Asbestos Inspection and Lead-Based Paint Screening

City of Tucson Water Building

1480 South 10th Avenue

APN 118-20-077A

Tucson, Pima County, AZ

May 9, 2023

Terracon Project No. 63227145B

Prepared for:

City of Tucson
4004 South Park Avenue Building 1
Tucson, AZ

Prepared by:

Terracon Consultants, Inc.
Tucson, Arizona

Terracon

Nationwide
Terracon.com

- Facilities
- Environmental
- Geotechnical
- Materials

355 South Euclid Avenue, Ste 107
Tucson, AZ 85719-6654
P 520-770-1789
F 520-792-2539
Terracon.com

May 9, 2023

City of Tucson Environmental & General Services
4004 South Park Avenue Building 1
Tucson, AZ 85714-1647

Attn: Ms. Valerie Herman
P: (520) 837-2270
E: Valerie.Herman@tucsonaz.gov

Re: Asbestos Inspection and Lead-Based Paint Screening
City of Tucson Water Building
1480 South 10th Avenue
Tucson, Pima County, Arizona
Terracon Project No. 63227145B

Dear Ms. Herman:

Terracon Consultants, Inc. (Terracon) is pleased to submit the attached report for the above referenced site to City of Tucson (Client). The purpose of this report is to present the results of an Asbestos Inspection and X-ray fluorescence (XRF) Lead-Based Paint (LBP) Screening performed on April 7, 2023. This inspection was conducted in general accordance with Terracon Proposal No. P63227145B dated March 7, 2023. Purchase Order PO-000965 dated March 16, 2023 was received as a notice to proceed. We understand that this Asbestos Inspection and LBP Screening was requested to assist with future demolition activities.

Terracon appreciates the opportunity to provide this service to City of Tucson. If you have any questions, please call the undersigned at (520) 798-4847 (Derek Koller).

Sincerely,
Terracon Consultants, Inc.

Derek Sizemore, CHMM
Environmental Group Manager

Scott Parker, MS
Principal

Attachments

Table of Contents

APPENDICES

EXECUTIVE SUMMARY

Terracon Consultants Inc. (Terracon) conducted an Asbestos Inspection and X-ray fluorescence (XRF) Lead-Based Paint (LBP) Screening at the warehouse building located within Pima County Assessor Parcel Number 118-20-077A, addressed 1480 South 10th Avenue in Tucson, Pima County, Arizona. The inspection was conducted on April 7, 2023 by Asbestos Hazard Emergency Response Act (AHERA)-accredited asbestos building inspectors and an EPA certified lead paint inspector.

Asbestos Findings

Terracon collected 45 bulk samples from 15 homogeneous areas (HAs) of suspect asbestos-containing materials (ACM) throughout the building. The following asbestos containing materials were identified as a result of laboratory analysis or assumed to be asbestos containing:

Summary of Identified ACM				
HA No.	Material Description	Material Location	NESHAP Classification[1]	Estimated Quantity
15	Black Penetration Tar	Roof	CAT I – Non-friable	150 Sq. Ft.

[1]Category I (CAT I) non-friable ACM

The listed Category I non-friable ACM that is damaged or could be damaged to the extent that it could be crumbled, pulverized or reduced to powder when dry, making it friable, must be removed prior to activities (renovation and/or demolition) that may disturb this material in accordance with applicable federal, state and local regulations.

The following building materials sampled contain less than one percent asbestos and are therefore not considered asbestos-containing materials by regulatory definitions, however some worker protection requirements may still apply, see 29 CFR 1926.1101 for more information.

Summary of Identified Materials with <1% Asbestos			
HA No.	Material Description	Material Location	Estimated Quantity
3	Skim Coat Texture Drywall System	Rooms 1 - 6	3,000 Sq. Ft.

A summary of the classification, condition and estimated quantity of identified ACM is presented in Appendix A. The summary of sample locations is presented in Appendix B. Asbestos sample location diagrams are provided in Appendix D. Laboratory analytical reports are included in Appendix E.

Lead-Based Paint Screening

Based on site observations, 10 XRF readings were taken from painted surfaces throughout the interior and exterior of the building on site. A summary of XRF readings is provided below:

- Building materials coated with LBP were not identified. As such, Terracon did not collect confirmation paint chip samples or a toxicity characteristic leaching procedure (TCLP) sample to characterize the demolition waste stream.
- Painted surfaces were identified during the XRF screening with <1.0 mg/cm^2.
- The XRF LBP Screening results included in Appendix C.

Terracon can provide the Client with a proposal for developing abatement specifications (project design) and for performing abatement oversight, air monitoring, and air clearance testing upon request.

1.0 INTRODUCTION

Terracon Consultants Inc. (Terracon) conducted an Asbestos Inspection and X-ray fluorescence (XRF) Lead-Based Paint (LBP) Screening at the warehouse building located within Pima County Assessor Parcel Number (APN) 118-20-077A, addressed 1480 South 10th Avenue in Tucson, Pima County, Arizona. The inspection was conducted on April 7, 2023 by Asbestos Hazard Emergency Response Act (AHERA)-accredited asbestos building inspectors and an Environmental Protection Agency (EPA) certified lead paint inspector. This inspection was conducted in general accordance with Terracon Proposal No. P63227145B dated March 7, 2023. We understand that this Asbestos Inspection and XRF LBP Screening was requested to assist with future demolition activities.

The asbestos portion of the inspection was performed to satisfy requirements of the EPA Regulation 40 CFR Part 61, Subpart M, NESHAP. Suspect ACM samples were collected in general accordance with the sampling protocols outlined in EPA 40 CFR Part 763 Subpart E, known as AHERA. Bulk asbestos samples were delivered to an accredited laboratory for analysis by PLM.

The XRF LBP Screening was performed to assist in compliance with OSHA requirements for lead-in-air content during disturbance of painted materials. The screening was performed in general accordance with the procedures prescribed in the EPA's work practice standards for conducting lead paint testing (40 CFR 745.227). The LBP Screening was not designed to meet the requirements of HUD for LBP inspections. The lead paint inspection was conducted using a handheld XRF unit.

2.0 BUILDING DESCRIPTION

The following table provides building information noted as of the date of the inspection.

BUILDING INFORMATION			
Address	1480 South 10th Avenue, Tucson, Pima County, AZ		
APN	118-20-077A		
Building Use	City of Tucson Water Warehouse Building		
Building Square Footage	14,100 ft^2	Number of Floors	1
Approximate Construction Date(s)	1980		
Main Structure	Steel I-beams		
Roof Type	Spray-applied roof membrane over a corrugated metal deck		

BUILDING CONSTRUCTION	
Building Insulation	Fiberglass insulation
Flooring Substrate	Concrete
Flooring Finishes	Concrete coating
Interior Wall Finishes	Textured wallboard
Ceiling Finishes	Suspended acoustical ceiling tile, textured wallboard
Heating System	Ceiling-mounted HVAC Equipment (offices only) Side-mounted evaporative cooling units for warehouse area
Domestic Water	Hot water is provided by hot water tanks within the bathroom
Pipe Insulation	Heating, cooling, and domestic water lines are uninsulated

3.0 FIELD ACTIVITIES

The asbestos inspection was conducted by Samuel Openlander and Derek Sizemore, AHERA-accredited asbestos building inspectors. The XRF LBP Screening was conducted by Derek Sizemore, an EPA-certified LBP inspector. Copies of Mr. Sizemore's and Mr. Openlander's certificates are provided in Appendix F. The inspection was conducted in general accordance with the sample collection protocols established in USEPA 40 CFR Part 763 Subpart E Section 763.86, AHERA. A summary of inspection activities is provided in this section.

3.1 Visual Assessment

Asbestos

Inspection activities were initiated with visual observation of the interior and exterior of the building to identify homogeneous areas of suspect ACM. A homogeneous area (HA) consists of building materials that appear similar throughout in terms of color and texture with consideration given to the date of application. Interior assessment was conducted in visually accessible areas of the building proposed for demolition and renovation. Building materials identified as metal, glass, or wood were not considered suspect ACM.

The roofing systems were sampled as part of this inspection. Terracon visually inspected all roof layers in multiple places and did not observe additional roofing layers unless mentioned in this report.

Lead Paint

Terracon visually assessed the interior and exterior of the existing building to identify construction materials suspect for LBP. Painted/coated surfaces which appear similar throughout in terms of color, texture, substrate and date of application are treated as a

unique material for inspection purposes. Painted/coated surfaces were visually assessed for evidence of distress, flaking, and/or peeling.

3.2 Physical Assessment

Asbestos

A physical assessment of each HA of suspect 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.

Lead Paint

A physical assessment of each selected painted surface was conducted to assess its condition. The painted surfaces were assessed as intact, fair, or poor condition depending on degree of cracking, peeling or chipping.

3.3 Sample Collection

Asbestos Inspection

Based on observations, bulk samples of suspect ACM were collected in general accordance with USEPA AHERA sampling protocols. Samples of suspect materials were collected from randomly selected locations in each homogeneous area. Bulk samples were collected using wet methods as applicable to reduce the potential for fiber release. Samples were placed in sealable containers and labeled with unique sample numbers using an indelible marker.

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 45 bulk samples from 15 homogeneous areas of suspect ACM. A summary of the classification, condition and approximate quantity of identified ACM is presented in Appendix A. The summary of sample locations is presented in Appendix B. Asbestos sample location diagrams are provided in Appendix D. Laboratory analytical reports for asbestos are included in Appendix E.

