Asbestos Survey Report

FOR THE PROPERTY AT:

13400 West Outer Drive
Detroit, MI 48239

ETC Job #: 260163

Prepared For:

Detroit Diesel Corporation
13400 West Outer Drive
Detroit, MI 48239
313-592-7086

Date of Inspection: 08/08/2023

Date of Report: 08/16/2023

Report Prepared and Submitted By:

James Brown

Michigan Asbestos Inspector License #: A51839

etc
environmental testing & consulting

38900 West Huron River Drive
Romulus, MI 48174
734-955-6600
www.2etc.com

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Purpose of this investigation

The purpose of this inspection was to determine the presence and quantity of ACM's.

KEY DEFINITIONS

ACM	Asbestos containing material. ACM's fall into 1 of 3 types. *See Appendix C-1*
Friable	Can be crumbled, pulverized, or reduced to powder by the pressure of an ordinary human hand.
Non-Friable	Cannot be pulverized under hand pressure.
Potentially Friable	Can become friable if disturbed.
Category	Refers to the two (2) types of Non-Friable ACM's. *See Appendix C-1*
Hazardous Materials	Non-asbestos materials that may be hazardous, and may require special handling and disposal requirements.
Room	The room testing occurred. Rooms are identified by a number because room usage may change (i.e., a bedroom may become an office). Some rooms may be labeled as functional spaces (FS).
Inaccessible Area's	These are locations around the property that could not be examined because the investigator could not gain access to them. These include areas that are unsafe to enter, locked rooms, areas with too much debris/clutter, etc.
Quantity	Materials are usually quantified in square feet (SF), cubic feet (CF), linear feet (LF), cubic yards (CY), or units.
EPA	Environmental Protection Agency
OSHA	Occupational Safety and Health Administration

Executive Summary

After a thorough investigation of the premises was conducted, and samples were collected and analyzed, the following materials were found to contain asbestos in a concentration >1%, in accordance with **EPA, OSHA, and other federal, state, and local standards** *(Please refer to "Interpretation of Inspection Results" in section C-2)*:

- Pipe Insulation Mag, White – FS 1-5
- 9x9 Floor Tile, Grey – FS 1-5
- Mastic, Black – FS 1-5
- 9x9 Floor Tile, Beige – FS 2-5
- Mastic, Black – FS 2-5

This property was **not surveyed** for hazardous materials as it was not included in the scope of work.

This survey included M-1 1st floor offices only.

Note: If renovations are not being done in a specific room that was found to have positive ACMs you do not need to remove that material as long as it is intact.

Before renovation or demolition activities can begin, and depending on the ACM found and the condition that it is in, it may be necessary that friable or potentially friable ACMs be removed.

Materials Table

MATERIALS SAMPLED AND ASBESTOS CONTENT

TABLE 1: ASBESTOS CONTENT RESULTS

SAMPLE #	MATERIAL DESCRIPTION	CLASSIFICATION	LOCATION (REFER TO MAPS IN APPENDIX A)	QUANTITY	ASBESTOS
1	**Pipe Insulation Mag, White**	**T**	**FS 1-5**	**348 LF**	**Yes**
2	Drywall, White	M	FS 1-5	8763 SF	No
3	Ceiling Panel, White	M	FS 1-5	5464 SF	No
4	**9x9 Floor Tile, Grey**	**M**	**FS 1-5**	**5464 SF**	**Yes**
5	**Mastic, Black**	**M**	**FS 1-5**	**5464 SF**	**Yes**
6	12x12 Floor Tile, Grey	M	FS 1	48 SF	No
7	Mastic, Yellow	M	FS 1	64 SF	No
8	9x9 Floor Tile, Orange	M	FS 2	1708 SF	No
9	Mastic, Tan	M	FS 2	1708 SF	No
10	**9x9 Floor Tile, Beige**	**M**	**FS 2-5**	**3782 SF**	**Yes**
11	**Mastic, Black**	**M**	**FS 2-5**	**3782 SF**	**Yes**
12	Cove Base, Grey	M	FS 1-5	631 SF	No
13	Mastic, Tan	M	FS 1-5	631 SF	No

- ***Bolded*** *materials are those that were found to contain asbestos at a concentration >1%. Please refer to "Interpretation of Inspection Results" in section C-2.*
- *Quantities that are listed are estimates only; in general, listed quantities represent only what was visible during testing. It is likely that where ACM has been identified throughout specific floors, similar materials and quantities exist on other like floors. It is the contractors'/client's responsibility to verify all amounts of asbestos identified during any bid process, or during future renovation and/or demolition activities. Materials that are identical in both relative location and physical description to already tested materials listed in this report should always be assumed to be ACM.*

Inspector Certification

The information contained in this report is a true and accurate representation of the conditions and activities at this property at the time of this investigation, based on the professional judgment of the person(s) who conducted and reported this asbestos inspection. All inspection work was completed by the Michigan certified asbestos inspector(s) listed below.

