



March 3, 2023

Mr. Garrett Foley
Regional Construction Manager
The Kroger Co.
40393 Grand River Avenue
Novi, Michigan 48375

**RE: Asbestos Survey Report
Kroger Store D-361 Renovation
425 North Center
Northville, Michigan
Project No. 328-203.0001**

Dear Mr. Foley:

Civil & Environmental Consultants, Inc. (CEC) was retained by The Kroger Co. (Kroger) to conduct an asbestos-containing material (ACM) survey at the Kroger Store D-361 Renovation in Northville, Michigan (subject property). The survey was conducted in accordance with CEC Proposal No. 328-203, and authorized via Kroger Purchase Order No. 786306, dated January 26, 2023. CEC understands that this asbestos survey was requested due to planned renovation of the subject property structure.

CEC's subcontractor, Micro Air Inc. (Micro Air), conducted the survey on February 10, 2023. The survey was conducted in general accordance with The Kroger Co., Asbestos-Containing Materials Scope of Work and Report Requirements (dated January 2022), the USEPA Asbestos National Emissions Standard for Hazardous Air Pollutants (NESHAP; 40 CFR Part 61, Subpart M) and the sample collection protocols established in EPA regulation 40 CFR 763, the Asbestos Hazard Emergency Response Act (AHERA). The Micro Air report is attached and must be read in its entirety for a comprehensive understanding of the findings of the survey and recommendations.

PROJECT INFORMATION

The building was constructed in 1971, and encompasses approximately 36,397 square-feet under roof. The building was constructed on a concrete slab foundation supporting concrete block and brick exterior walls, with metal roof joists and a corrugated metal roof deck. Interior finishes consists of wallboard and concrete block walls. Ceilings were suspended acoustical ceiling tiles or exposed roof joists. Floors were carpet, vinyl or ceramic tile, or concrete. The roofing system consisted of a rubber membrane over isocyanate panels and associated sealants.

The subject property consisted of Kroger Store D-361 and asphalt parking lot. The Kroger Store consisted of a grocery sales area, department preparation areas, pharmacy, office area, and a warehouse. Mezzanine areas consist of an administrative office, ECR room, and a mechanical area. Additional tenants within the Kroger Store included Starbucks.

FIELD ACTIVITIES

CEC's subcontractor, Micro Air Inc. (Micro Air), utilizing a Michigan-licensed asbestos inspector, conducted the survey. The survey was limited to accessible areas and destructive sampling (e.g., breaking into wall voids) was not conducted.

Survey activities began with a visual inspection of interior and exterior (including roofs) areas of the subject property to identify homogeneous areas of suspect asbestos-containing materials (ACM). A homogeneous area (HA) consists of building materials that appear similar throughout in terms of color, texture and consideration of date of installation or application.

Based on the findings of the visual inspection, bulk samples of suspect ACM were collected in general accordance with AHERA sample collection protocols. Bulk samples were collected of the following suspect materials: exterior wall foundation caulk, window/door frame caulk, window glazing, exterior finishing system, brick mortar, brick expansion joint, concrete block mortar, concrete block expansion joint, poured concrete slab, poured flooring, clay tile grout, plastic wall adhesive, ceramic tile grout, carpet mastic, gasket material on cooler/freezer walls, seam caulk on HVAC duct, drywall and joint compound, 2' x 4' drop acoustical ceiling tile (two patterns), vinyl base molding and adhesive (two colors), vinyl stair tread and adhesive, 12" x 12" vinyl floor tile and mastic (two patterns), 24" x 24" vinyl floor tile and mastic, vibration joint cloth, and woodgrain pattern linoleum flooring and adhesive.

Bulk samples were submitted under chain of custody to a laboratory accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) for analysis by polarized light microscopy (PLM) with dispersion staining techniques per EPA's Method for the Determination of Asbestos in Bulk Building Materials (600/R-93-116).

REGULATORY OVERVIEW

The State of Michigan Department of Environmental Quality (MDEQ), Air Division enforces the USEPA Asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61, Subpart M). The Asbestos NESHAP regulates asbestos fiber emissions, asbestos waste disposal practices, and requires the identification and classification according to friability of existing ACM prior to demolition or renovation activity.

The Asbestos NESHAP regulation defines ACM as a material containing more than 1% asbestos. Friable ACM as any material containing more than 1% asbestos that, when dry, may be crumbled, pulverized or reduced to powder by hand pressure. Non-friable materials when dry, cannot be may be crumbled, pulverized or reduced to powder by hand pressure. Category I non-friable ACMs 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 ACMs are all other non-friable materials other than Category I non-friable ACM that contain more than 1% asbestos.

Friable ACM along with Category I and Category II non-friable ACM which is in poor condition and has become friable or which will be subjected to drilling, sanding, grinding, cutting or abrading and could be crushed or pulverized during anticipated renovation or renovation activities are considered regulated ACM (RACM). RACM must be removed prior to renovation or demolition activities which will disturb the asbestos-containing materials.

The Occupational Safety and Health Administration (OSHA) asbestos standard for construction (29 CFR 1926.1101) regulates workplace exposure to asbestos. The OSHA standard requires that employee exposures to airborne asbestos fibers be maintained below 0.1 fiber 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. f/cc) over a 30-minute time period, the excursion limit. The TWA and excursion limit together are known as the OSHA permissible exposure limits or 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.

Asbestos abatement notifications for all demolition and renovation activities involving the removal or disturbance of RACM and non-friable ACMs should be submitted to the Michigan Department of Environmental Quality (MDEQ) and LARA at least 10-working days prior to the commencement of project activities. If remodeling/renovation efforts include repair, removal or replacement of “load bearing” structural members, this is considered demolition and a 10-day notification to the local municipal agency may be required.

FINDINGS

One hundred and seventeen bulk samples of suspect ACMs were collected during the inspection and submitted to an accredited laboratory for analysis by PLM. Laboratory analysis of the bulk samples identified asbestos in the following materials:

- Black floor tile mastic in the mezzanine office

The black floor tile mastic was observed on the concrete floor beneath carpet tile in the mezzanine office. The material is considered a Category I non-friable ACM in good condition. The presence and quantity should be verified by abatement contractors during pre-bid walkthroughs.

RECOMMENDATIONS

Based on the results of this survey, ACMs were identified in the subject property building. Confirmed or assumed materials classified as RACM or Category II non-friable must be removed prior to renovation or demolition that will disturb the materials. Identified ACMs classified as RACM or Category II non-friable include the following:

- No RACM or Category II nonfriable ACM identified

Category I non-friable ACM may not need to be removed and disposed, provided the material is not subjected to burning, drilling, sanding, grinding, cutting, or abrading, and/or potentially crushed or pulverized during renovation or demolition activities. Identified ACMs classified as Category I non-friable include the following:

- Black floor tile mastic

The black floor tile mastic, if maintained in its current condition, represent minimal potential for a fiber release. An O & M Program is recommended if the materials are to be left in place for any length of time. If the materials are to be removed, CEC recommends that asbestos removal, regardless of quantity or NESHAP Classification, be conducted by a State of Michigan-licensed asbestos abatement contractor prior to demolition or renovation activities that would disturb the materials. Further, suspect materials, other than those identified during this asbestos survey may exist within the building. Should suspect materials other than those which were identified during this survey be uncovered during demolition or renovation, those materials should be assumed asbestos-containing until sampling and analysis can confirm or deny asbestos content.

GENERAL COMMENTS

This report has been prepared for the exclusive use and reliance of The Kroger Co. and its subsidiaries and affiliates and its authorized representatives (Users), who may solely rely upon the conclusions presented herein. Reliance on this Asbestos Survey by the Users and all authorized parties will be subject to the terms, conditions and limitations stated in the Professional Services and Consulting Agreement (PSCA) signed by Civil & Environmental Consultants, Inc. and the Kroger Co. General Offices (G.O.) on June 20, 2019. The use or reliance by a third party is not permitted without the specific written permission of both the CEC and Kroger. ***This report is not a bidding document.*** Contractors or consultants reviewing this report must draw their own conclusions regarding further investigation or remediation deemed necessary. CEC 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.

CEC appreciates the opportunity to serve The Kroger Co. on this project. Please call us if we can be of any further assistance.

Sincerely,

Civil & Environmental Consultants, Inc.



Bryan N. Gatlin

Senior Environmental Scientist



Deborah J. Blankenship, RG, PG, CPG

Principal

Attachment

Micro Air Renovation Asbestos Inspection Report, dated February 28, 2023

cc: Cliff Brown, The Kroger Co.
Marty Cristo, The Kroger Co.
Peg Chandler, The Kroger Co.
Stephanie Barlow, The Kroger Co.
Brett Smollen, The Kroger Co.

ATTACHMENT

2023

NESHAP Renovation Asbestos Survey Report

For

**Existing Kroger Store D-361
425 North Center
Northville, Michigan 48167**

Prepared For:

Civil & Environmental Consultants, Inc.

3000 Little Hills Expressway, Suite 102

St. Charles, MO 63301

Attn: Ms. Deborah J. Blankenship, P.G., R.G., Principal

Prepared By:



Micro Air, Inc.