XRF LBP Screening

An XRF portable lead paint analyzer was used to obtain direct readouts of lead content in coated surfaces in the proposed work areas.

The Heuresis Pb200i XRF utilizes a radioactive source, isotope Cobalt 57 (57Co), to assess the lead content of surface coatings. 57Co emits gamma rays that optically excite

the K-shell electrons (causes the electrons to jump to a higher orbital) of atoms. An electron from a different orbital (e.g., L-shell or M-shell) relaxes (falls) to the inner K-shell, filling the vacancy and transforming its potential energy into electro-magnetic radiation of the x-ray spectrum. This quantum mechanical process is called induced x-ray fluorescence. The XRF's internal instrumentation detects the x-rays that collide with its sensor and compares the x-ray's energy to lead's characteristic L-shell to K-shell transition energy.

3.4 Sample Analysis

Asbestos

Bulk suspect ACM samples were submitted under chain of custody to Cates Laboratories of Dallas, Texas for analysis by polarized light microscopy with dispersion staining techniques per USEPA methodology 600/R-93/116. The percentage of asbestos in a sample, where applicable, was determined by microscopic visual estimation.

The EPA recognizes that PLM analysis of asbestos bulk samples can be inaccurate at low concentrations of asbestos (i.e., less than 10%). In Appendix E of 40 CFR 763, Subpart E (Interim Method of the Determination of Asbestos in Bulk Insulation Samples), the EPA codifies point counting as part of the asbestos analytical method. For samples reported with <2% asbestos by PLM visual estimation, the laboratory further analyzed the sampled by the point count method.

Lead Paint

Based on observations, 10 XRF readings were taken from painted surfaces throughout the interior and exterior of the building on site. As Terracon did not identify paints considered LBP by USEPA definition and pursuant to the client's request, a toxicity characteristic leaching procedure (TCLP) sample representative of the demolition waste stream and paint chip confirmation samples were not collected.

4.0 REGULATORY OVERVIEW

Asbestos

The Asbestos NESHAP program in Arizona is enforced by federal, state, and county Asbestos NESHAP Coordinators. For projects occurring in Pima County, the County has been delegated authority from the EPA to enforce the Asbestos NESHAP within its respective jurisdictional boundaries, excluding tribal lands.

The asbestos NESHAP (40 CFR Part 61, Subpart M) regulates asbestos fiber emissions and asbestos waste disposal practices. The 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, may be crumbled, pulverized or reduced to powder by hand pressure. All friable ACM is considered regulated asbestos containing material (RACM).

If the analytical results indicate that all the samples collected per homogenous material do not contain asbestos, then the material is not considered an ACM. However, if the analytical results of one or more of the samples collected per homogenous material indicate that asbestos is present in quantities of greater than one percent as defined by the EPA, the homogeneous material is considered to be ACM regardless of other analytical results (unless a representative number of samples have been analyzed by PLM point counting as described below, and the results indicate the material contains less than one percent asbestos).

Any material that contains greater than one percent asbestos is considered an ACM and must be handled according to Occupational Safety and Health Administration (OSHA), EPA, and applicable state and local regulations. The EPA National Emission Standard for Hazardous Air Pollutants (NESHAP) 40 CFR 61, Subparts A and M has a requirement related to inspection of suspect ACM in buildings. When the asbestos content of a friable material is visually estimated by PLM to be detectable but less than ten percent, your firm may elect to (1) assume the amount is greater than one percent and treat the material as asbestos-containing or (2) require verification of the amount by the PLM point counting technique. If the results obtained by point counting and visual estimation are different, the point count result must be used. When no asbestos is detected by PLM, point counting is not required.

The 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 or 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 (exterior), 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 fibers per cubic centimeter of air (0.1 f/cc) as an eight-hour time weighted average (TWA) and not exceed 1.0 fibers per cubic centimeter of air (1.0 f/cc) over a 30-minute time period known as an excursion limit (EL). The TWA and EL are known as OSHA's permissible exposure limits (PELs). 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.

Lead Paint

The lead paint sampling activities were conducted in general accordance with the EPA's work practice standards for conducting lead activities (40 CFR 745.227). Lead is regulated by the EPA and OSHA.

The Resource Conservation and Recovery Act (RCRA) gave the EPA authority to regulate the waste status of demolition or renovation debris, including Lead-Containing materials. Specific notification and testing requirements must be addressed prior to transporting, treating, storing, or disposing of hazardous wastes. Lead-Containing wastes are considered hazardous waste under RCRA if TCLP results exceed five milligrams per liter (mg/L).

Detectable lead quantities may constitute a lead dust hazard during renovation and demolition activities. Personnel performing renovation and demolition activities that may disturb painted components and building surfaces with concentrations of lead above the designated analytical detection limit should comply with all current OSHA regulations in order to minimize employee exposure. OSHA defines lead paint as a paint, which contains lead, regardless of the concentration. Currently, any proposed renovation or demolition is subject to the OSHA regulations (29 CFR 1926.62 – Lead Exposure in Construction). The OSHA regulation defines specific training requirements, engineering controls and working practices for construction personnel subject to this standard. Occupational exposure to lead occurring in the course of construction work, including maintenance activities, painting, alteration and repairs is subject to the OSHA "Interim" Lead Exposure in Construction standard.

Construction work covered by 29 CFR 1926.62 includes any repair or renovation activities or other activities that disturb in-place lead-containing materials but does not include routine cleaning and repainting where there is insignificant damage, wear, or corrosion of existing lead-containing coatings or substrates. Employers must assure that no employee will be exposed to lead at concentrations greater than 50 micrograms per cubic meter ($\mu g/m^3$) averaged over an eight-hour period without adequate protection. The OSHA Standard also establishes an action level of 30 $\mu g/m^3$ which, if exceeded, triggers the requirement for medical monitoring.

The above overview is not intended to be inclusive of all potentially pertinent regulatory information. The relevant EPA and OSHA standards should be consulted prior to undertaking activities involving the demolition, renovation, or maintenance of surfaces coated with lead paints.

5.0 FINDINGS AND RECOMMENDATIONS

Asbestos Findings

Terracon collected 45 bulk samples from 15 homogeneous areas (HAs) of suspect ACM throughout the building. The following ACMs were identified as a result of laboratory analysis:

Summary of Identified ACM				
HA No.	Material Description	Material Location	NESHAP Classification[1]	Estimated Quantity
15	Black Penetration Tar	Roof	CAT I – Non-friable	150 Sq. Ft.

[1]Category I (CAT I) non-friable ACM

The listed Category I non-friable ACM that is damaged or could be damaged to the extent that it could be crumbled, pulverized or reduced to powder when dry, making it friable, must be removed prior to activities (renovation and/or demolition) that may disturb this material in accordance with applicable federal, state and local regulations.

The following building materials sampled contain less than one percent asbestos and are therefore not considered asbestos-containing materials by regulatory definitions, however some worker protection requirements may still apply, see 29 CFR 1926.1101 for more information.

Summary of Identified Materials with <1% asbestos			
HA No.	Material Description	Material Location	Estimated Quantity
3	Skim Coat Texture Drywall System	Rooms 1 - 6	3,000 Sq. Ft.

A summary of the classification, condition and approximate quantity of identified ACM is presented in Appendix A. The summary of sample locations is presented in Appendix B. Sample location diagrams are provided in Appendix D. Laboratory analytical reports are included in Appendix E.

Note estimated quantities are based on a cursory field evaluation, and actual quantities may vary significantly, especially if asbestos containing materials are present in hidden and/or inaccessible areas not evaluated as part of this inspection.

Lead-Based Paint Screening

Based on site observations, 10 XRF readings were taken from painted surfaces throughout the interior and exterior of the building on site. A summary of XRF readings is provided below:

- Building materials coated with LBP were not identified. As such, Terracon did not collect confirmation paint chip samples or a TCLP sample to characterize the demolition waste stream.
- Painted surfaces were identified during the XRF screening with <1.0 mg/cm^2.
- The LBP Screening results included in Appendix C.

Construction work covered by United States Occupational Safety and Health Administration (OSHA) regulation 29 CFR 1926.62 (Lead Exposure in Construction) includes any repair or renovation activities or other activities that disturb in-place lead-containing materials, but does not include routine cleaning and repainting where there is insignificant damage, wear, or corrosion of existing lead-containing coatings or substrates. OSHA regulation 29 CFR 1926.62 (Lead Exposure in Construction) was intended to apply to any detectable concentration of lead in paint, as small concentrations of lead can result in unacceptable employee exposures depending upon on the method of removal and other workplace conditions. To accomplish this task, employers must assure that no employee will be exposed to airborne lead at concentrations greater than 50 micrograms per cubic meter (μg/m^3) averaged over an eight-hour period without adequate protection. The OSHA Standard also establishes an action level of 30 μg/m^3 which, if exceeded, triggers the requirement for medical monitoring.