James Brown

Inspector E-Mail address: James.Brown@2etc.com

Appendices

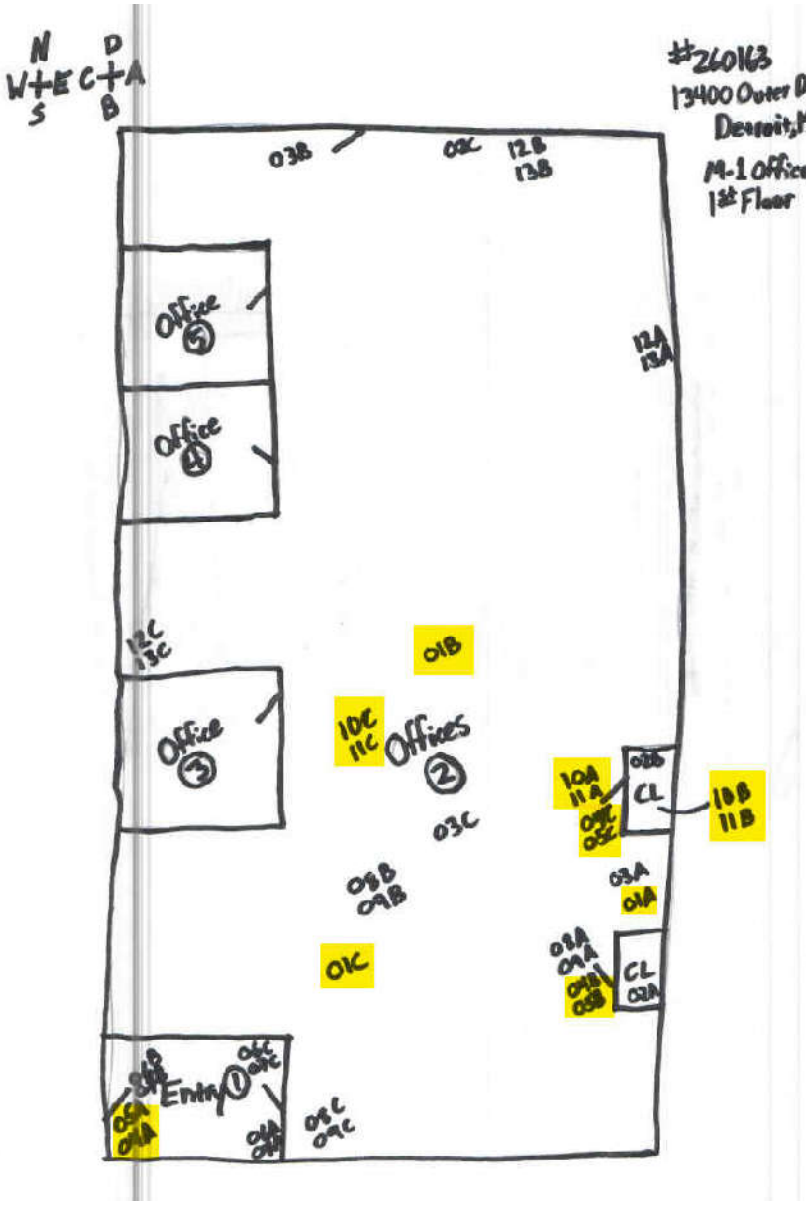
APPENDIX A – MAPS

EA 3

Floor Plans

INTERIOR FIRST FLOOR

EA 2



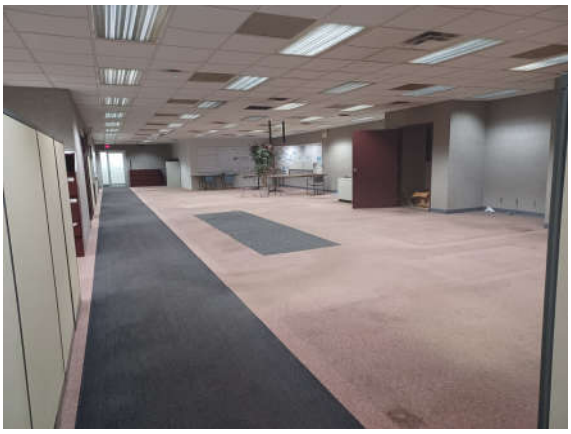
EA 4

EA 1

Please Note: This is a rough floor plan only. All items, (doorways, windows, etc.) may not be included in this illustration. Also, room and component sizes are not drawn to scale.