6320 La Pas Trail

Indianapolis, Indiana 46268

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TAB 1

ASBESTOS SURVEY REPORT



6320 LA PAS TRAIL, INDIANAPOLIS, INDIANA 46268
TELEPHONE: (317) 293-1533 FAX: (317) 290-3566

E-MAIL: microair@microair.com
WEB SITE: <http://www.microair.com>

Indoor Air Quality
Catastrophe Services
Microbiology
Asbestos Surveys
Air Monitoring
Industrial Hygiene
Epidemiology
Radon Testing
Water Testing
Lead Testing

February 28th, 2023

Ms. Deborah J. Blankenship, P.G
Senior Project Manager
Civil & Environmental Consultants, Inc.
3000 Little Hills Expressway; Suite 102
Saint Charles, MO 63301

**RE: Renovation Asbestos Inspection
Existing Kroger Store D-361
425 North Center
Northville, Michigan 48167
Micro Air, Inc. Job #20-18982-D**

Dear Ms. Blankenship:

Micro Air, Inc. was contracted by Civil & Environmental Consultants, Inc. to conduct an asbestos inspection of the Kroger Store D-361 located at 425 North Center in Northville, Michigan. Mr. Donald G. French of Micro Air, Inc. (State of Michigan asbestos inspector accreditation number A11834, Exp. Date: 03/07/2023) conducted the inspection on February 10th, 2023. The survey was conducted in order to accommodate renovation of the existing Kroger Store at the site.

All survey work was conducted following guidelines established under the EPA National Emission Standard for Asbestos (40 CFR 61 Subpart M) and the EPA "Asbestos Hazard Emergency Response Act (AHERA)" (40 CFR 763 subpart E). **Sampling of the roofing system was conducted during the course of the survey per the request of Civil & Environmental Consultants, Inc.**

All bulk samples collected during the inspection were submitted to Micro Air, Inc.'s laboratory for analysis. All bulk samples were analyzed utilizing the EPA approved Polarized Light Microscopy method (EPA Method/600/R-93/116). Following is a synopsis of the findings of the survey:

**Existing Kroger Store D-361
425 North Center
Northville, Michigan 48167**

According to the Northville City Assessors office the building was constructed in 1971 and contains approximately 36,397 square feet of floor space. An extensive interior renovation was apparently conducted prior to this inspection. The retail space is constructed of concrete block and brick with exterior finishing system fascia, drywall soffits, aluminum door and window system, concrete block walls and structural steel supporting a corrugated metal roof deck. A rubber membrane roofing system was identified at the site.

Interior finishes consist of drywall interior walls, drop acoustical tile ceilings and carpet, sheet flooring, vinyl floor tile and ceramic tile applied over poured concrete floors. An administrative office and an ECR room were identified on the mezzanine level of the store. A manager's office, click-list, and a Starbucks were identified on the ground level of the store.

Domestic water and refrigerant lines throughout the building are insulated with either non-suspect armaflex or fiberglass insulation. An exposed roof drain with cementitious fittings was identified at the southeast corner of the store floor. Non-suspect wood was identified at interior cooler walls throughout the building. The building is heated by rooftop gas units with supplemental electric cooling.

The following potential, asbestos-containing materials were identified at the retail space and sampled for asbestos content during the inspection:

1. Exterior wall foundation caulk
2. Window/door frame caulk
3. Window glazing
4. Exterior finishing system
5. Brick mortar
6. Brick expansion joint
7. Concrete block mortar
8. Concrete block expansion joint
9. Poured concrete slab
10. Poured flooring
11. Clay tile grout
12. Plastic wall adhesive
13. Ceramic tile grout
14. Carpet mastic
15. Gasket material on cooler/freezer walls
16. Seam caulk on HVAC duct
17. Perimeter drywall and associated joint compound
18. Interior drywall and associated joint compound
19. 2' x 4' drop acoustical ceiling tile (two patterns)

- 20. Vinyl base molding and adhesive (two colors)
- 21. Vinyl stair tread and adhesive
- 22. 12" x 12" vinyl floor tile and mastic (Two patterns)
- 23. 24" x 24" vinyl floor tile and mastic
- 24. Vibration joint cloth
- 25. Woodgrain pattern linoleum flooring and adhesive

The following asbestos-containing material was confirmed to exist within the existing Kroger Store D-361 located at 425 North Center in Northville, Michigan during the course of the inspection:

Homogeneous Area #1

Material: Original floor tile mastic on concrete floor, **Location:** Mezzanine office, **Quantity:** Approximately 145 square feet, **NESHAP Classification:** Known, Category 1, non-friable asbestos-containing material*, **Note:** The material in question is what is believed to be the original floor tile mastic remaining under the carpet tile.

Notes:

* Vinyl floor tile adhesives, are classified as Category 1 non-friable asbestos, under U.S. Environmental Protection Agency and Indiana Department of Environmental Management regulations. **These materials may remain in place during the course of building renovations, provided they not subjected to sanding, grinding, mechanical abrading, burning or recycling. If these materials are removed to accommodate building renovations, the materials should be removed by a State of Michigan licensed asbestos contractor.**

Enclosed is a copy of the laboratory bulk sample reports/chain of custody logs, bulk sample location drawings, photographs of materials sampled and inspector/laboratory certifications.

Thank you for the opportunity to provide our asbestos related services. If you have any questions concerning this report or need additional information, please do not hesitate to contact me.

Respectfully submitted,



Donald G. French
Asbestos Inspector
Micro Air, Inc.

TAB 2

PHOTOGRAPHS



Existing Kroger Store D-361

425 North Center

Northville, Michigan 48167

Exterior Photo



Existing Kroger Store D-361

425 North Center

Northville, Michigan 48167

Exterior Soffits and Perimeter Walls

Perimeter Drywall and Associated Joint Compound

No Asbestos Detected



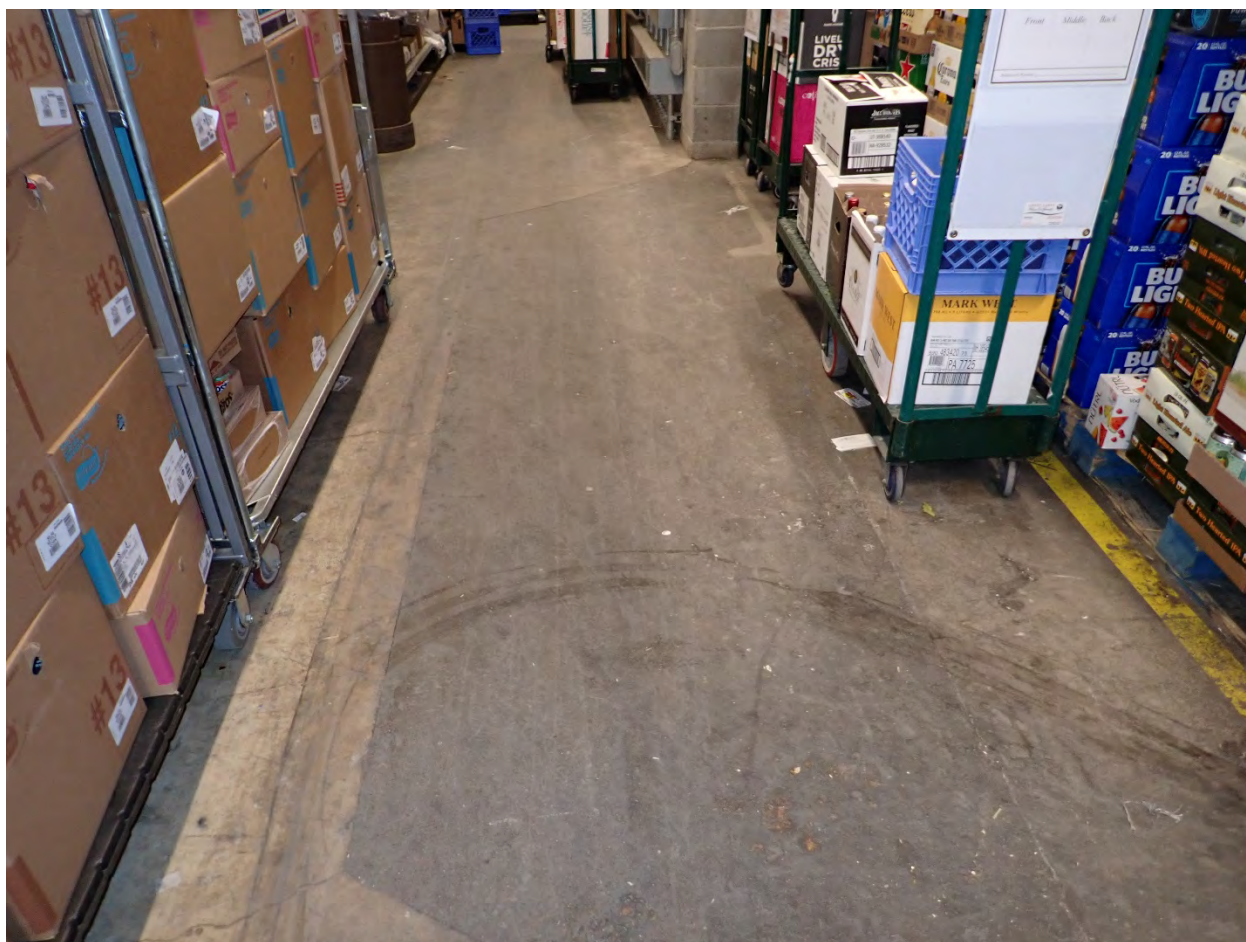
Existing Kroger Store D-361
425 North Center
Northville, Michigan 48167
Interior Walls
Interior Drywall and Associated Joint Compound
No Asbestos Detected