6.0 LIMITATIONS/GENERAL COMMENTS

Terracon did not perform sampling which required excessive demolition or destructive activities such as knocking holes in walls, dismantling of equipment or removal of protective coverings. Reasonable efforts to access suspect materials within known areas of restricted access (e.g., crawl spaces) were made; however, confined spaces or areas which may pose a health or safety risk to Terracon personnel were not sampled. Sampling did not include suspect materials which could not be safely reached with available ladders/man-lifts. As Terracon could not assess beneath all roofing materials in all areas, there may be isolated areas of additional suspect material present beneath existing roofing. Terracon inspected the interior ceiling, wall, and flooring systems in multiple places throughout the building and did not observe additional coverings/layers except where noted in this report, but there may be additional suspect material present within the building in concealed areas that was not observed.

This Asbestos Inspection and LBP Screening 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 inspection of the building. The information contained in this report is relevant to the date on which this inspection was performed and should not be relied upon to represent conditions at a later date.

The regulated building materials and conditions presented in this report represent those

observed on the dates we conducted the sampling. This sampling is intended for the exclusive use of City of Tucson for specific application to the referenced property. This report does not replace nor can be used as professionally developed construction or demolition plans, specifications, or bidding documents. This report is not a legal opinion. 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.

6.1 Reliance

This Report was prepared for the exclusive use and reliance of the Client. Reliance by any other party is prohibited without the written authorization of the Client and Terracon. If the Client is aware of additional parties that will require reliance on the Report, the names, addresses and relationship of these parties must be provided for to Terracon for approval. Terracon will grant reliance on the Report to those approved parties upon receipt of a fully executed Reliance Agreement (available upon request) and receipt of an additional fee of $350.00 per relying party.

Reliance on the Report by the Client and all authorized parties will be subject to the terms, conditions and limitations stated in the Agreement for Services (and sections of this proposal incorporated therein), the Reliance Agreement, and the Report.

APPENDIX A

City of Tucson Water Building

1480 South 10th Avenue, Tucson Arizona

Tucson, Pima County, Arizona

Terracon Project No. 63227145B

IDENTIFIED ASBESTOS CONTAINING MATERIALS BY HOMOGENEOUS AREA (HA)

HA No.	Material Description	Material Location	% and Type Asbestos^	NESHAP Classification	Condition	Estimated Quantity*
15	Black Penetration Tar	Roof	5% Chrysotile	CAT I – Non-friable	Good	150 Sq. Ft.

PC = point count analysis

^ % & Type Asbestos = this column contains both the analytical result of the sample with the highest concentration of asbestos detected in the samples that make up the HA and the types of asbestos identified.

*Estimated quantities are based on a cursory field evaluation, and actual quantities may vary significantly, especially if asbestos containing materials are present in hidden and/or inaccessible areas not evaluated as part of this inspection.

The materials listed in this table have been sampled and determined to contain asbestos in concentrations greater than 1%. When disturbed, various federal, state and local regulations may apply. These materials should be monitored for damage over time and repaired as necessary by appropriately trained personnel. Removal may be necessary before renovations and in most cases before a demolition. See Appendix B for a summary of samples collected. See Appendix E for detailed analytical results

IDENTIFIED MATERIALS CONTAINING 1% OR LESS ASBESTOS BY HA

HA No.	Material Description	Material Location	% and Type Asbestos[#] ^	Condition	Estimated Quantity*
3	Skim Coat Texture Drywall System	Rooms 1 - 6	1.00% Chrysotile by PC – Paint Texture 2	Good	3,000 Sq. Ft.

PC = point count analysis

[#]The materials listed in the table above were determined by PLM point counting to contain asbestos at concentrations ranging from less than 0.25% to 1.00%. These materials are considered not to contain asbestos at concentrations greater that 1% and are not regulated by NESHAP. However, compliance with the USOSHA standard (29 CFR 1926.1101) is still required. Compliance by building owners with the USOSHA asbestos regulations may result in response actions not required by the USEPA for certain unregulated materials. Under the USOSHA Construction Standard for Asbestos (29 CFR 1926.1101), materials containing less than or equal to 1% asbestos is still regulated to some degree. The employer who disturbs this asbestos material must, 1) use wet methods, 2) promptly contain waste in leak-tight containers, and 3) conduct air monitoring or have a negative exposure assessment. The waste is not regulated for transportation or disposal by USEPA or USOSHA.

^ % & Type Asbestos = this column contains both the analytical result of the sample with the highest concentration of asbestos detected in the samples that make up the HA and the types of asbestos identified.

*Estimated quantities are based on a cursory field evaluation, and actual quantities may vary significantly, especially if asbestos containing materials are present in hidden and/or inaccessible areas not evaluated as part of this survey.

APPENDIX B

City of Tucson Water Building

1480 South 10th Avenue, Tucson Arizona

Tucson, Pima County, Arizona

Terracon Project No. 63227145B

ASBESTOS SURVEY SAMPLE LOCATION SUMMARY

HA No.	Material Description	Sample Number	Sample Location	Lab Results
1	Concrete Flooring	1-FC2-1	Warehouse	None Detected - Concrete
1	Concrete Flooring	1-FC2-2	Warehouse	None Detected - Concrete
1	Concrete Flooring	1-FC2-3	Warehouse	None Detected - Concrete
2	Black Cove Base and Mastic	2-FC3-4	Room 3	None Detected - Cove Base
2	Black Cove Base and Mastic	2-FC3-4	Room 3	None Detected - Cream Mastic
2	Black Cove Base and Mastic	2-FC3-5	Room 5	None Detected - Cove Base
2	Black Cove Base and Mastic	2-FC3-5	Room 5	None Detected - Cream Mastic
2	Black Cove Base and Mastic	2-FC3-6	Room 6	None Detected - Cove Base
2	Black Cove Base and Mastic	2-FC3-6	Room 6	None Detected - Cream Mastic
3	Skim-coat Texture Drywall System	3-WB4-7	Room 3	None Detected - Paint Layer
3	Skim-coat Texture Drywall System	3-WB4-7	Room 3	None Detected - Paper
3	Skim-coat Texture Drywall System	3-WB4-7	Room 3	None Detected - Wallboard Material
3	Skim-coat Texture Drywall System	3-WB4-8	Room 5	None Detected - Paint Texture 1
3	Skim-coat Texture Drywall System	3-WB4-8	Room 5	None Detected - Joint Tape
3	Skim-coat Texture Drywall System	3-WB4-8	Room 5	None Detected - Joint Compound
3	Skim-coat Texture Drywall System	3-WB4-8	Room 5	PC 1.00% Chrysotile - Paint Texture 2

Samples in bold contain ≤1% asbestos by rounding
Samples in shaded bold contain >1% asbestos
PC = Point Count Analysis

HA No.	Material Description	Sample Number	Sample Location	Lab Results
3	Skim-coat Texture Drywall System	3-WB4-8	Room 5	None Detected - Paper
3	Skim-coat Texture Drywall System	3-WB4-8	Room 5	None Detected - Wallboard Material
3	Skim-coat Texture Drywall System	3-WB4-9	Room 6	None Detected - Paint Texture 1
3	Skim-coat Texture Drywall System	3-WB4-9	Room 6	None Detected - Joint Tape
3	Skim-coat Texture Drywall System	3-WB4-9	Room 6	None Detected - Joint Compound
3	Skim-coat Texture Drywall System	3-WB4-9	Room 6	PC <0.25% Chrysotile - Paint Texture 2
3	Skim-coat Texture Drywall System	3-WB4-9	Room 6	None Detected - Paper
3	Skim-coat Texture Drywall System	3-WB4-9	Room 6	None Detected - Wallboard Material
4	Concrete Coating	4-FC2-10	Room 2	None Detected - Grey Coating
4	Concrete Coating	4-FC2-11	Room 5	None Detected - Grey Coating
4	Concrete Coating	4-FC2-12	Room 6	None Detected - Grey Coating
5	2' X 4' Acoustic Ceiling Tile	5-CT4-13	Room 1	None Detected - Ceiling Tile
5	2' X 4' Acoustic Ceiling Tile	5-CT4-14	Room 1	None Detected - Ceiling Tile
5	2' X 4' Acoustic Ceiling Tile	5-CT4-15	Room 1	None Detected - Ceiling Tile
6	Untextured Drywall	6-WB2-16	Warehouse	None Detected - Paper
6	Untextured Drywall	6-WB2-16	Warehouse	None Detected - Wallboard Material
6	Untextured Drywall	6-WB2-17	Warehouse	None Detected - Paper
6	Untextured Drywall	6-WB2-17	Warehouse	None Detected - Wallboard Material
6	Untextured Drywall	6-WB2-18	Warehouse	None Detected - Paper
6	Untextured Drywall	6-WB2-18	Warehouse	None Detected - Wallboard Material
7	White Bathroom Caulk	7-CA5-19	Room 6	None Detected - Caulking
7	White Bathroom Caulk	7-CA5-20	Room 6	None Detected - Caulking
7	White Bathroom Caulk	7-CA5-21	Room 6	None Detected - Caulking
8	Joint Expansion Caulk	8-CA6-22	Warehouse	None Detected - Expansion Jt. Caulking
8	Joint Expansion Caulk	8-CA6-23	Warehouse	None Detected - Expansion Jt. Material
8	Joint Expansion Caulk	8-CA6-24	Warehouse	None Detected - Expansion Jt. Material
9	Black Metal Sealant	9-PI1-25	Exterior, near Roll-Up	None Detected - Black/White Sealant
9	Black Metal Sealant	9-PI1-26	Exterior, near Roll-Up	None Detected - Black/White Sealant
9	Black Metal Sealant	9-PI1-27	Exterior, near Roll-Up	None Detected - Black/White Sealant