APPENDIX B – PHOTOS

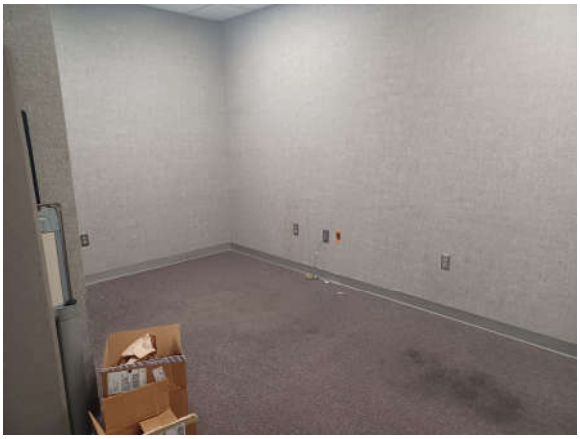
FS 1



FS 2

FS 3

FS 4



FS 5

Positive Pipe Insulation Mag, White

Positive 9x9 Floor Tile, Grey & Mastic, Black

Positive 9x9 Floor Tile, Beige & Mastic, Black

APPENDIX C – EDUCATION, TESTING, RESOURCES & LAWS

C-1: Asbestos Education

ASBESTOS

Asbestos is a generic term encompassing various fibrous mineral silicates from 2 groups:

- Serpentine – "curly fibers" and layered structure
  - **Chrysotile** (hydrated magnesium silicate) – about 95% of asbestos in US buildings
- Amphibole – "needle-like" structure
  - **Amosite** (iron magnesium silicate) – 2nd most commonly used asbestos
  - Crocidolite (sodium-iron silicate)
  - **Tremolite** (calcium-magnesium silicate) – potential contaminate in vermiculite
  - Anthophyllite (another iron-magnesium silicate)
  - Actinolite (calcium-magnesium-iron silicate)

CATEGORIES OF ASBESTOS CONTAINING MATERIALS

The EPA identifies three (3) categories of ACM used in buildings:

- **Surface Materials** – ACM sprayed or troweled on surfaces (i.e. walls, ceilings, etc.) for acoustical, decorative, or fireproofing purposes (i.e. plaster and fireproofing insulation).
- **Thermal System Insulation (TSI)** – Insulation used to inhibit heat transfer or prevent condensation on pipes, boilers, ducts, HVAC systems, etc. This includes pipe lagging, pipe wrap, block, batt, cements, "muds", ropes, gaskets, etc.
- **Miscellaneous Materials** – Other, largely non-friable products, that include floor tile, ceiling tile, roofing felt, wall board, outdoor siding, etc.

CHARACTERISTICS OF ASBESTOS CONTAINING MATERIALS

ACMs are characterized in one of two ways. They are either:

- **Friable –** when dry, can be crumbled, pulverized, or reduced to powder by the pressure of an ordinary human hand.
- **Non-Friable –** cannot be pulverized under hand pressure.
  - **Category I** – includes asbestos packings, gaskets, resilient floor covering, and asphalt roofing products.
  - **Category II** – any non-friable ACM not included in Category I such as mastic, cementitious materials, and ceiling tiles.

ASBESTOS EXPOSURE

Airborne asbestos contamination in buildings is a significant environmental problem. It has been determined and documented that inhalation of significant quantities of airborne asbestos fibers over an extended period of time can have serious health effects.

In order to assess any potential health risks within a building, it is necessary to conduct a survey of the building to identify and locate any friable or non-friable asbestos containing materials (ACM) that may be located within.

If and when ACM are located within a building, the ACM must then be evaluated and assessed to determine whether any immediate health hazards are presented to the building occupants. It must be noted that the presence of asbestos in a building does not necessarily mean that the health of the building occupants is endangered. As long as an ACM remains intact (in good condition and is not disturbed, damaged, or mutilated) exposure of asbestos fibers to the air is unlikely.