Existing Kroger Store D-361
425 North Center
Northville, Michigan 48167
Exterior Fascia
Brick Mortar and Expansion Joint
No Asbestos Detected



Existing Kroger Store D-361
425 North Center
Northville, Michigan 48167
Loading Dock and Warehouse Areas
Concrete Block Mortar and Expansion Joint
No Asbestos Detected



Existing Kroger Store D-361
425 North Center
Northville, Michigan 48167
Loading Dock and Warehouse Areas
Bare Concrete Slab Flooring
No Asbestos Detected



Existing Kroger Store D-361
425 North Center
Northville, Michigan 48167
Exterior Perimeter at Base of Walls
Foundation Wall Caulk
No Asbestos Detected



Existing Kroger Store D-361

425 North Center

Northville, Michigan 48167

Exterior – North and East Sides

Window/Door Frame Caulk

No Asbestos Detected



Existing Kroger Store D-361

425 North Center

Northville, Michigan 48167

Exterior – North and East Sides

Window Glazing

No Asbestos Detected



Existing Kroger Store D-361

425 North Center

Northville, Michigan 48167

Exterior Upper Wall

EFS

No Asbestos Detected



Existing Kroger Store D-361
425 North Center
Northville, Michigan 48167
Mezzanine Office, Managers Office, Vestibule
Carpet Tile Mastic
Known, Asbestos-Containing Material

Note: Asbestos was only detected under the carpet in the mezzanine office as shown in photo



Existing Kroger Store D-361
425 North Center
Northville, Michigan 48167
Restrooms and Food Prep Areas
Ceramic Tile Grout
No Asbestos Detected



Existing Kroger Store D-361
425 North Center
Northville, Michigan 48167
Lower Walls of Foyer Recycling, and Store Floor
Adhesive on Plastic Wall Covering
No Asbestos Detected



Existing Kroger Store D-361
425 North Center
Northville, Michigan 48167
Floral Department Sink Only
Stainless Steel Sink Insulation
No Asbestos Detected



Existing Kroger Store D-361

425 North Center

Northville, Michigan 48167

Metal Coolers / Freezers

Gasket at Cooler Walls

No Asbestos Detected



Existing Kroger Store D-361

425 North Center

Northville, Michigan 48167

Warehouse Area

Seam Caulk on HVAC Duct and Vibration Joint Cloth

No Asbestos Detected



Existing Kroger Store D-361

425 North Center

Northville, Michigan 48167

Food Prep Areas

Poured Flooring

No Asbestos Detected



Existing Kroger Store D-361

425 North Center

Northville, Michigan 48167

Stairwell

Vinyl Stair Tread Adhesive

No Asbestos Detected



Existing Kroger Store D-361

425 North Center

Northville, Michigan 48167

Ground Floor Managers Office and Break Room

2' x 4' Rough Pattern Ceiling Tile

No Asbestos Detected



Existing Kroger Store D-361
425 North Center
Northville, Michigan 48167
Food Prep Areas
2' x 4' Drywall Pattern Ceiling Tile
No Asbestos Detected



Existing Kroger Store D-361
425 North Center
Northville, Michigan 48167
Mezzanine and Store Floor
Vinyl Base Molding and Adhesive
No Asbestos Detected