Samples in bold contain ≤1% asbestos by rounding
Samples in shaded bold contain >1% asbestos
PC = Point Count Analysis

HA No.	Material Description	Sample Number	Sample Location	Lab Results
10	White Metal Sealant	10-SC7-28	Exterior	None Detected - White/Grey Sealant
10	White Metal Sealant	10-SC7-29	Exterior	None Detected - White/Grey Sealant
10	White Metal Sealant	10-SC7-30	Exterior	None Detected - White/Grey Sealant
11	Silver Metal Sealant	11-SC7-31	Exterior	None Detected - Silver/White Sealant
11	Silver Metal Sealant	11-SC7-32	Exterior	None Detected - Silver/White Sealant
11	Silver Metal Sealant	11-SC7-33	Exterior	None Detected - Silver/White Sealant
12	Duct Sealant	12-SC7-34	Exterior, HVAC Systems	None Detected - Grey Sealant
12	Duct Sealant	12-SC7-35	Exterior, HVAC Systems	None Detected - Grey Sealant
12	Duct Sealant	12-SC7-36	Exterior, HVAC Systems	None Detected - Grey Sealant
13	White Door Caulk	13-CA2-37	Exterior, Southwest Corner	None Detected - Caulking
13	White Door Caulk	13-CA2-38	Exterior, Southwest Corner	None Detected - Caulking
13	White Door Caulk	13-CA2-39	Exterior, Southwest Corner	None Detected - Caulking
14	White Coating	14-RF5-40	Roof	None Detected - White Coating
14	White Coating	14-RF5-41	Roof	None Detected - White Coating
14	White Coating	14-RF5-42	Roof	None Detected - White Coating
15	**Black Penetration Tar**	**15-RF4-43**	**Roof**	**5% Chrysotile - Roofing Mastic**
15	**Black Penetration Tar**	**15-RF4-44**	**Roof**	**5% Chrysotile - Roofing Mastic**
15	**Black Penetration Tar**	**15-RF4-45**	**Roof**	**5% Chrysotile - Roofing Mastic**

Samples in bold contain ≤1% asbestos by rounding
Samples in **shaded bold** contain >1% asbestos
PC = Point Count Analysis

APPENDIX C

City of Tucson Water Building

1402 South 10th Avenue, Tucson Arizona

Tucson, Pima County, Arizona

Terracon Project No. 63227145B

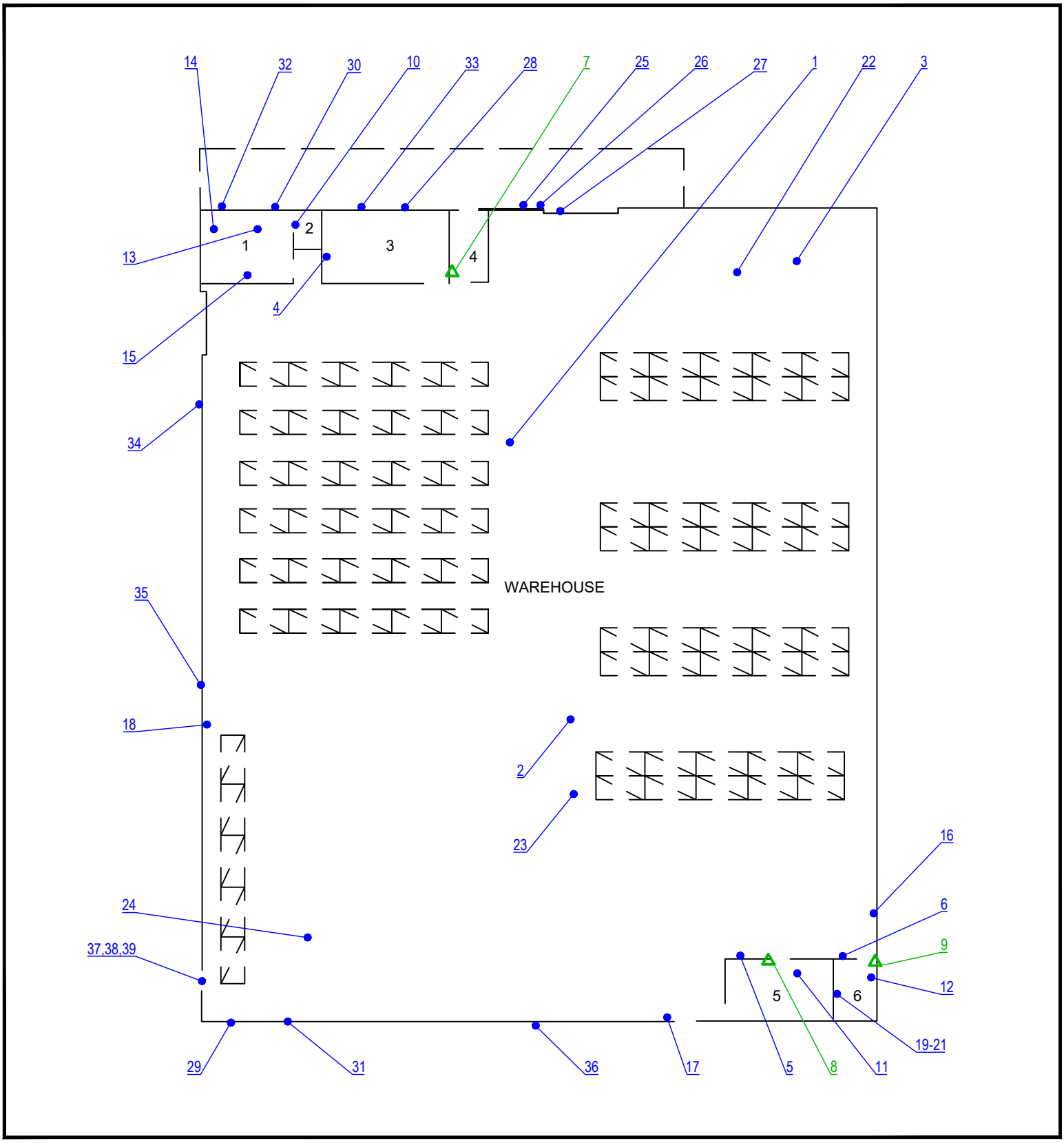
XRF LBP SCREENING SUMMARY

XRF Reading No.	Paint Description	Location	Paint Condition	Results (mg/cm^2)
CAL 1		Pre-Calibration		1.0
CAL 2		Pre-Calibration		0.9
CAL 3		Pre-Calibration		1.0
1	Yellow on Concrete	Warehouse	Fair	0.8
2	Red on Metal I Beams	Warehouse	Good	0.1
3	Blue on Metal Door Frame	Room 2	Good	0.1
4	Blue on Metal Door	Room 3	Good	0.1
5	Tan on Drywall	Room 5	Good	0.3
6	Tan on Wood Fascia	Room 5	Good	0.2
7	Blue on Wood Windowsill	Room 5	Good	0.0
8	Tan on Wood Windowsill	Room 5	Good	0.1
9	Tan on Metal Window Frame	Room 5	Good	0.2
10	Blue on Metal Window Frame	Room 5	Good	<LOD
CAL 4		Post-Calibration		1.0
CAL 5		Post-Calibration		1.0
CAL 6		Post-Calibration		1.0

<LOD = Less than XRF limit of detection
LBP = Greater than or equal to 1.0 mg/cm^2

APPENDIX D

ASBESTOS SAMPLING DIAGRAMS



LEGEND

- APPROXIMATE SAMPLE LOCATION (NON-ACM)
- △ APPROXIMATE SAMPLE LOCATION (≤1% ACM)