HEALTH EFFECTS OF ASBESTOS EXPOSURE

The potential health hazards associated with exposure to asbestos results from inhalation of airborne fibers; small asbestos fibers can pass readily through the upper respiratory tract and be deposited in the terminal bronchioles of the lung. There they can produce a local irritation which the body attempts to neutralize by initiating a tissue response. The resulting body response is encapsulation of the fibers and consequent formation of "asbestos nodules."

Common asbestos related diseases include:

- Lung Cancer
- Mesothelioma
- Asbestosis
- Chronic Obstructive Pulmonary Disease (COPD)

C-2: Asbestos Testing

SAMPLING

Representative bulk samples of suspected ACBMs were randomly collected within each building area. The materials sampled were broken down into distinct homogenous (similar) materials. Homogenous material determination was based on the following criteria:

- Similar physical characteristics (same color and texture, etc.)
- Application (sprayed-on, troweled-on, assembly into a system etc.)
- Material function (Thermal insulation, floor tile, wallboard system etc.)

While the NESHAP regulation allows for the taking of one sample of select non-friable materials, the OSHA standard suggests a minimum of three samples of each homogeneous material be taken. This is a better approach due the potential errors in the analytical method used.

To provide the most accurate information possible and be sure of our results, ETC may choose to take three samples of each material.

If materials are being assumed to contain asbestos, they must be treated as asbestos containing, even if they are not. This can lead to significantly increased costs for the building owner.

In general, ETC only assumes materials to be asbestos when sampling them will ruin their integrity (i.e. fire doors) or when they are too dangerous to sample (i.e. live electrical lines).

FOLLOW-UP INSPECTIONS

In some cases, ETC may identify areas where destructive access was required to review materials that were not readily accessible. In these cases, a follow-up inspection may be required once access to these areas is granted in order to assess these previously inaccessible areas.

Additionally, materials that were deemed to be positive for asbestos content during the initial survey will need to be quantified and have their conditions assessed in a follow-up inspection.

PLM ANALYSIS METHODOLOGY

Bulk samples submitted for Polarized Light Microscopy (PLM) analysis were analyzed utilizing the Environmental Protection Agency's Test Method: Method for the determination of Asbestos in Bulk Building Materials (EPA 600/R-93/116, July 1993). Additional treatment and tests may be required to accurately define composition (e.g. ashing, fiber extraction, acid dissolution, TEM).

Analysis was performed by visual and stereoscopic examination of the bulk sample followed by microscopic examination and quantification using a polarized light microscope. The samples were analyzed for asbestos (chrysotile, amosite, crocidolite, anthophyllite, and actinolite/tremolite), fibrous non-asbestos constituents (mineral wool, cellulose, etc.) and non-fibrous constituents.

According to NESHAP requirements, any bulk sample that has an asbestos content above 0% but below 10% should be point counted for final determination of percentage. ***Please note, that when a contract DOES NOT include point counting as defined in NESHAP,*** and additional analysis is desired, ETC can send any samples in this range for point counting. However, this will require additional charges for analysis. Therefore, for any samples in the range above 0% but below 10%, these results can only be considered estimates.

INTERPRETATION OF INSPECTION RESULTS

A material is considered by the EPA, OSHA, and other federal, state, and local agencies to be asbestos-containing if at least one sample collected from the homogenous material has asbestos fibers present in a **concentration greater than one percent (>1 %)**.

However, materials with concentrations **greater than zero percent (0%) but less than or equal to one percent (≤1%)**, will now be considered regulated under certain sections of the OSHA Asbestos in Construction Standard (29 CFR 1926.1101).