Existing Kroger Store D-361

425 North Center

Northville, Michigan 48167

Mezzanine Level

12" x 12" White Speck Pattern Floor Tile and Mastic

No Asbestos Detected

NO PHOTO

Existing Kroger Store D-361

425 North Center

Northville, Michigan 48167

Starbucks

24" x 24" Pattern Floor Tile and Mastic

No Asbestos Detected



Existing Kroger Store D-361

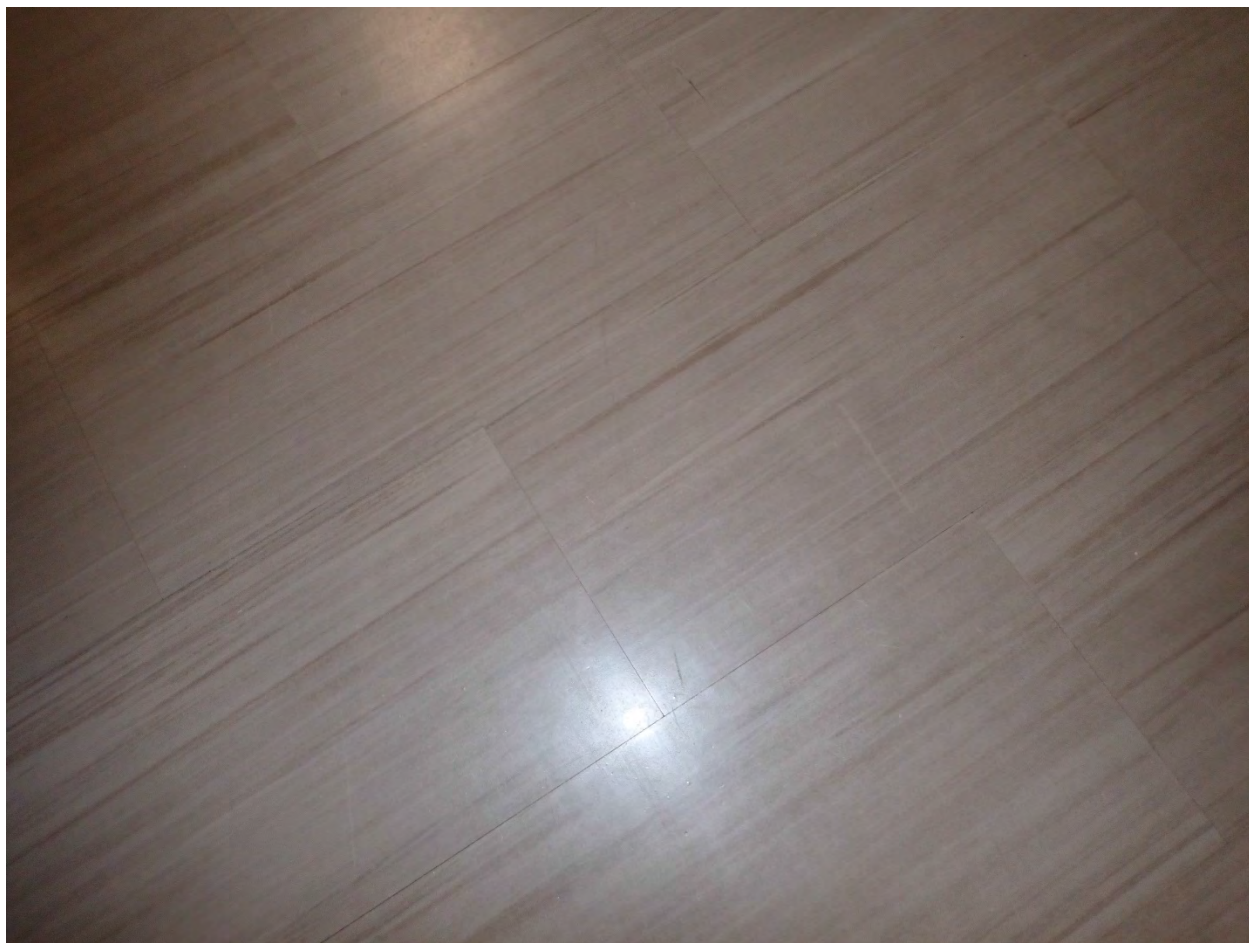
425 North Center

Northville, Michigan 48167

Store Floor

Dark Woodgrain Linoleum Flooring and Adhesive

No Asbestos Detected



Existing Kroger Store D-361

425 North Center

Northville, Michigan 48167

Store Floor

Light Woodgrain Linoleum Flooring and Adhesive

No Asbestos Detected



Existing Kroger Store D-361

425 North Center

Northville, Michigan 48167

Store Floor at SW Corner

Roof Drain Pan and Fitting Insulation on Fiberglass Line

No Asbestos Detected



Existing Kroger Store D-361

425 North Center

Northville, Michigan 48167

Roof

Seam Cement on Rubber Membrane Roofing System



Existing Kroger Store D-361

425 North Center

Northville, Michigan 48167

Roof

Roof Penetration Sealant on Rubber Membrane Roofing System



Existing Kroger Store D-361

425 North Center

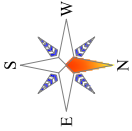
Northville, Michigan 48167

Roof

Roofing Felts under Rubber Membrane Roofing System

TAB 3

ASBESTOS BULK SAMPLE LOCATION DRAWING

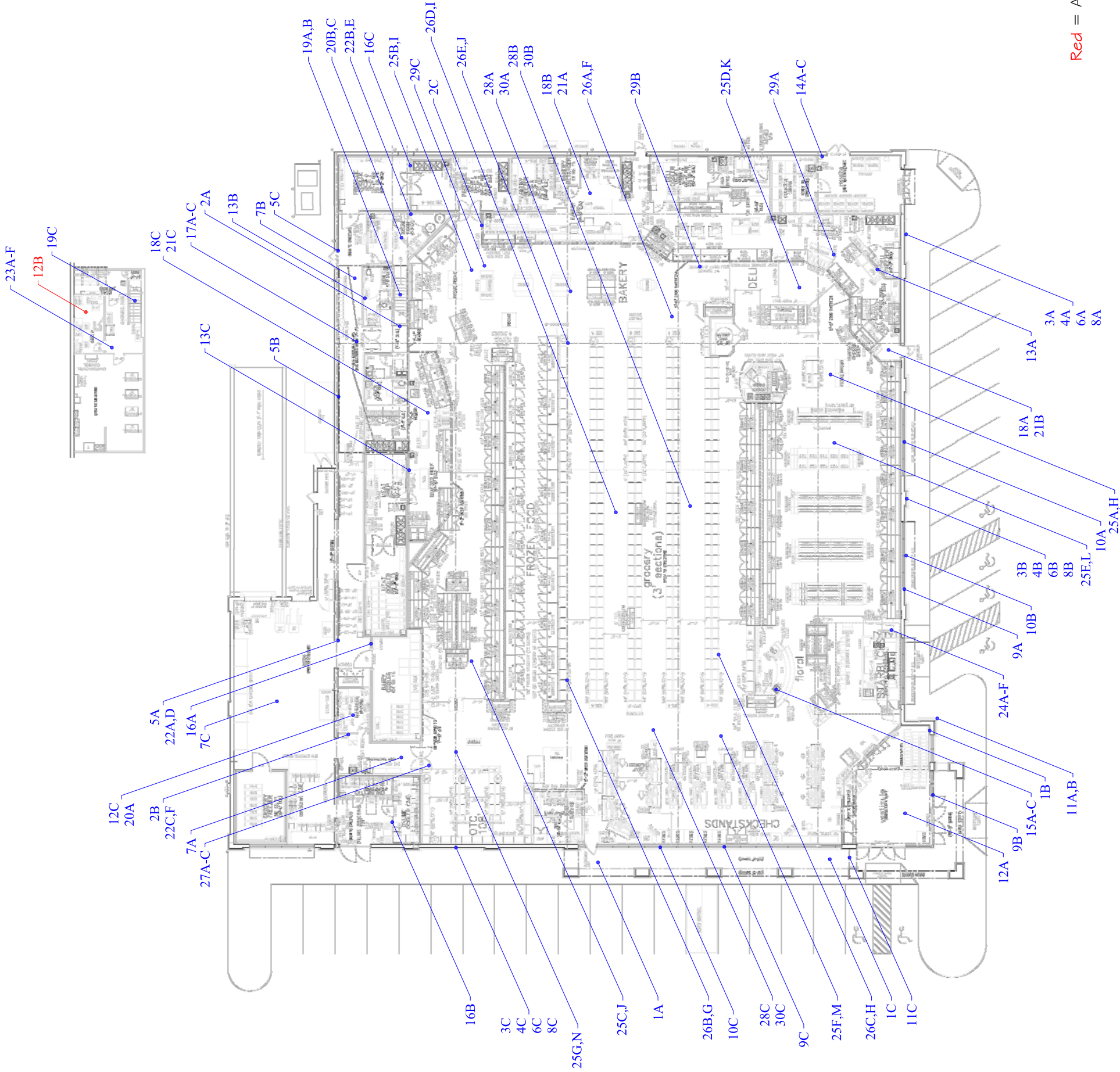


Date:	February 2023
Scale:	None
Project Mgr.:	A.E.B.
Drawn By:	D.G.F.
Checked By:	A.E.B.

Micro Air, Inc.
6320 La Pas Trail
Indianapolis, Indiana 46268
(317) 293-1533

Existing Kroger Store D-361
425 North Center
Northville, Michigan 48167
Asbestos Bulk Sample Location Drawing
Drawing #: 20-18982-D SLD

Red = Asbestos-Containing Sample Location



TAB 4

ASBESTOS BULK SAMPLE REPORT/CHAIN OF CUSTODY



micro air inc.

6320 La Pas Trail, Indianapolis, IN 46268 * Phone: (317) 293-1533 * lab@microair.com * www.microair.com

February 22, 2023

Civil & Environmental Consultants
Deborah Blankenship
3000 Little Hills Expressway
Suite 102
St. Charles, MO 63301

Polarized Light Microscopy (PLM) Bulk Sample Results

Project Name:	Existing Kroger Store D-361	Location:	425 N. Center - Northville, MI
Project Number:	20-18982-D	Date Received:	February 17, 2023

Enclosed please find the results of samples analyzed by the Micro Air, Inc. laboratory.

Samples were analyzed by 40 CFR Part 763 Appendix E to Subpart E - Interim Method for the Determination of Asbestos in Bulk Insulation Samples using Polarized Light Microscopy (PLM) with Dispersion Staining. Where appropriate, analytical procedures outlined in the EPA Method/600/R-93/116, Method for the Determination of Asbestos in Bulk Building Materials (July 1993) may also be used during analysis. All samples may be heated to release fibrous material.

Samples are considered asbestos-containing material (ACM), as defined by the EPA, when asbestos is found in greater than 1% of the sample. Sample percentages are calculated using comparative visual estimation (CVES). Asbestos regulations and EPA methods state that distinct layers must be analyzed and reported separately. If composite analysis is requested and performed on multi-layered samples, the sample is considered ACM if any quantity of asbestos is found. This report should not be used to imply product or service endorsement by NVLAP, NIST, or any agency of the U.S. Government.

Disclaimer: PLM results of non-friable organic bound (NOB) materials, such as floor tiles and roofing materials, can be inconclusive due to analytical difficulties in standard bulk sample analysis techniques. If desired, results can be confirmed with transmission electron microscopy (TEM) to ensure that asbestos has not been missed during PLM analysis.

This report may not be reproduced, except in full, without written approval from Micro Air, Inc. These results only relate to the items tested and are only as accurate as the sampling information submitted by the customer (e.g. air volumes). Samples are received in good condition unless otherwise noted.

Please consult your Project Manager, Donald French, with any questions regarding these results.

Analyzed By:
Makayla Ohrberg

Authorized By:

Betsie L. McAfee
Technical Manager

Client: Civil & Environmental Consultants
 Report Date: 2/22/2023
 Lab Number: 165917

Project Number: 20-18982-D
 Project Name: Existing Kroger Store D-361

Polarized Light Microscopy (PLM) Bulk Sample Results

Location: 425 N. Center - Northville, MI

Sample ID	Client Sample ID	Date Collected	Date Analyzed	Sample Description	Asbestos Present?	Color	Homogeneous	Sample Composition	
								Asbestos	Non-Asbestos
001	1A	2/10/2023	2/20/2023	Perimeter Drywall and Associated Joint Compound; Soffit - E. Side	NO	PINK	NO	N/A	Cellulose <1% Fiberglass <1% Binder 100%
002	1B	2/10/2023	2/20/2023	Perimeter Drywall and Associated Joint Compound; Vestibule	NO	W	NO	N/A	Cellulose <1% Binder 100%
003	1C	2/10/2023	2/20/2023	Perimeter Drywall and Associated Joint Compound; Soffit - E. Side	NO	PINK	NO	N/A	Cellulose 2% Binder 98%
004	2A	2/10/2023	2/20/2023	Interior Drywall and Associated Joint Compound; Restroom Hall	NO	W	NO	N/A	Cellulose 2% Fiberglass <1% Binder 98%
005	2B	2/10/2023	2/20/2023	Interior Drywall and Associated Joint Compound; Ground Floor - Managers Office	NO	T	NO	N/A	Cellulose <1% Fiberglass <1% Binder 100%
006	2C	2/10/2023	2/20/2023	Interior Drywall and Associated Joint Compound; Bakery Header	NO	T	NO	N/A	Cellulose 3% Fiberglass <1% Binder 97%
007	3A	2/10/2023	2/20/2023	Brick Mortar; Exterior - N. Side	NO	G	YES	N/A	Cellulose <1% Binder 100%

Client: Civil & Environmental Consultants
Report Date: 2/22/2023
Lab Number: 165917

Project Number: 20-18982-D
Project Name: Existing Kroger Store D-361

Polarized Light Microscopy (PLM) Bulk Sample Results

Location: 425 N. Center - Northville, MI

Sample ID	Client Sample ID	Date Collected	Date Analyzed	Sample Description	Asbestos Present?	Color	Homogeneous	Sample Composition	
								Asbestos	Non-Asbestos
008	3B	2/10/2023	2/20/2023	Brick Mortar; Exterior - N. Side	NO	G	YES	N/A	Cellulose <1% Binder 100%
009	3C	2/10/2023	2/20/2023	Brick Mortar; Exterior - E. Side	NO	G	YES	N/A	Cellulose <1% Binder 100%
010	4A	2/10/2023	2/20/2023	Brick Expansion Joint; Exterior - N. Side	NO	BR	YES	N/A	Binder 100%
011	4B	2/10/2023	2/20/2023	Brick Expansion Joint; Exterior - N. Side	NO	BR	YES	N/A	Binder 100%
012	4C	2/10/2023	2/20/2023	Brick Expansion Joint; Exterior - E. Side	NO	BR	YES	N/A	Binder 100%
013	5A	2/10/2023	2/20/2023	Concrete Block Mortar; Warehouse	NO	G	YES	N/A	Cellulose <1% Binder 100%
014	5B	2/10/2023	2/20/2023	Concrete Block Mortar; Warehouse	NO	G	YES	N/A	Cellulose <1% Binder 100%