<1% ACM
HA 3: Samples 7-9: SKIM COAT TEXTURE DRYWALL SYSTEM

N

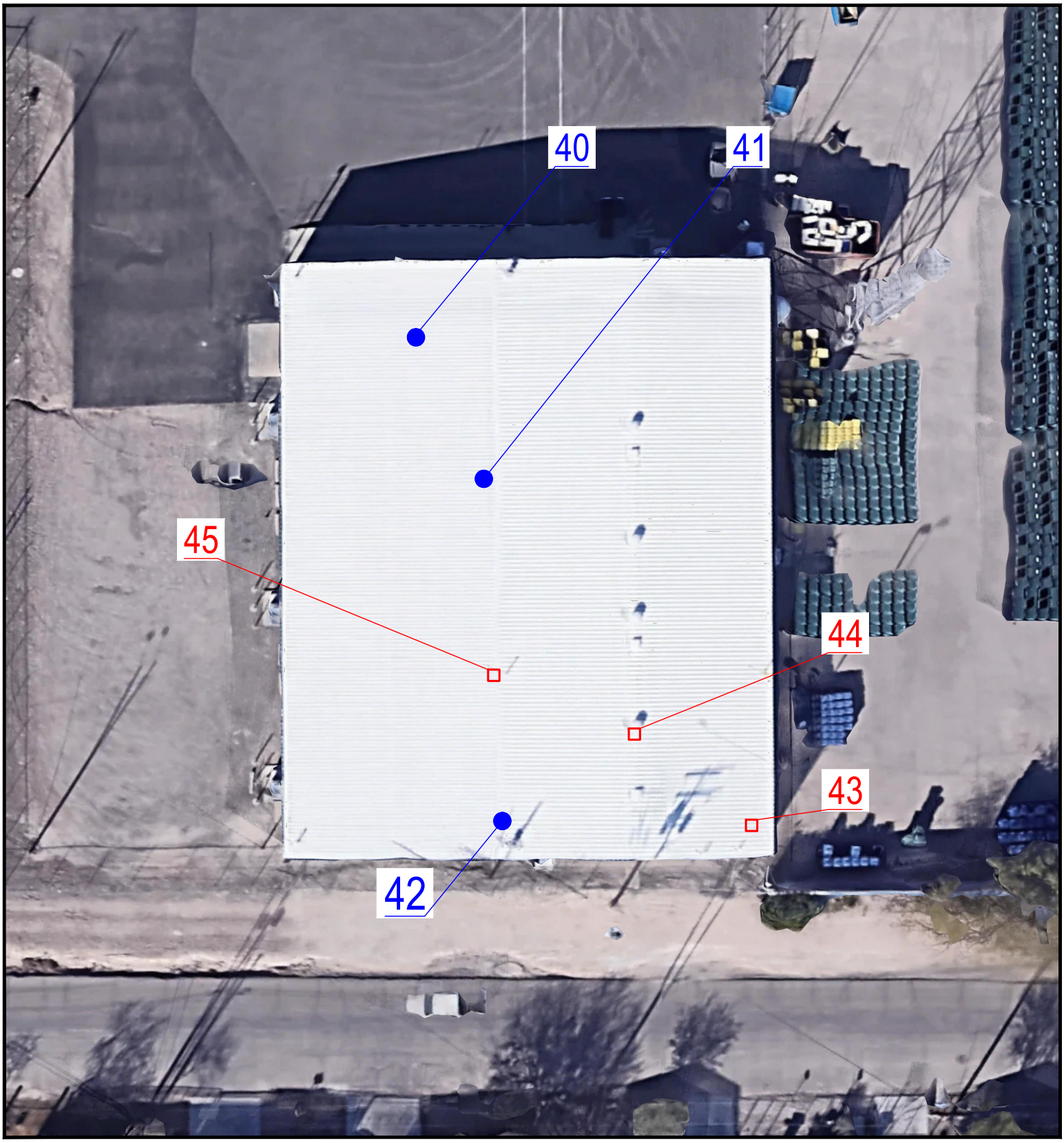
Project Mngr:	DRS
Drawn By:	CML
Checked By:	DRS
Approved By:	DDK
Project No.	63227145B
Scale:	NOT SHOWN
File No.	63227145B
Date:	04-2023

Terracon
Consulting Engineers and Scientists
355 SOUTH EUCLID, SUITE 107 TUCSON, ARIZONA 85719
PH. (520) 770-1789 FAX. (520) 792-2539

Asbestos Sample Diagram: Warehouse

City of Tucson Water Building
1480 South 10th Avenue
TUCSON, ARIZONA

EXHIBIT
D1



LEGEND

- APPROXIMATE SAMPLE LOCATION (NON-ACM)
- APPROXIMATE SAMPLE LOCATION (ACM)

ACMs
HA 15: Samples 43-45: BLACK PENETRATION TAR

N

Project Mngr:	DRS
Drawn By:	CML
Checked By:	DRS
Approved By:	DDK

Project No.	63227145B
Scale:	NOT SHOWN
File No.	63227145B
Date:	04-2023

Terracon
Consulting Engineers and Scientists
355 SOUTH EUCLID, SUITE 107 TUCSON, ARIZONA 85719
PH. (520) 770-1789 FAX. (520) 792-2539

Asbestos Sample Diagram: Roof

City of Tucson Water Building
1480 South 10th Avenue
TUCSON, ARIZONA

EXHIBIT
D2

APPENDIX E

ASBESTOS LABORATORY REPORT AND CHAIN-OF CUSTODY

PLM REPORT SUMMARY

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: Terracon
Project (Line 1): City of Tucson Water Building
Project (Line 2): 1480 South 10th Avenue
Project No: 63227145B
Identification: Asbestos, Bulk Sample Analysis
Test Method: Polarized Light Microscopy/Dispersion Staining (PLM/DS)
EPA Method 600/R-93/116

Lab Job No.: PLM-33186
Set No.: 47650
Report Date: 4/11/2023
Sample Date: 4/7/2023

On 4/10/2023, forty-five (45) bulk samples were submitted by Mr. Derek Sizemore of Terracon for asbestos analysis by PLM/DS. Copies of the lab data sheets are attached; additional information may be found therein. The results are summarized below:

Lab Sample No.	Client Field I.D.	Sample Description/Location	Asbestos Content
CL1137086	1-FC2-1	Concrete Flooring - Warehouse	None Detected
CL1137087	1-FC2-2	Concrete Flooring - Warehouse	None Detected
CL1137088	1-FC2-3	Concrete Flooring - Warehouse	None Detected
CL1137089	2-FC3-4	Black Cove Base & Mastic - Room 3	None Detected - Cove Base None Detected - Cream Mastic
CL1137090	2-FC3-5	Black Cove Base & Mastic - Room 5	None Detected - Cove Base None Detected - Cream Mastic
CL1137091	2-FC3-6	Black Cove Base & Mastic - Room 6	None Detected - Cove Base None Detected - Cream Mastic
CL1137092	3-WB4-7	Skim Coat Texture Drywall System - Room 3	None Detected - Paint Layer None Detected - Paper None Detected - Wallboard Material
CL1137093	3-WB4-8	Skim Coat Texture Drywall System - Room 5	None Detected - Paint Texture 1 None Detected - Joint Tape None Detected - Joint Compound 2% Chrysotile - Paint Texture 2 None Detected - Paper None Detected - Wallboard Material (by PLM) 1.00% Chrysotile - Paint Texture 2 (by Point Count)
CL1137094	3-WB4-9	Skim Coat Texture Drywall System - Room 6	None Detected - Paint Texture 1 None Detected - Joint Tape None Detected - Joint Compound <1% Chrysotile - Paint Texture 2 None Detected - Paper None Detected - Wallboard Material (by PLM) <0.25% Chrysotile - Paint Texture 2 (by Point Count)
CL1137095	4-FC2-10	Concrete Coating - Room 2	None Detected

These samples were analyzed by layers. The overall percent asbestos for the sample is reported when relevant. The EPA considers a material to be asbestos containing only if it contains greater than one percent asbestos by Calibrated Visual Area Estimation (CVAE). EPA regulations also indicate that Regulated Asbestos Containing Materials (RACM) – materials that are friable or may become friable – be further analyzed by point counting when the results indicate less than ten percent asbestos by CVAE. CatesLab utilizes CVAE on a routine basis and does not include point counting unless specifically requested by the client. The results may not be reproduced except in full.

PLM REPORT SUMMARY

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: Terracon
Project (Line 1): City of Tucson Water Building
Project (Line 2): 1480 South 10th Avenue
Project No: 63227145B
Identification: Asbestos, Bulk Sample Analysis
Test Method: Polarized Light Microscopy/Dispersion Staining (PLM/DS)
EPA Method 600/R-93/116

Lab Job No.: PLM-33186
Set No.: 47650
Report Date: 4/11/2023
Sample Date: 4/7/2023

On 4/10/2023, forty-five (45) bulk samples were submitted by Mr. Derek Sizemore of Terracon for asbestos analysis by PLM/DS. Copies of the lab data sheets are attached; additional information may be found therein. The results are summarized below:

Lab Sample No.	Client Field I.D.	Sample Description/Location	Asbestos Content
CL1137096	4-FC2-11	Concrete Coating - Room 5	None Detected
CL1137097	4-FC2-12	Concrete Coating - Room 6	None Detected
CL1137098	5-CT4-13	2' X 4' Acoustical Ceiling Tile - Room 1	None Detected
CL1137099	5-CT4-14	2' X 4' Acoustical Ceiling Tile - Room 1	None Detected
CL1137100	5-CT4-15	2' X 4' Acoustical Ceiling Tile - Room 1	None Detected
CL1137101	6-WB2-16	Untextured Drywall - Warehouse	None Detected - Paper None Detected - Wallboard Material
CL1137102	2-WB2-17	Untextured Drywall - Warehouse	None Detected - Paper None Detected - Wallboard Material
CL1137103	2-WB2-18	Untextured Drywall - Warehouse	None Detected - Paper None Detected - Wallboard Material
CL1137104	7-CA5-19	White Bathroom Caulk - Room 6	None Detected
CL1137105	7-CA5-20	White Bathroom Caulk - Room 6	None Detected
CL1137106	7-CA5-21	White Bathroom Caulk - Room 6	None Detected
CL1137107	8-CA6-22	Joint Expansion Caulk - Warehouse	None Detected
CL1137108	8-CA6-23	Joint Expansion Caulk - Warehouse	None Detected
CL1137109	8-CA6-24	Joint Expansion Caulk - Warehouse	None Detected
CL1137110	9-CS7-25	Black Metal Sealant - Exterior, near Roll-Up	None Detected
CL1137111	9-CS7-26	Black Metal Sealant - Exterior, near Roll-Up	None Detected
CL1137112	9-CS7-27	Black Metal Sealant - Exterior, near Roll-Up	None Detected
CL1137113	10-SC7-28	White Metal Sealant - Exterior	None Detected
CL1137114	10-SC7-29	White Metal Sealant - Exterior	None Detected

These samples were analyzed by layers. The overall percent asbestos for the sample is reported when relevant. The EPA considers a material to be asbestos containing only if it contains greater than one percent asbestos by Calibrated Visual Area Estimation (CVAE). EPA regulations also indicate that Regulated Asbestos Containing Materials (RACM) – materials that are friable or may become friable – be further analyzed by point counting when the results indicate less than ten percent asbestos by CVAE. CatesLab utilizes CVAE on a routine basis and does not include point counting unless specifically requested by the client. The results may not be reproduced except in full.