The standard contains numerous work practice requirements and prohibitions which apply, regardless of the exposure levels. However, only two of the requirements and three of the prohibitions must be observed in the case of work activities involving installed construction materials that do not contain >1% asbestos. Those work practice requirements and prohibitions that must be observed regardless of the exposure levels and of the percentage of asbestos in the installed construction materials are:

- 29 CFR 1926.1101(g)(1)(ii), which requires: **wet methods, or wetting agents, to control employee exposures during asbestos handling, mixing, removal, cutting, application, and cleanup, except where employers demonstrate that the use of wet methods is infeasible**

due to, for example, the creation of electrical hazards, equipment malfunction, and, in roofing, except as provided in paragraph (g)(8)(ii)[2] of this section;

- 29 CFR 1926.1101(g)(1)(iii), which requires: prompt clean-up and disposal of wastes and debris contaminated with asbestos in leak-tight containers except in roofing operations, where the procedures specified in paragraph (g)(8)(ii)[3] of this section apply;
- 29 CFR 1926.1101(g)(3)(i), which prohibits: high-speed abrasive disc saws that are not equipped with point-of-cut ventilator or enclosures with HEPA filtered exhaust air;
- 29 CFR 1926.1101(g)(3)(ii), which prohibits: compressed air used to remove asbestos, or materials containing asbestos, unless the compressed air is used in conjunction with an enclosed ventilation system designed to capture the dust cloud created by the compressed air; and
- 29 CFR 1926.1101(g)(3)(iv), which prohibits: employee rotation as a means of reducing employee exposure to asbestos.

There are also some other provisions that apply to work activities involving installed construction materials even where the material does not contain >1% asbestos. However, if neither asbestos PEL is exceeded, only the following few provisions apply:

- 29 CFR 1926.1101(f)(2)(i), the provision for establishing that neither asbestos PEL is exceeded: Each employer who has a workplace or work operation covered by this standard shall ensure that a "competent person" conducts an exposure assessment immediately before or at the initiation of the operation to ascertain expected exposures during that operation or workplace. The assessment must be completed in time to comply with requirements which are triggered by exposure data or the lack of a "negative exposure assessment," and to provide information necessary to assure that all control systems planned are appropriate for that operation and will work properly;
- 29 CFR 1926.1101(f)(6)(i), a provision covering the observation of monitoring: The employer shall provide affected employees and their designated representatives an opportunity to observe any monitoring of employee exposure to asbestos conducted in accordance with this section;
- 29 CFR 1926.1101(f)(5)(i), a provision covering employee notification of monitoring results: The employer shall notify affected employees of the monitoring results that represent that employee's exposure as soon as possible following receipt of monitoring results;
- 29 CFR 1926.1101(f)(5)(ii), another provision covering employee notification of monitoring results: The employer shall notify affected employees of the results of monitoring representing the employee's exposure in writing either individually or by posting at a centrally located place that is accessible to affected employees; and
- 29 CFR 1926.1101(n)(2)(i)-(iii), a set of provisions covering recordkeeping for measurements of exposures to airborne asbestos.

There are numerous additional provisions of the standard that apply to work activities involving installed construction materials even where the material does not contain >1% asbestos if at least one of the asbestos PELs is exceeded.

A letter of interpretation from Federal OSHA authorities that explains this position can be found by following the link below:

https://www.osha.gov/laws-regs/standardinterpretations/2003-11-24-0

Note: A summary of the materials sampled, asbestos content, quantities and locations can be found in Table 1.

C-3: Other Hazardous Materials and Vermiculite

Hazardous Materials

Additionally, information showing other hazardous materials (above the household quantity limitations) found at the site is included in Table 2. This lists non-asbestos materials that may be hazardous, and may require special handling and disposal requirements. Items that might be in this category include things like tires, mercury switches, florescent lighting tubes, halogen lights, Freon in refrigeration units, pesticides, herbicides, paints, solvents, etc.

However, under the Resource Conservation and Recovery Act (RCRA) that addresses hazardous wastes, there is residential household quantity exclusion. Therefore, these materials will only be listed in this chart if they are present in quantities larger than what would be expected in a normal household. For instance, if the home was a farm and had a 55-gallon drum of pesticide present, this would be listed in Table 2. On the other hand, if there were a few pesticide containers present as would be found in most homes, these materials would not be listed.

Vermiculite

The EPA is informing the public to consider all vermiculite insulation as ACM, and is doing so because the current method is not accurate and yields false negatives when used on vermiculite.

However, the current standard PLM and point count methods satisfy the minimum EPA regulatory requirements for analysis of vermiculite loose fill insulation under 40 CFR part 61, subpart M. The EPA plans on publishing an analysis method that will be more accurate for vermiculite insulation. Upon its publishing, this method will supersede the current methods and continue use of the old methods will be subject to enforcement action.