Client: Civil & Environmental Consultants
Report Date: 2/22/2023
Lab Number: 165917

Project Number: 20-18982-D
Project Name: Existing Kroger Store D-361

Polarized Light Microscopy (PLM) Bulk Sample Results

Location: 425 N. Center - Northville, MI

Sample ID	Client Sample ID	Date Collected	Date Analyzed	Sample Description	Asbestos Present?	Color	Homogeneous	Sample Composition	
								Asbestos	Non-Asbestos
015	5C	2/10/2023	2/20/2023	Concrete Block Mortar; Warehouse	NO	G	YES	N/A	Cellulose <1% Binder 100%
016	6A	2/10/2023	2/20/2023	Concrete Block Expansion Joint; Exterior - N. Side	NO	G	YES	N/A	Binder 100%
017	6B	2/10/2023	2/20/2023	Concrete Block Expansion Joint; Exterior - N. Side	NO	G	YES	N/A	Binder 100%
018	6C	2/10/2023	2/20/2023	Concrete Block Expansion Joint; Exterior - E. Side	NO	G	YES	N/A	Binder 100%
019	7A	2/10/2023	2/20/2023	Bare Concrete Flooring; Warehouse - E. End	NO	G	YES	N/A	Binder 100%
020	7B	2/10/2023	2/20/2023	Bare Concrete Flooring; Warehouse - W. End	NO	G	YES	N/A	Binder 100%
021	7C	2/10/2023	2/20/2023	Bare Concrete Flooring; Loading Dock	NO	G	YES	N/A	Binder 100%

Client: Civil & Environmental Consultants
 Report Date: 2/22/2023
 Lab Number: 165917

Project Number: 20-18982-D
 Project Name: Existing Kroger Store D-361

Polarized Light Microscopy (PLM) Bulk Sample Results

Location: 425 N. Center - Northville, MI

Sample ID	Client Sample ID	Date Collected	Date Analyzed	Sample Description	Asbestos Present?	Color	Homogeneous	Sample Composition	
								Asbestos	Non-Asbestos
022	8A	2/10/2023	2/20/2023	Foundation Joint Caulk; Exterior - N. Side	NO	G	YES	N/A	Cellulose <1% Binder 100%
023	8B	2/10/2023	2/20/2023	Foundation Joint Caulk; Exterior - N. Side	NO	G	YES	N/A	Cellulose <1% Binder 100%
024	8C	2/10/2023	2/20/2023	Foundation Joint Caulk; Exterior - E. Side	NO	G	YES	N/A	Cellulose <1% Binder 100%
025	9A	2/10/2023	2/20/2023	Window/Door Frame Caulk; Window Frame - N. Side	NO	G	YES	N/A	Cellulose <1% Binder 100%
026	9B	2/10/2023	2/20/2023	Window/Door Frame Caulk; Vestibule Door Frame	NO	G	YES	N/A	Binder 100%
027	9C	2/10/2023	2/20/2023	Window/Door Frame Caulk; Window Frame - E. Side	NO	G	YES	N/A	Cellulose <1% Binder 100%
028	10A	2/10/2023	2/20/2023	Window Glazing; Exterior - N. Side	NO	B	YES	N/A	Binder 100%

Client: Civil & Environmental Consultants
 Report Date: 2/22/2023
 Lab Number: 165917

Project Number: 20-18982-D
 Project Name: Existing Kroger Store D-361

Polarized Light Microscopy (PLM) Bulk Sample Results

Location: 425 N. Center - Northville, MI

Sample ID	Client Sample ID	Date Collected	Date Analyzed	Sample Description	Asbestos Present?	Color	Homogeneous	Sample Composition	
								Asbestos	Non-Asbestos
029	10B	2/10/2023	2/20/2023	Window Glazing; Exterior - N. Side	NO	B	YES	N/A	Binder 100%
030	10C	2/10/2023	2/20/2023	Window Glazing; Exterior - E. Side	NO	B	YES	N/A	Binder 100%
031	11A	2/10/2023	2/20/2023	EFS; Exterior - N. Side	NO	BL - T	NO	N/A	Cellulose <1% Fiberglass 40% Binder 60%
032	11B	2/10/2023	2/20/2023	EFS; Exterior - N. Side	NO	BL - T	NO	N/A	Cellulose <1% Fiberglass 40% Binder 60%
033	11C	2/10/2023	2/20/2023	EFS; Exterior - E. Side	NO	BL - T	NO	N/A	Fiberglass 40% Binder 60%
034	12A	2/10/2023	2/20/2023	Carpet Tile Mastic; Vestibule	NO	BR	YES	N/A	Cellulose 5% Synthetics 2% Binder 93%
035	12B	2/10/2023	2/20/2023	Carpet Tile Mastic; Mezzanine Office	YES	BR	YES	Chrysotile 4%	Cellulose 2% Binder 94%

Client: Civil & Environmental Consultants
Report Date: 2/22/2023
Lab Number: 165917

Project Number: 20-18982-D
Project Name: Existing Kroger Store D-361

Polarized Light Microscopy (PLM) Bulk Sample Results

Location: 425 N. Center - Northville, MI

Sample ID	Client Sample ID	Date Collected	Date Analyzed	Sample Description	Asbestos Present?	Color	Homogeneous	Sample Composition	
								Asbestos	Non-Asbestos
036	12C	2/10/2023	2/20/2023	Carpet Tile Mastic; Ground Floor Office	NO	BR	YES	N/A	Cellulose 2% Synthetics 2% Binder 96%
037	13A	2/10/2023	2/20/2023	Ceramic Tile Grout; Deli	NO	W	YES	N/A	Cellulose <1% Binder 100%
038	13B	2/10/2023	2/20/2023	Ceramic Tile Grout; Public Restroom	NO	W	YES	N/A	Binder 100%
039	13C	2/10/2023	2/20/2023	Ceramic Tile Grout; Seafood	NO	W	YES	N/A	Binder 100%
040	14A	2/10/2023	2/20/2023	Plastic Wall Panel Adhesive; Recycling	NO	T	YES	N/A	Cellulose <1% Binder 100%
041	14B	2/10/2023	2/20/2023	Plastic Wall Panel Adhesive; Recycling	NO	T	YES	N/A	Cellulose 2% Binder 98%
042	14C	2/10/2023	2/20/2023	Plastic Wall Panel Adhesive; Recycling	NO	T	YES	N/A	Cellulose 2% Binder 98%

Client: Civil & Environmental Consultants
 Report Date: 2/22/2023
 Lab Number: 165917

Project Number: 20-18982-D
 Project Name: Existing Kroger Store D-361

Polarized Light Microscopy (PLM) Bulk Sample Results

Location: 425 N. Center - Northville, MI

Sample ID	Client Sample ID	Date Collected	Date Analyzed	Sample Description	Asbestos Present?	Color	Homogeneous	Sample Composition	
								Asbestos	Non-Asbestos
043	15A	2/10/2023	2/20/2023	Stainless Steel Sink Insulation; Floral Sink	NO	G	YES	N/A	Cellulose <1% Binder 100%
044	15B	2/10/2023	2/20/2023	Stainless Steel Sink Insulation; Floral Sink	NO	G	YES	N/A	Cellulose <1% Binder 100%
045	15C	2/10/2023	2/20/2023	Stainless Steel Sink Insulation; Floral Sink	NO	G	YES	N/A	Cellulose <1% Binder 100%
046	16A	2/10/2023	2/20/2023	Cooler/Freezer Wall Panel Gasket; Dairy Cooler	NO	G	YES	N/A	Cellulose <1% Binder 100%
047	16B	2/10/2023	2/20/2023	Cooler/Freezer Wall Panel Gasket; Click-List Freezer	NO	G	YES	N/A	Cellulose <1% Binder 100%
048	16C	2/10/2023	2/20/2023	Cooler/Freezer Wall Panel Gasket; Produce Cooler	NO	G	YES	N/A	Cellulose <1% Binder 100%
049	17A	2/10/2023	2/20/2023	HVAC Seam Caulk; Warehouse by Restroom Entry	NO	G	YES	N/A	Cellulose <1% Binder 100%

Client: Civil & Environmental Consultants
 Report Date: 2/22/2023
 Lab Number: 165917