PLM REPORT SUMMARY

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: Terracon
Project (Line 1): City of Tucson Water Building
Project (Line 2): 1480 South 10th Avenue
Project No: 63227145B
Identification: Asbestos, Bulk Sample Analysis
Test Method: Polarized Light Microscopy/Dispersion Staining (PLM/DS)
EPA Method 600/R-93/116

Lab Job No.: PLM-33186
Set No.: 47650
Report Date: 4/11/2023
Sample Date: 4/7/2023

On 4/10/2023, forty-five (45) bulk samples were submitted by Mr. Derek Sizemore of Terracon for asbestos analysis by PLM/DS. Copies of the lab data sheets are attached; additional information may be found therein. The results are summarized below:

Lab Sample No.	Client Field I.D.	Sample Description/Location	Asbestos Content
CL1137115	10-SC7-30	White Metal Sealant - Exterior	None Detected
CL1137116	11-SC7-31	Silver Metal Sealant - Exterior	None Detected
CL1137117	11-SC7-32	Silver Metal Sealant - Exterior	None Detected
CL1137118	11-SC7-33	Silver Metal Sealant - Exterior	None Detected
CL1137119	12-SC7-34	Duct Sealant - Exterior, HVAC Systems	None Detected
CL1137120	12-SC7-35	Duct Sealant - Exterior, HVAC Systems	None Detected
CL1137121	12-SC7-36	Duct Sealant - Exterior, HVAC Systems	None Detected
CL1137122	13-CA2-37	White Door Caulk - Exterior, Southwest Corner	None Detected
CL1137123	13-CA2-38	White Door Caulk - Exterior, Southwest Corner	None Detected
CL1137124	13-CA2-39	White Door Caulk - Exterior, Southwest Corner	None Detected
CL1137125	14-RF5-40	White Roof Coating - Roof	None Detected
CL1137126	14-RF5-41	White Roof Coating - Roof	None Detected
CL1137127	14-RF5-42	White Roof Coating - Roof	None Detected
CL1137128	15-RF4-43	Black Penetration Tar - Roof	5% Chrysotile
CL1137129	15-RF4-44	Black Penetration Tar - Roof	5% Chrysotile
CL1137130	15-RF4-45	Black Penetration Tar - Roof	5% Chrysotile

These samples were analyzed by layers. The overall percent asbestos for the sample is reported when relevant. The EPA considers a material to be asbestos containing only if it contains greater than one percent asbestos by Calibrated Visual Area Estimation (CVAE). EPA regulations also indicate that Regulated Asbestos Containing Materials (RACM) – materials that are friable or may become friable – be further analyzed by point counting when the results indicate less than ten percent asbestos by CVAE. CatesLab utilizes CVAE on a routine basis and does not include point counting unless specifically requested by the client. The results may not be reproduced except in full.

PLM REPORT SUMMARY

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client:	Terracon	Lab Job No.:	PLM-33186
Project (Line 1):	City of Tucson Water Building	Set No.:	47650
Project (Line 2):	1480 South 10th Avenue	Report Date:	4/11/2023
Project No:	63227145B	Sample Date:	4/7/2023
Identification:	Asbestos, Bulk Sample Analysis		
Test Method:	Polarized Light Microscopy/Dispersion Staining (PLM/DS) EPA Method 600/R-93/116		

On 4/10/2023, forty-five (45) bulk samples were submitted by Mr. Derek Sizemore of Terracon for asbestos analysis by PLM/DS.
Copies of the lab data sheets are attached; additional information may be found therein.

STATEMENT OF LABORATORY ACCREDITATION

The samples were analyzed in general accordance with the procedures outlined in the U.S. EPA Interim Method for the Determination of Asbestos in Bulk Insulation Samples as found in 40 CFR, Part 763, Subpart E, Appendix E (formerly Subpart F, Appendix A), or the current U.S. EPA method (EPA Method 600/R-93/116) for the analysis of asbestos in building materials, by polarized light microscopy. The results of each bulk sample relate only to the material tested and the results shall not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

Specific questions concerning bulk sample results shall be directed to the Laboratory Director.

Analyst: Chris Munch

Laboratory Director: John R. Cates, P.G.

Approved Signatory:

NVLAP®

TESTING
NVLAP LAB CODE 200569-0

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **1-FC2-1**
Sample Description: **Concrete Flooring - Warehouse**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137086**

Layer 1 **Concrete**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Cementitious**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate	**60**		**Non-fibrous**						
Cement Binders	**40**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137086**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **1-FC2-2**
Sample Description: **Concrete Flooring - Warehouse**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137087**

Layer 1 **Concrete**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Cementitious**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate	**60**		**Non-fibrous**						
Cement Binders	**40**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137087**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **1-FC2-3**
Sample Description: **Concrete Flooring - Warehouse**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137088**

Layer 1 **Concrete**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Cementitious**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate	**60**		**Non-fibrous**						
Cement Binders	**40**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137088**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **2-FC3-4**
Sample Description: **Black Cove Base & Mastic - Room 3**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137089**

Layer 1 **Cove Base**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Black	**Rubbery**	**Yes**	**ND**	**ND**	**95**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Vinyl Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Cream Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Cream	**Rubbery**	**Yes**	**ND**	**ND**	**5**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137089**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **2-FC3-5**
Sample Description: **Black Cove Base & Mastic - Room 5**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137090**

Layer 1 **Cove Base**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Black	**Rubbery**	**Yes**	**ND**	**ND**	**95**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Vinyl Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Cream Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Cream	**Rubbery**	**Yes**	**ND**	**ND**	**5**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137090**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **2-FC3-6**
Sample Description: **Black Cove Base & Mastic - Room 6**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137091**

Layer 1 **Cove Base**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Black	**Rubbery**	**Yes**	**ND**	**ND**	**95**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Vinyl Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Layer 2 **Cream Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Cream	**Rubbery**	**Yes**	**ND**	**ND**	**5**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glue Binders	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137091**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **3-WB4-7**
Sample Description: **Skim Coat Texture Drywall System - Room 3**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137092**

Layer 1 Paint Layer

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Hard	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Paint	100								

Prep/treatment: **heat / melt** Asbestos Content: **None Detected**

Layer 2 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Layer 3 Wallboard Material

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	1	ND	80

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	1		ribbons				high		
Aggregate	4		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation** Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186** Sample #: **CL1137092**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **3-WB4-8**
Sample Description: **Skim Coat Texture Drywall System - Room 5**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137093**

Layer 1 Paint Texture 1

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders/Paint	100		Non-fibrous						

Prep/treatment: **solvent dissolution**
Asbestos Content: **None Detected**

Layer 2 Joint Tape

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Fibrous / Woven	Yes	85	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glass Fibers	85		straight	none			none		
Binders	15		Non-fibrous						

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Layer 3 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Perlite	5		Glass Foam				0		
Aggregate/Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Layer 4 Paint Texture 2

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Chrysotile	2	2	Silky / Wavy	None	1.556	1.549	low	Parallel	+
Aggregate/Binders/Paint	98		Non-fibrous						

Prep/treatment: **solvent dissolution**
Asbestos Content: **2% Chrysotile (by PLM)**
1.00% Chrysotile - Paint Texture 2 (by Point Count)

Layer 5 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Comments: **Point Count performed by Chris Munch on 4/11/2023**

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137093**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **3-WB4-8**
Sample Description: **Skim Coat Texture Drywall System - Room 5**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137093**

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments: **Point Count performed by Chris Munch on 4/11/2023**

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137093**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **3-WB4-8**
Sample Description: **Skim Coat Texture Drywall System - Room 5**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137093**

Layer 6 **Wallboard Material**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	**Blocky**	**Yes**	**1**	**ND**	**60**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**1**		**ribbons**				**high**		
Aggregate	**4**		**Non-fibrous**						
Gypsum Binders	**95**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments: **Point Count performed by Chris Munch on 4/11/2023**

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137093**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **3-WB4-9**
Sample Description: **Skim Coat Texture Drywall System - Room 6**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137094**

Layer 1 Paint Texture 1

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Aggregate/Binders/Paint	100		Non-fibrous						

Prep/treatment: **solvent dissolution**
Asbestos Content: **None Detected**

Layer 2 Joint Tape

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Cream	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Layer 3 Joint Compound

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Perlite	5		Glass Foam				0		
Aggregate/Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Layer 4 Paint Texture 2

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	ND	ND	5

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Chrysotile	<1	1	Silky / Wavy	None	1.556	1.549	low	Parallel	+
Aggregate/Binders/Paint	100		Non-fibrous						

Prep/treatment: **solvent dissolution**
Asbestos Content: **<1% Chrysotile (by PLM)**
<0.25% Chrysotile - Paint Texture 2 (by Point Count)

Layer 5 Paper

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Comments: **Point Count performed by Chris Munch on 4/11/2023**