C-4: Additional Resources

Additional information about asbestos is available on the Internet through the U.S. EPA's homepage (www2.epa.gov/asbestos). Demolition specific information can be found at https://www.epa.gov/large-scale-residential-demolition/asbestos-containing-materials-acm-and-demolition. In addition, the Asbestos NESHAP notification form, guidelines for completing the form and regulations are located at www.michigan.gov/air. Select "Asbestos NESHAP Program".

Questions about the federal OSHA standards or the state's asbestos compliance and training requirements can be obtained by visiting the LARA Asbestos Program's web site at www.michigan.gov/asbestos. Questions related to the transportation of asbestos can be addressed by the U.S. Department of Transportation's (U.S. DOT) Hazmat Information Center at 800-467-4922.

Head to https://asbestosprogram.apps.lara.state.mi.us/Contractor/ContractorSearch for a list of Michigan asbestos abatement contractors.

A "Notification of Intent to Renovate/Demolish" form can be found online at https://www.michigan.gov/documents/deq/deq-aqd-field-tpu-asbestos-notification-form_262676_7.pdf.

Additional information about vermiculite is available on the EPA's website and is located at https://www.epa.gov/asbestos/protect-your-family-asbestos-contaminated-vermiculite-insulation.

C-5: Regulatory Information

The Environmental Protection Agency (EPA) set the standard for asbestos surveys in the AHERA regulations (40 CFR Part 763) which required surveys of all school buildings in the United States. Additionally, the Department of Occupational Safety and Health (OSHA) has also passed regulations affecting the performance of asbestos surveys in buildings. According to current OSHA regulations (29 CFR 1926.1101), building owners must inform occupants of the location, quantity and condition of confirmed or assumed asbestos containing materials within all public and commercial facilities.

In addition to these regulations regarding surveys, facility owners and operators are also required to insure that employees or occupants of their buildings are not exposed to unsafe levels of airborne asbestos. Allowable fiber levels as defined by the regulatory agencies and standards below dictate which levels are applicable in which facilities:

0.01 f/cc - Environmental Protection Agency (EPA) Clean Air Standard

This standard was designed as a clearance criterion for asbestos removal projects in schools. This means that if a removal project occurs in a school, air testing must be conducted in the removal area after work is completed. The results of this sampling must be below this level in order to allow re-occupancy of this area.

0.05 f/cc - Michigan Occupational Safety and Health Administration (MIOSHA) Clean Air Standard

This standard is similar to the EPA standard previously mentioned except that it applies to all other public buildings and areas within the State of Michigan

0.10 f/cc - Occupational Safety and Health Administration (OSHA) Personal Exposure Level

This is the OSHA permissible exposure limit (PEL) average over an 8-hour day. This means that this is the maximum level of asbestos that workers and/or employees can be exposed to without respirator protection and protective clothing. Should air sampling be at or near the PEL the employer will have to:

- Implement Worker Training
- Conduct Employee Respiration Monitoring
- Perform Recordkeeping
- Conduct Medical Surveillance
- Notify Workers
- Post Danger Signs
- Perform periodic air monitoring, establish regulated areas, and construct decontamination facilities
- Provide respiratory protection and personnel protective clothing

For these reasons, it is important that building owners conduct a combination of a complete asbestos bulk survey and periodic air monitoring to determine what types of asbestos containing materials (ACM) are present in their building, what condition these materials are in and to what extent these materials have become airborne.

APPENDIX D – LABORATORIES USED & ORIGINAL LABORATORY ANALYSIS REPORTS

D-1: Laboratory Used

Environmental Testing Laboratories
37575 West Huron River Drive
Romulus, MI 48174
1-734-955-6600

D-2: Original Laboratory Analysis Reports

All of the original laboratory analysis reports for any samples that were sent for testing are included in the following pages.

DISCLAIMER:

The information contained herein is accurate for conditions present at the time of the investigation. In addition, ETC will not be held liable for incorrect or inaccurate information provided by the client, occupant, or property owner, or the recommendations based on that incorrect or inaccurate information. This report (including any enclosures and attachments) has been prepared for the exclusive use and benefit of the addressee(s) and solely for the purpose for which it is provided.

Unless ETC provides express prior written consent, no part of this report should be reproduced, distributed or communicated to any third party. ETC does not accept any liability if this report is used for an alternative purpose from which it is intended, nor to any third party in respect of this report.

ETC cannot be held responsible for materials encountered after the initial survey is completed unless we are contacted and given the opportunity to test and verify the material content. The costs associated with this additional testing are not included within the scope of this project and the addressee(s)/and or client will incur additional charges for the additional sampling and analysis.