Project Number: 20-18982-D
 Project Name: Existing Kroger Store D-361

Polarized Light Microscopy (PLM) Bulk Sample Results

Location: 425 N. Center - Northville, MI

Sample ID	Client Sample ID	Date Collected	Date Analyzed	Sample Description	Asbestos Present?	Color	Homogeneous	Sample Composition	
								Asbestos	Non-Asbestos
050	17B	2/10/2023	2/20/2023	HVAC Seam Caulk; Warehouse by Restroom Entry	NO	G	YES	N/A	Cellulose 2% Binder 98%
051	17C	2/10/2023	2/20/2023	HVAC Seam Caulk; Warehouse by Restroom Entry	NO	G	YES	N/A	Cellulose <1% Binder 100%
052	18A	2/10/2023	2/20/2023	Poured Flooring; Deli Prep	NO	G - BR	YES	N/A	Cellulose <1% Binder 100%
053	18B	2/10/2023	2/20/2023	Poured Flooring; Bakery Prep	NO	G - BR	YES	N/A	Cellulose <1% Binder 100%
054	18C	2/10/2023	2/20/2023	Poured Flooring; Seafood Prep	NO	G - BR	YES	N/A	Binder 100%
055	19A	2/10/2023	2/22/2023	Vinyl Stair Tread Adhesive; Stairwell	NO	Y - G	YES	N/A	Cellulose <1% Synthetics 3% Binder 97%
056	19B	2/10/2023	2/22/2023	Vinyl Stair Tread Adhesive; Stairwell	NO	Y - G	YES	N/A	Synthetics 5% Binder 95%

Client: Civil & Environmental Consultants
 Report Date: 2/22/2023
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Project Number: 20-18982-D
 Project Name: Existing Kroger Store D-361

Polarized Light Microscopy (PLM) Bulk Sample Results

Location: 425 N. Center - Northville, MI

Sample ID	Client Sample ID	Date Collected	Date Analyzed	Sample Description	Asbestos Present?	Color	Homogeneous	Sample Composition	
								Asbestos	Non-Asbestos
057	19C	2/10/2023	2/22/2023	Vinyl Stair Tread Adhesive; Stairwell	NO	Y - G	YES	N/A	Cellulose <1% Synthetics 4% Binder 96%
058	20A	2/10/2023	2/22/2023	2' x 4' Rough Pattern Ceiling Tile; Ground Floor - Managers Office	NO	T - W	YES	N/A	Cellulose 30% Fiberglass 60% Binder 10%
059	20B	2/10/2023	2/22/2023	2' x 4' Rough Pattern Ceiling Tile; Break Room	NO	T - W	YES	N/A	Cellulose 30% Fiberglass 62% Binder 8%
060	20C	2/10/2023	2/22/2023	2' x 4' Rough Pattern Ceiling Tile; Break Room	NO	T - W	YES	N/A	Cellulose 30% Fiberglass 62% Binder 8%
061	21A	2/10/2023	2/22/2023	2' x 4' Drywall Pattern Ceiling Tile; Bakery	NO	W	YES	N/A	Cellulose 3% Binder 97%
062	21B	2/10/2023	2/22/2023	2' x 4' Drywall Pattern Ceiling Tile; Deli	NO	W	YES	N/A	Cellulose 2% Binder 98%
063	21C	2/10/2023	2/22/2023	2' x 4' Drywall Pattern Ceiling Tile; Seafood	NO	W	YES	N/A	Cellulose 2% Binder 98%

Client: Civil & Environmental Consultants
 Report Date: 2/22/2023
 Lab Number: 165917

Project Number: 20-18982-D
 Project Name: Existing Kroger Store D-361

Polarized Light Microscopy (PLM) Bulk Sample Results

Location: 425 N. Center - Northville, MI

Sample ID	Client Sample ID	Date Collected	Date Analyzed	Sample Description	Asbestos Present?	Color	Homogeneous	Sample Composition	
								Asbestos	Non-Asbestos
064	22A	2/10/2023	2/22/2023	Vinyl Cove Base Molding; Stoor Floor - SE Side	NO	BR	YES	N/A	Binder 100%
065	22B	2/10/2023	2/22/2023	Vinyl Cove Base Molding; Lunch Room	NO	BR	YES	N/A	Binder 100%
066	22C	2/10/2023	2/22/2023	Vinyl Cove Base Molding; Ground Floor - Managers Office	NO	BR	YES	N/A	Binder 100%
067	22D	2/10/2023	2/22/2023	Vinyl Cove Base Molding Mastic; Store Floor - SE Side	NO	T	YES	N/A	Cellulose <1% Binder 100%
068	22E	2/10/2023	2/22/2023	Vinyl Cove Base Molding Mastic; Lunch Room	NO	T	YES	N/A	Cellulose <1% Binder 100%
069	22F	2/10/2023	2/22/2023	Vinyl Cove Base Molding Mastic; Ground Floor - Managers Office	NO	T	YES	N/A	Cellulose <1% Binder 100%
070	23A	2/10/2023	2/22/2023	12" x 12" White Speck Pattern Floor Tile; Mezzanine	NO	W	YES	N/A	Binder 100%

Client: Civil & Environmental Consultants
 Report Date: 2/22/2023
 Lab Number: 165917

Project Number: 20-18982-D
 Project Name: Existing Kroger Store D-361

Polarized Light Microscopy (PLM) Bulk Sample Results

Location: 425 N. Center - Northville, MI

Sample ID	Client Sample ID	Date Collected	Date Analyzed	Sample Description	Asbestos Present?	Color	Homogeneous	Sample Composition	
								Asbestos	Non-Asbestos
071	23B	2/10/2023	2/22/2023	12" x 12" White Speck Pattern Floor Tile; Mezzanine	NO	W	YES	N/A	Cellulose <1% Binder 100%
072	23C	2/10/2023	2/22/2023	12" x 12" White Speck Pattern Floor Tile; Mezzanine	NO	W	YES	N/A	Cellulose <1% Binder 100%
073	23D	2/10/2023	2/22/2023	12" x 12" White Speck Pattern Floor Tile Mastic; Mezzanine	NO	T	YES	N/A	Cellulose 3% Binder 97%
074	23E	2/10/2023	2/22/2023	12" x 12" White Speck Pattern Floor Tile Mastic; Mezzanine	NO	T	YES	N/A	Cellulose 2% Binder 98%
075	23F	2/10/2023	2/22/2023	12" x 12" White Speck Pattern Floor Tile Mastic; Mezzanine	NO	T	YES	N/A	Cellulose 6% Binder 94%
076	24A	2/10/2023	2/22/2023	24" x 24" Tan Floor Tile; Starbucks	NO	G	YES	N/A	Cellulose <1% Binder 100%
077	24B	2/10/2023	2/22/2023	24" x 24" Tan Floor Tile; Starbucks	NO	G	YES	N/A	Cellulose <1% Binder 100%

Client: Civil & Environmental Consultants
 Report Date: 2/22/2023
 Lab Number: 165917

Project Number: 20-18982-D
 Project Name: Existing Kroger Store D-361

Polarized Light Microscopy (PLM) Bulk Sample Results

Location: 425 N. Center - Northville, MI

Sample ID	Client Sample ID	Date Collected	Date Analyzed	Sample Description	Asbestos Present?	Color	Homogeneous	Sample Composition	
								Asbestos	Non-Asbestos
078	24C	2/10/2023	2/22/2023	24" x 24" Tan Floor Tile; Starbucks	NO	G	YES	N/A	Binder 100%
079	24D	2/10/2023	2/22/2023	24" x 24" Tan Floor Tile Mastic; Starbucks	NO	T	YES	N/A	Cellulose <1% Binder 100%
080	24E	2/10/2023	2/22/2023	24" x 24" Tan Floor Tile Mastic; Starbucks	NO	T	YES	N/A	Cellulose 2% Binder 98%
081	24F	2/10/2023	2/22/2023	24" x 24" Tan Floor Tile Mastic; Starbucks	NO	T	YES	N/A	Cellulose <1% Binder 100%
082	25A	2/10/2023	2/22/2023	Dark Woodgrain Linoleum Flooring; Store Floor - N. Side	NO	BR	YES	N/A	Cellulose <1% Binder 100%
083	25B	2/10/2023	2/22/2023	Dark Woodgrain Linoleum Flooring; Store Floor - SW Corner	NO	BR	YES	N/A	Cellulose <1% Binder 100%
084	25C	2/10/2023	2/22/2023	Dark Woodgrain Linoleum Flooring; Store Floor - S. Side by Dairy	NO	BR	YES	N/A	Cellulose <1% Binder 100%

Client: Civil & Environmental Consultants
 Report Date: 2/22/2023
 Lab Number: 165917

Project Number: 20-18982-D
 Project Name: Existing Kroger Store D-361

Polarized Light Microscopy (PLM) Bulk Sample Results

Location: 425 N. Center - Northville, MI

Sample ID	Client Sample ID	Date Collected	Date Analyzed	Sample Description	Asbestos Present?	Color	Homogeneous	Sample Composition	
								Asbestos	Non-Asbestos
085	25D	2/10/2023	2/22/2023	Dark Woodgrain Linoleum Flooring; Store Floor - Deli	NO	BR	YES	N/A	Cellulose <1% Binder 100%
086	25E	2/10/2023	2/22/2023	Dark Woodgrain Linoleum Flooring; Store Floor - Produce	NO	BR	YES	N/A	Cellulose <1% Binder 100%
087	25F	2/10/2023	2/22/2023	Dark Woodgrain Linoleum Flooring; Store Floor - Check-out	NO	BR	YES	N/A	Cellulose <1% Binder 100%
088	25G	2/10/2023	2/22/2023	Dark Woodgrain Linoleum Flooring; Store Floor - SE Corner	NO	BR	YES	N/A	Cellulose <1% Binder 100%
089	25H	2/10/2023	2/22/2023	Dark Woodgrain Linoleum Flooring Mastic; Store Floor - N. Side	NO	T	YES	N/A	Cellulose <1% Binder 100%
090	25I	2/10/2023	2/22/2023	Dark Woodgrain Linoleum Flooring Mastic; Store Floor - SW Corner	NO	T	YES	N/A	Cellulose <1% Binder 100%
091	25J	2/10/2023	2/22/2023	Dark Woodgrain Linoleum Flooring Mastic; Store Floor - S. Side by Dairy	NO	T	YES	N/A	Cellulose <1% Binder 100%