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137094**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **3-WB4-9**
Sample Description: **Skim Coat Texture Drywall System - Room 6**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137094**

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments: **Point Count performed by Chris Munch on 4/11/2023**

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137094**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **3-WB4-9**
Sample Description: **Skim Coat Texture Drywall System - Room 6**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137094**

Layer 6 **Wallboard Material**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	**Blocky**	**Yes**	**1**	**ND**	**60**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**1**		**ribbons**				**high**		
Aggregate	**4**		**Non-fibrous**						
Gypsum Binders	**95**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments: **Point Count performed by Chris Munch on 4/11/2023**

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137094**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **4-FC2-10**
Sample Description: **Concrete Coating - Room 2**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137095**

Layer 1 **Grey Coating**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Rubbery	Yes	ND	ND	100

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Binders / Fillers	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137095**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **4-FC2-11**
Sample Description: **Concrete Coating - Room 5**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137096**

Layer 1 **Grey Coating**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Rubbery	Yes	ND	ND	100

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Binders / Fillers	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137096**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **4-FC2-12**
Sample Description: **Concrete Coating - Room 6**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137097**

Layer 1 **Grey Coating**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Rubbery	Yes	ND	ND	100

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Binders / Fillers	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137097**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **5-CT4-13**
Sample Description: **2' X 4' Acoustical Ceiling Tile - Room 1**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137098**

Layer 1 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Beige w/wht pt	**Fibrous**	**Yes**	**60**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**30**		**ribbons**				**high**		
Mineral Wool Fibers	**30**		**Rods**				**0**		
Perlite	**30**		**Glass Foam**				**0**		
Binders / Paint	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137098**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **5-CT4-14**
Sample Description: **2' X 4' Acoustical Ceiling Tile - Room 1**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137099**

Layer 1 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Beige w/wht pt	Fibrous	Yes	60	ND	100

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	30		ribbons				high		
Mineral Wool Fibers	30		Rods				0		
Perlite	30		Glass Foam				0		
Binders / Paint	10		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137099**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **5-CT4-15**
Sample Description: **2' X 4' Acoustical Ceiling Tile - Room 1**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137100**

Layer 1 **Ceiling Tile**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Beige w/wht pt	Fibrous	Yes	60	ND	100

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	30		ribbons				high		
Mineral Wool Fibers	30		Rods				0		
Perlite	30		Glass Foam				0		
Binders / Paint	10		Non-fibrous						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137100**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **6-WB2-16**
Sample Description: **Untextured Drywall - Warehouse**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137101**

Layer 1 **Paper**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Layer 2 **Wallboard Material**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	1	ND	90

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glass Fibers	1		straight	none			none		
Aggregate	4		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137101**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **2-WB2-17**
Sample Description: **Untextured Drywall - Warehouse**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137102**

Layer 1 **Paper**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Layer 2 **Wallboard Material**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	1	ND	90

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glass Fibers	1		straight	none			none		
Aggregate	4		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137102**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **2-WB2-18**
Sample Description: **Untextured Drywall - Warehouse**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137103**

Layer 1 **Paper**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan	Fibrous	Yes	100	ND	10

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	100		ribbons				high		

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Layer 2 **Wallboard Material**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Blocky	Yes	1	ND	90

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Glass Fibers	1		straight	none			none		
Aggregate	4		Non-fibrous						
Gypsum Binders	95		Non-fibrous						

Prep/treatment: **mechanical separation**
Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137103**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **7-CA5-19**
Sample Description: **White Bathroom Caulk - Room 6**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137104**

Layer 1 **Caulking**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Rubbery	Yes	ND	ND	100

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Binders / Fillers	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137104**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **7-CA5-20**
Sample Description: **White Bathroom Caulk - Room 6**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137105**

Layer 1 **Caulking**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Binders / Fillers	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137105**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **7-CA5-21**
Sample Description: **White Bathroom Caulk - Room 6**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137106**

Layer 1 **Caulking**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Rubbery	Yes	ND	ND	100

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Binders / Fillers	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137106**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **8-CA6-22**
Sample Description: **Joint Expansion Caulk - Warehouse**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137107**

Layer 1 **Expansion Jt. Caulking**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Putty**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Binders / Fillers	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137107**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **8-CA6-23**
Sample Description: **Joint Expansion Caulk - Warehouse**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137108**

Layer 1 **Expansion Jt. Material**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan/Black	**Fibrous**	**Yes**	**90**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**90**		**ribbons**				**high**		
Tar Binders	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137108**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **8-CA6-24**
Sample Description: **Joint Expansion Caulk - Warehouse**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137109**

Layer 1 **Expansion Jt. Material**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Tan/Black	**Fibrous**	**Yes**	**90**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Cellulose Fibers	**90**		**ribbons**				**high**		
Tar Binders	**10**		**Non-fibrous**						

Prep/treatment: **mechanical separation**

Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137109**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **9-CS7-25**
Sample Description: **Black Metal Sealant - Exterior, near Roll-Up**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137110**

Layer 1 **Black/White Sealant**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Black/White	Putty	No	ND	ND	100

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Binders / Fillers	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137110**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **9-CS7-26**
Sample Description: **Black Metal Sealant - Exterior, near Roll-Up**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137111**

Layer 1 **Black/White Sealant**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Black/White	Putty	No	ND	ND	100

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Binders / Fillers	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137111**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **9-CS7-27**
Sample Description: **Black Metal Sealant - Exterior, near Roll-Up**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137112**

Layer 1 **Black/White Sealant**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Black/White	**Putty**	**No**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Binders / Fillers	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137112**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **10-SC7-28**
Sample Description: **White Metal Sealant - Exterior**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137113**

Layer 1 **White/Grey Sealant**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White/Grey	Rubbery	Yes	5	ND	100

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Polyethylene Fibers	5		Filaments/shredded				high		
Binders / Fillers	95		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137113**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **10-SC7-29**
Sample Description: **White Metal Sealant - Exterior**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137114**

Layer 1 **White/Grey Sealant**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White/Grey	Rubbery	Yes	5	ND	100

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Polyethylene Fibers	5		Filaments/shredded				high		
Binders / Fillers	95		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137114**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **10-SC7-30**
Sample Description: **White Metal Sealant - Exterior**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137115**

Layer 1 **White/Grey Sealant**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White/Grey	Rubbery	Yes	5	ND	100

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Polyethylene Fibers	5		Filaments/shredded				high		
Binders / Fillers	95		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137115**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **11-SC7-31**
Sample Description: **Silver Metal Sealant - Exterior**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137116**

Layer 1 **Silver/White Sealant**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Silver/White	Rubbery	Yes	5	ND	100

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Polyethylene Fibers	5		Filaments/shredded				high		
Binders / Fillers	95		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137116**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **11-SC7-32**
Sample Description: **Silver Metal Sealant - Exterior**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137117**

Layer 1 **Silver/White Sealant**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Silver/White	Rubbery	Yes	5	ND	100

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Polyethylene Fibers	5		Filaments/shredded				high		
Binders / Fillers	95		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137117**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **11-SC7-33**
Sample Description: **Silver Metal Sealant - Exterior**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137118**

Layer 1 **Silver/White Sealant**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Silver/White	Rubbery	Yes	5	ND	100

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Polyethylene Fibers	5		Filaments/shredded				high		
Binders / Fillers	95		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137118**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **12-SC7-34**
Sample Description: **Duct Sealant - Exterior, HVAC Systems**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137119**

Layer 1 **Grey Sealant**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	Rubbery	Yes	2	ND	100

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Synthetic Fibers	**2**		**Monofilaments**						
Binders / Fillers	**98**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137119**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **12-SC7-35**
Sample Description: **Duct Sealant - Exterior, HVAC Systems**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137120**

Layer 1 **Grey Sealant**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Rubbery**	**Yes**	**2**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Synthetic Fibers	**2**		**Monofilaments**						
Binders / Fillers	**98**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137120**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **12-SC7-36**
Sample Description: **Duct Sealant - Exterior, HVAC Systems**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137121**

Layer 1 **Grey Sealant**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Grey	**Rubbery**	**Yes**	**2**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Synthetic Fibers	**2**		**Monofilaments**						
Binders / Fillers	**98**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137121**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **13-CA2-37**
Sample Description: **White Door Caulk - Exterior, Southwest Corner**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137122**

Layer 1 **Caulking**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Binders / Fillers	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137122**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **13-CA2-38**
Sample Description: **White Door Caulk - Exterior, Southwest Corner**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137123**

Layer 1 **Caulking**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Binders / Fillers	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137123**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **13-CA2-39**
Sample Description: **White Door Caulk - Exterior, Southwest Corner**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137124**

Layer 1 **Caulking**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	**Rubbery**	**Yes**	**ND**	**ND**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Binders / Fillers	**100**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137124**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **14-RF5-40**
Sample Description: **White Roof Coating - Roof**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137125**

Layer 1 **White Coating**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Rubbery	Yes	ND	ND	100

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Binders / Fillers	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137125**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **14-RF5-41**
Sample Description: **White Roof Coating - Roof**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137126**

Layer 1 **White Coating**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Rubbery	Yes	ND	ND	100

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Binders / Fillers	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137126**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **14-RF5-42**
Sample Description: **White Roof Coating - Roof**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137127**

Layer 1 **White Coating**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
White	Rubbery	Yes	ND	ND	100