Client: Civil & Environmental Consultants
 Report Date: 2/22/2023
 Lab Number: 165917

Project Number: 20-18982-D
 Project Name: Existing Kroger Store D-361

Polarized Light Microscopy (PLM) Bulk Sample Results

Location: 425 N. Center - Northville, MI

Sample ID	Client Sample ID	Date Collected	Date Analyzed	Sample Description	Asbestos Present?	Color	Homogeneous	Sample Composition	
								Asbestos	Non-Asbestos
092	25K	2/10/2023	2/22/2023	Dark Woodgrain Linoleum Flooring Mastic; Store Floor - Deli	NO	T	YES	N/A	Cellulose 2% Binder 98%
093	25L	2/10/2023	2/22/2023	Dark Woodgrain Linoleum Flooring Mastic; Store Floor - Produce	NO	T	YES	N/A	Cellulose 2% Binder 98%
094	25M	2/10/2023	2/22/2023	Dark Woodgrain Linoleum Flooring Mastic; Store Floor - Check-out	NO	T	YES	N/A	Cellulose <1% Binder 100%
095	25N	2/10/2023	2/22/2023	Dark Woodgrain Linoleum Flooring Mastic; Store Floor - SE Corner	NO	T	YES	N/A	Cellulose <1% Binder 100%
096	26A	2/10/2023	2/22/2023	Light Woodgrain Linoleum Flooring; Store Floor - W. End of Aisle 4	NO	T	YES	N/A	Cellulose <1% Binder 100%
097	26B	2/10/2023	2/22/2023	Light Woodgrain Linoleum Flooring; Store Floor - E. End of Aisle 7	NO	T	YES	N/A	Binder 100%
098	26C	2/10/2023	2/22/2023	Light Woodgrain Linoleum Flooring; Store Floor - E. End of Aisle 3	NO	T	YES	N/A	Binder 100%

Client: Civil & Environmental Consultants
 Report Date: 2/22/2023
 Lab Number: 165917

Project Number: 20-18982-D
 Project Name: Existing Kroger Store D-361

Polarized Light Microscopy (PLM) Bulk Sample Results

Location: 425 N. Center - Northville, MI

Sample ID	Client Sample ID	Date Collected	Date Analyzed	Sample Description	Asbestos Present?	Color	Homogeneous	Sample Composition	
								Asbestos	Non-Asbestos
099	26D	2/10/2023	2/22/2023	Light Woodgrain Linoleum Flooring; Store Floor - Middle of Aisle 5	NO	T	YES	N/A	Cellulose <1% Binder 100%
100	26E	2/10/2023	2/22/2023	Light Woodgrain Linoleum Flooring; Store Floor - W. End of Aisle 7	NO	T	YES	N/A	Cellulose <1% Binder 100%
101	26F	2/10/2023	2/22/2023	Light Woodgrain Linoleum Flooring Mastic; Store Floor - W. End of Aisle 4	N/A	N/A	N/A	NOT ANALYZED	QUANTITY NON SUFFICIENT
102	26G	2/10/2023	2/22/2023	Light Woodgrain Linoleum Flooring Mastic; Store Floor - E. End of Aisle 7	NO	T	YES	N/A	Cellulose <1% Fiberglass <1% Binder 100%
103	26H	2/10/2023	2/22/2023	Light Woodgrain Linoleum Flooring Mastic; Store Floor - E. End of Aisle 3	NO	T	YES	N/A	Cellulose <1% Binder 100%
104	26I	2/10/2023	2/22/2023	Light Woodgrain Linoleum Flooring Mastic; Store Floor - Middle of Aisle 5	NO	T	YES	N/A	Cellulose <1% Binder 100%
105	26J	2/10/2023	2/22/2023	Light Woodgrain Linoleum Flooring Mastic; Store Floor - W. End of Aisle 7	NO	T	YES	N/A	Cellulose <1% Fiberglass <1% Binder 100%

Client: Civil & Environmental Consultants
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Project Number: 20-18982-D
 Project Name: Existing Kroger Store D-361

Polarized Light Microscopy (PLM) Bulk Sample Results

Location: 425 N. Center - Northville, MI

Sample ID	Client Sample ID	Date Collected	Date Analyzed	Sample Description	Asbestos Present?	Color	Homogeneous	Sample Composition	
								Asbestos	Non-Asbestos
106	27A	2/10/2023	2/22/2023	Roof Drain Fitting Insulation on Fiberglass Line; Store Floor - SW Corner, Pan Insulation	NO	W	YES	N/A	Cellulose 20% Fiberglass 30% Binder 50%
107	27B	2/10/2023	2/22/2023	Roof Drain Fitting Insulation on Fiberglass Line; Store Floor - SW Corner, Pan Insulation	NO	W	YES	N/A	Cellulose 20% Fiberglass 30% Binder 50%
108	27C	2/10/2023	2/22/2023	Roof Drain Fitting Insulation on Fiberglass Line; Store Floor - SW Corner, Elbow Insulation	NO	W	YES	N/A	Cellulose 20% Fiberglass 30% Binder 50%
109	28A	2/10/2023	2/22/2023	Seam Cement on Rubber Membrane Roof; Roof - W. Side	NO	B	YES	N/A	Cellulose 8% Binder 92%
110	28B	2/10/2023	2/22/2023	Seam Cement on Rubber Membrane Roof; Roof - Center	NO	B	YES	N/A	Cellulose 6% Binder 94%
111	28C	2/10/2023	2/22/2023	Seam Cement on Rubber Membrane Roof; Roof - E. Side	NO	B	YES	N/A	Cellulose 6% Binder 94%
112	29A	2/10/2023	2/22/2023	Roof Penetration Sealant; Roof - NW Corner	NO	B	YES	N/A	Cellulose <1% Binder 100%

Client: Civil & Environmental Consultants
Report Date: 2/22/2023
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Project Number: 20-18982-D
Project Name: Existing Kroger Store D-361

Polarized Light Microscopy (PLM) Bulk Sample Results

Location: 425 N. Center - Northville, MI

Sample ID	Client Sample ID	Date Collected	Date Analyzed	Sample Description	Asbestos Present?	Color	Homogeneous	Sample Composition	
								Asbestos	Non-Asbestos
113	29B	2/10/2023	2/22/2023	Roof Penetration Sealant; Roof - W. Side	NO	B	YES	N/A	Binder 100%
114	29C	2/10/2023	2/22/2023	Roof Penetration Sealant; Roof - SW Corner	NO	B	YES	N/A	Cellulose <1% Binder 100%
115	30A	2/10/2023	2/22/2023	Roofing Felts on Rubber Membrane Roof; Roof - W. Side	NO	G - T	YES	N/A	Cellulose 100% Fiberglass <1%
116	30B	2/10/2023	2/22/2023	Roofing Felts on Rubber Membrane Roof; Roof - Center	NO	G - T	YES	N/A	Cellulose 100% Fiberglass <1%
117	30C	2/10/2023	2/22/2023	Roofing Felts on Rubber Membrane Roof; Roof - E. Side	NO	G - T	YES	N/A	Cellulose 98% Fiberglass 2%

Color: B-Black, BL-Blue, BR-Brown, CL-Clear, GL-Gold, G-Gray, GR-Green, O-Orange, P-Pink, PR-Purple, R-Red, S-Silver, T-Tan, W-White, Y-Yellow

Betsie L. McAfee has reviewed this final report and has taken overall technical responsibility for the data.

micro air inc.

6320 LA PAS TRAIL, INDIANAPOLIS, INDIANA 46268
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E-MAIL: microair@microair.com
WEB SITE: www.microair.com

DAILY BULK SAMPLE LOG

165917

TECHNICIAN Donald G French DATE 2/10/23 JOB # 20-18982-D

LOCATION Kroger Store D-361 PAGE 1 OF 7

SAMPLE NUMBER	SAMPLE LOCATION	MATERIAL CONDITION	PHOTO NUMBER	SAMPLE DESCRIPTION
001 1 A	Soffit E side			Perimeter Drywall &
002 B	Vestibule			Associated
003 C	Soffit E side			Joint Compound
004 2 A	Restroom Hall			Interior Drywall
005 B	Ground Floor Managers Office			& Associated
006 C	Bakery Header			Joint Compound
007 3 A	Exterior - N side			Brick
008 B	" - N side			Mortar
009 C	" - E side			↓
010 4 A	Exterior - N side			Brick
011 B	" - N side			Expansion Joint
012 C	" - E side			↓
013 5 A	Warehouse			Concrete Block
014 B	"			Mortar
015 C	"			↓
016 6 A	Exterior - N side			Concrete Block
017 B	" - N side			Expansion Joint
018 C	" - E side			↓

White - Office

Yellow - Laboratory

CHAIN OF CUSTODY CHRONICLE:

COLLECTED BY:

CUSTODY TRANSFERRED TO:

RECEIVED IN LABORATORY BY:

NAME

DATE

NAME

DATE

NAME

DATE

2/16/23
4:15AM

micro air inc.

6320 LA PAS TRAIL, INDIANAPOLIS, INDIANA 46268
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DAILY BULK SAMPLE LOG

165917

TECHNICIAN Donald G French DATE 2/16/23 JOB # 20-18982-D

LOCATION Kroger Store D-361 PAGE 2 OF 7

SAMPLE NUMBER	SAMPLE LOCATION	MATERIAL CONDITION	PHOTO NUMBER	SAMPLE DESCRIPTION
019 7A	Warehouse E end			Base Concrete
020 B	" W end			Flooring
021 C	Loading Dock			↓
022 BA	Exterior - N side			Foundation Joint
023 B	" - N side			Caulk
024 C	" - E side			↓
025 9A	Window Frame N side			Window/Door
026 B	Vestibule Door Frame			Frame Caulk
027 C	Window Frame E side			↓
028 10A	Exterior - N side			Window
029 B	" - N side			Glazing
030 C	" - E side			↓
031 11A	Exterior - N side			EFS
032 B	" - N side			
033 C	" - E side			↓
034 12A	Vestibule			Carpet Tile
035 B	Mechanical Office			Mastic
036 C	Ground Floor Office			↓

White - Office

Yellow - Laboratory

CHAIN OF CUSTODY CHRONICLE:

COLLECTED BY:

CUSTODY TRANSFERRED TO:

RECEIVED IN LABORATORY BY:

NAME

DATE

NAME

DATE

NAME

DATE

2/16/23
4:15AM

micro air inc.

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TELEPHONE: (317) 293-1533 FAX: (317) 290-3586

E-MAIL: microair@microair.com
WEB SITE: www.microair.com

DAILY BULK SAMPLE LOG

TECHNICIAN Donald G. French DATE 2/16/23 JOB # 20-18982-D

LOCATION Kroger Store D-361 PAGE 3 OF 7

SAMPLE NUMBER	SAMPLE LOCATION	MATERIAL CONDITION	PHOTO NUMBER	SAMPLE DESCRIPTION
037 13A	Deli			Ceramic Tile
038 B	Public Restroom			Grout
039 C	Sealed			↓
040 14A	Recycling			Plastic Wall
041 B	↓			Panel Adhesive
042 C	↓			↓
043 15A	Floral Sink			Stainless Steel
044 B	↓			Sink Insulation
045 C	↓			↓
046 16A	Dairy Cooler			Cooler/Freezer
047 B	Chick-hist Freezer			Wall Panel Gasket
048 C	Produce Cooler			↓
049 17A	Warehouse by Restroom Entry			HVAC Seam
050 B	↓			Caulk
051 C	↓			↓
052 18A	Deli Prep			Poured
053 B	Bakery Prep			Flooring
054 C	Sealed Prep			↓

White - Office

Yellow - Laboratory

CHAIN OF CUSTODY CHRONICLE:

COLLECTED BY:

CUSTODY TRANSFERRED TO:

RECEIVED IN LABORATORY BY:

NAME

DATE

NAME

DATE

NAME

DATE

4:15AM

micro air inc.

6320 LA PAS TRAIL, INDIANAPOLIS, INDIANA 46268
TELEPHONE: (317) 283-1533 FAX: (317) 280-3566

E-MAIL: microair@microair.com
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DAILY BULK SAMPLE LOG

165917

TECHNICIAN Donald G French

DATE 2/10/23

JOB # 20-18982-D

LOCATION Kroger Store D-361

PAGE 4 OF 7

SAMPLE NUMBER	SAMPLE LOCATION	MATERIAL CONDITION	PHOTO NUMBER	SAMPLE DESCRIPTION
055 19 A	Stairwell			Vinyl Stair Tread
056 B	↓			Adhesive
057 C	↓			↓
058 20 A	Ground Floor Managers Office			2'x4' Ceiling Tile
059 B	Break Room			(Rough Pattern)
060 C	Mezzanine Break Room			↓
061 21 A	Bakery			2'x4' Ceiling Tile
062 B	Deli			(Drywall Pattern)
063 C	Seafood			↓
064 22 A	Store Floor SE side			Vinyl Cove Base
065 B	Lunch Room			Molding
066 C	Ground Floor Managers Office			↓
067 D	↓			Adhesive
068 E				on Above
069 F	↓			
070 23 A	Mezzanine			12"x12" Floor Tile
071 B	↓			(White Spark Pattern)
072 C	↓			↓
073 D	↓			Mastic
074 E	↓			on Above
075 F	↓			

White - Office

Yellow - Laboratory

CHAIN OF CUSTODY CHRONICLE:

COLLECTED BY:

Donald G French 2/10/23

NAME

DATE

CUSTODY TRANSFERRED TO:

NAME

DATE

RECEIVED IN LABORATORY BY:

NAME

DATE

2/16/23

4:15 PM

micro air inc.

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DAILY BULK SAMPLE LOG

TECHNICIAN Donald G French DATE 2/10/23 JOB # 20-18982-D

LOCATION Kroger Store D-361 PAGE 5 OF 7

SAMPLE NUMBER	SAMPLE LOCATION	MATERIAL CONDITION	PHOTO NUMBER	SAMPLE DESCRIPTION
076 24A	Starbucks			24"x24" Floor Tile
077 B				(Tan)
078 C				↓
079 D				Mastic
080 E				on Above
081 F				
082 25A	North side of Store Floor			Dark Woodgrain
083 B	Store Floor - SW Corner			Linoleum Flooring
084 C	" " - S side by Dairy			↓
085 D	" " by Deli			
086 E	" " - Produce			
087 F	" " @ Check-Out			
088 G	" " @ SE Corner			↓
089 25H				Mastic on Above
090 I				↓
091 J				
092 K				
093 L				
094 M				
095 N				

White - Office

Yellow - Laboratory

CHAIN OF CUSTODY CHRONICLE:

COLLECTED BY:

Donald G French 2/10/23
NAME DATE

CUSTODY TRANSFERRED TO:

NAME

DATE

RECEIVED IN LABORATORY BY:

NAME

DATE

[Signature] 2/16/23
4:15 AM

micro air inc.

6320 LA PAS TRAIL, INDIANAPOLIS, INDIANA 46268
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DAILY BULK SAMPLE LOG

TECHNICIAN Donald G French DATE 2/10/23 JOB # 20-18982-D

LOCATION Kroger Store D-361 PAGE 6 OF 7

SAMPLE NUMBER	SAMPLE LOCATION	MATERIAL CONDITION	PHOTO NUMBER	SAMPLE DESCRIPTION
096 26 A	Store Floor - Aisle 4 @ West End			Light Woodgrain
097 B	" " - End of Aisle 7			Linoleum Flooring
098 C	" " - End of Aisle 3			
099 D	" " - Middle of Aisle 5			
100 E	" " - End of Aisle 7			
101 26 F				Mastic on Above
102 G				
103 H				
104 I				
105 J				
106 27 A	Store Floor - SW Corner (Pur Insulation)			Roof Drain Fittings
107 B	" " " " (Pur Insulation)			Insulation
108 C	" " " " (Exposed Insulation)			on Fiberglass Line
109 28 A	Roof - W			Seam Cement on
110 B	" - Central			Rubber Membrane
111 C	" - E			Roof
112 29 A	Roof - NW			Roof Penetration
113 B	" - W			Sealant
114 C	" - SW			

White - Office

Yellow - Laboratory

CHAIN OF CUSTODY CHRONICLE:

COLLECTED BY:

CUSTODY TRANSFERRED TO:

RECEIVED IN LABORATORY BY:

NAME

DATE

NAME

DATE

NAME

DATE

2/16/23
4:15AM



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165917

LOCATION Kroger Store D-361 PAGE 7 OF 7

115
116
117

Yellow – Laboratory

COLLECTED BY:

RECEIVED IN LABORATORY BY:

DATE _____

DATE 2/16/23
4:15 PM

TAB 5
CERTIFICATIONS

Donald G. French
6320 LaPas Trail
Indianapolis, IN 46268

Donald G. French

Inspector

A11834

03/07/2023

157478



**United States Department of Commerce
National Institute of Standards and Technology**



Certificate of Accreditation to ISO/IEC 17025:2017

NVLAP LAB CODE: 101221-0

Micro Air, Inc.
Indianapolis, IN

*is accredited by the National Voluntary Laboratory Accreditation Program for specific services,
listed on the Scope of Accreditation, for:*

Asbestos Fiber Analysis

*This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality
management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).*

2022-04-01 through 2023-03-31

Effective Dates




For the National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

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ASBESTOS FIBER ANALYSIS

NVLAP LAB CODE 101221-0

Bulk Asbestos Analysis

<u>Code</u>	<u>Description</u>
18/A01	EPA – 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples
18/A03	EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials



For the National Voluntary Laboratory Accreditation Program