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Binders / Fillers	100		Non-fibrous						

Prep/treatment: **heat / melt**

Asbestos Content: **None Detected**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137127**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **15-RF4-43**
Sample Description: **Black Penetration Tar - Roof**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137128**

Layer 1 **Roofing Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Black	**Asphaltic**	**Yes**	**2**	**2**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Chrysotile	**5**	**4**	**Silky / Wavy**	**None**	**1.556**	**1.549**	**low**	**Parallel**	**+**
Aggregate/Tar Binders	**95**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **5% Chrysotile**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137128**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **15-RF4-44**
Sample Description: **Black Penetration Tar - Roof**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137129**

Layer 1 **Roofing Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Black	**Asphaltic**	**Yes**	**2**	**2**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Chrysotile	**5**	**4**	**Silky / Wavy**	**None**	**1.556**	**1.549**	**low**	**Parallel**	**+**
Aggregate/Tar Binders	**95**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **5% Chrysotile**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137129**

Bulk Asbestos Analysis Sheet

Cates Laboratories
1339 Motor Circle
Dallas, Texas 75207 (214) 920-5006

EPA Method 600/R-93/116

NVLAP Lab No. 200569-0
TDSHS License No. 30-0287

Client: **Terracon**
Project (Line 1): **City of Tucson Water Building**
Project (Line 2): **1480 South 10th Avenue**
Project #: **63227145B**
Field ID #: **15-RF4-45**
Sample Description: **Black Penetration Tar - Roof**

Lab Proj #: **PLM-33186**
Set #: **47650**
Sample #: **CL1137130**

Layer 1 **Roofing Mastic**

Stereoscopic Examination

Color	Texture	Homogeneous?	% Fibrous	% Asbestos	% of Sample
Black	**Asphaltic**	**Yes**	**2**	**2**	**100**

PLM Examination:

Components	%	+/-	Morphology	Color/ Pleochroism	Parallel Ref. Index	Perpendicular Ref. Index	Biref	Extinction Angle	Sign of Elongation
Chrysotile	**5**	**4**	**Silky / Wavy**	**None**	**1.556**	**1.549**	**low**	**Parallel**	**+**
Aggregate/Tar Binders	**95**		**Non-fibrous**						

Prep/treatment: **heat / melt**

Asbestos Content: **5% Chrysotile**

Comments:

Analyst: **Chris Munch**
Date Analyzed: **4/11/2023**

Lab Job #: **PLM-33186**
Sample #: **CL1137130**

CATES LABORATORIES

CHAIN OF CUSTODY

CL Project No PLM-33186
(Lab Only) SEM-47650

Company: Terracon Consultant's, Inc.

Contact/Results to: Derek Sizemore Verbal ☐ Email ■ Fax ☐ (check all that apply)

Email(s) derek.sizemore@terracon com

Telephone No 5207984844 Fax No.

Project Information

City of Tucson Water Building Project No.: 63227145B

Address: 1480 S 10th Avenue P.O No.:

Turnaround (check one)

RUSH ASAP ☐ RUSH 24HR ☐ 2 DAY (standard) ■ 3-4 DAY ☐ 5 DAY ☐

Testing Services (check all that apply)

Asbestos		IAQ - Mold (Non-Viable)
PLM-BULK EPA 600/R-93/116 ■ Point Count (400) ☐	PCM-AIR NIOSH 7400 ☐ OSHA TWA ☐	AIR (spore trap) - Standard Profile (count/genus identification) ☐ AIR (spore trap) - Expanded Profile (w/insect parts/pollen/skin) ☐ BULK (tape lift, swab) - Standard Profile (genus identification) ☐

CatesLab No Range (Lab Only)	Sample Date	
1137086 - 1137130		No. of Samples. Positive Stop: Yes ☐ No ☐

Sample No.	Sample Description/Location	Volume (air only)
	SEE ATTACHED SAMPLE LOG	
	Note: Please point count results identified in PLM at 2% or less. On point count, please positive stop at 1.5% or higher. Please report drywall systems with an additional composite line.	

Relinquished By	Date/Time:	Received By:	Date/Time:
Derek Sizemore	4/7/23 / 1430		4/10/23 1000

AF72017-09 - issued 4/3/2017 Walk-In☐ D-Drop☐ F-Drop☐ FedEx ☒ UPS☐ Lonestar☐ USPS☐

Terracon PN: 63227145B

Asbestos Bulk Sample Log

PLM 3318b
SET-47650

Building Name/Site Address: COT Water Building
Inspector(s): Derek Sizemore and Samuel Openlander

Sample No:	Material Sampled	Location	Collection Date
1 - FC2 - 1	Concrete Flooring	Warehouse	4/7/23
↓ - ↓ - 2			
↓ - ↓ - 3			
2 - FC3 - 4	Black Cove Base and Mastic	Room 3	
↓ - ↓ - 5		Room 5	
↓ - ↓ - 6		Room 6	
3 - WB4 - 7	Skimcoat Texture Drywall System	Room 3	
↓ - ↓ - 8		Room 5	
↓ - ↓ - 9		Room 6	
4 - FC2 - 10	Concrete casting	Room 2	
↓ - ↓ - 11		Room 5	
↓ - ↓ - 12		Room 6	
5 - CT4 - 13	2 x 4 ACT	Room 1	
↓ - ↓ - 14			
↓ - ↓ - 15			
6 - WB2 - 16	Untextured Drywall	Warehouse	
↓ - ↓ - 17			
↓ - ↓ - 18			

Terracon PN: 63227145B

Asbestos Bulk Sample Log

PWN 33186
SAP - 47650

Building Name/Site Address: COT Water Building
Inspector(s): Derek Sizemore and Samuel Openlander

Sample No: (HA, BS Code, Sample No.)	Material Sampled	Location	Collection Date
7 - CA5 - 19	White Bathroom Caulk	Room 6	4/7/23
↓ - ↓ - 20	↓	↓	↓
↓ - ↓ - 21	↓	↓	↓
8 - CA6 - 22	Joint expansion Caulk	Warehouse	↓
↓ - ↓ - 23	↓	↓	↓
↓ - ↓ - 24	↓	↓	↓
9 - SC7 - 25	Black Metal Sealant	Exterior (Near Rollup)	↓
↓ - ↓ - 26	↓	↓	↓
↓ - ↓ - 27	↓	↓	↓
10 - SC7 - 28	White Metal Sealant	Exterior	↓
↓ - ↓ - 29	↓	↓	↓
↓ - ↓ - 30	↓	↓	↓
11 - SC7 - 31	Silver Metal Sealant	↓	↓
↓ - ↓ - 32	↓	↓	↓
↓ - ↓ - 33	↓	↓	↓
12 - SC7 - 34	Duct Sealant	Exterior HVAC Systems	↓
↓ - ↓ - 35	↓	↓	↓
↓ - ↓ - 36	↓	↓	↓

Terracon PN: 63227145B

Asbestos Bulk Sample Log

PLN# 33186
SEAT- 47650

Building Name/Site Address: COT Water Building
Inspector(s): Derek Sizemore and Samuel Openlander

Sample No: (HA, BS Code, Sample No.)	Material Sampled	Location	Collection Date
13 - CA2 - 37	White Door Caulk	SW Corner Exterior	4/7/23
- - 38			
- - 39			
14 - RF5 - 40	White Roof Coating	Roof	
- - 41			
- - 42			
15 - RF4 - 43	Black Penetration Tar		
- - 44			
- - 45			
- - 46			
- - 47			
- - 48			
- - 49			
- - 50			
- - 51			
- - 52			
- - 53			
- - 54			

APPENDIX F

LICENSES AND CERTIFICATIONS

THE ASBESTOS INSTITUTE

Certifies that

Derek Sizemore

has attended and received instruction in the EPA approved course

AHERA Building Inspector Refresher

on

July 05, 2022

and successfully completed and passed the competency exam.

Certificate:
ON-4644-14173-070522

Date of Examination:
5-Jul-2022
Date of Expiration:
05-Jul-2023

William T. Cavness
Director

Approved Instructor

THE ASBESTOS INSTITUTE
20033 N. 19th Ave, Building 6, Phoenix, AZ 85027
602-864-6564 – www.theasbestosinstitute.com

This training meets all requirements for asbestos certification under Toxic Substance Control Act Title II.

United States Environmental Protection Agency

This is to certify that

Derek R Sizemore

has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 as:

Inspector

In the Jurisdiction of:

All EPA Administered Lead-based Paint Activities Program States, Tribes and Territories

This certification is valid from the date of issuance and expires November 14, 2025

LBP-I-I168960-3

Certification #

October 20, 2022

Issued On

Adrienne Priselac, Manager, Toxics Office

Land Division

THE ASBESTOS INSTITUTE

Certifies that

Samuel Openlander

has attended and received instruction in the EPA approved course

AHERA Building Inspector Initial

on

January 9-11 2023

and successfully completed and passed the competency exam.

Certificate:
4380-15223-011123

Date of Examination:
11-Jan-2023
Date of Expiration:
11-Jan-2024

William T. Cavness
Director

Approved Instructor

THE ASBESTOS INSTITUTE
20033 N. 19th Ave, Building 6, Phoenix, AZ 85027
602-864-6564 – www.theasbestosinstitute.com

This training meets all requirements for asbestos certification under Toxic Substance Control Act Title II.