Environmental Testing Laboratories, Inc.

37575 W Huron River Drive
Romulus, Michigan 48174
(734) 955-6600
Fax: (734) 955-6604

To: Environmental Testing And Consulting Inc.
38900 Huron River Drive
Romulus, MI 48174

ETL Job: 260163
Client Project: 260163

Attention: Michele Buckler
Project Location: 13400 W. Outer Drive , Detroit, MI 48239
Detroit Diesel

Lab Sample Number	Client Sample Number	Sample Type	Completed
1566547	001A	Asbestos	08/11/2023
1566548	001B	Asbestos	08/11/2023
1566549	001C	Asbestos	08/11/2023
1566550	002A	Asbestos	08/11/2023
1566551	002B	Asbestos	08/11/2023
1566552	002C	Asbestos	08/11/2023
1566553	003A	Asbestos	08/11/2023
1566554	003B	Asbestos	08/11/2023
1566555	003C	Asbestos	08/11/2023
1566556	004A	Asbestos	08/11/2023
1566557	004B	Asbestos	08/11/2023
1566558	004C	Asbestos	08/11/2023
1566559	005A	Asbestos	08/11/2023
1566560	005B	Asbestos	08/11/2023
1566561	005C	Asbestos	08/11/2023
1566562	006A	Asbestos	08/11/2023

Lab Sample Number	Client Sample Number	Sample Type	Completed
1566563	006B	Asbestos	08/11/2023
1566564	006C	Asbestos	08/11/2023
1566565	007A	Asbestos	08/11/2023
1566566	007B	Asbestos	08/11/2023
1566567	007C	Asbestos	08/11/2023
1566568	008A	Asbestos	08/11/2023
1566569	008B	Asbestos	08/11/2023
1566570	008C	Asbestos	08/11/2023
1566571	009A	Asbestos	08/11/2023
1566572	009B	Asbestos	08/11/2023
1566573	009C	Asbestos	08/11/2023
1566574	010A	Asbestos	08/11/2023
1566575	010B	Asbestos	08/11/2023
1566576	010C	Asbestos	08/11/2023
1566577	011A	Asbestos	08/11/2023
1566578	011B	Asbestos	08/11/2023
1566579	011C	Asbestos	08/11/2023
1566580	012A	Asbestos	08/11/2023
1566581	012B	Asbestos	08/11/2023
1566582	012C	Asbestos	08/11/2023
1566583	013A	Asbestos	08/11/2023
1566584	013B	Asbestos	08/11/2023
1566585	013C	Asbestos	08/11/2023

Lab Sample Number	Client Sample Number	Sample Type	Completed

Reviewed by: Jessica Dilworth

Jessica Dilworth

Summary

Method	Sample	Layer	Mastic
PLM	31		1
Point Count	2		

NVLAP LAB CODE 201028-0

Environmental Testing Laboratories, Inc.
37575 W Huron River Drive
Romulus, Michigan 48174
(734) 955-6600, Fax: (734) 955-6604

Certificate of Analysis

Polarized Light Microscopy Asbestos Analysis Report

To : Environmental Testing And Consulting Inc.
38900 Huron River Drive
Romulus,MI 48174

Location : 13400 W. Outer Drive , Detroit, MI 48239
Detroit Diesel

ETL Job : 260163
Client Project : 260163
Date Collected : 08/08/2023
Date Received : 08/08/2023

Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
1566547 001A Offices 2 Between Closets Layer-1 Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023	Pipe Insulation / Mag - White - HA(1)	White Fibrous Homogenous	PLM 1% Cellulose	PLM 74% Other	PLM 25% Chrysotile
1566548 001B Center Of Offices 2 Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023 Sample Not Analyzed		Positive Stop			
1566549 001C Offices 2 SW Corner Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023 Sample Not Analyzed		Positive Stop			
1566550 002A Offices 2 S Closet Layer-1 Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023	Ceiling / Wall / Drywall Board - White - HA(2)	White Non-Fibrous Homogenous	PLM 2% Cellulose	PLM 98% Other	PLM None Detected
1566551 002B Offices 2 North Closet Layer-1 Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023	Ceiling / Wall / Drywall Board - White - HA(2)	White Non-Fibrous Homogenous	PLM 2% Cellulose	PLM 98% Other	PLM None Detected
1566552 002C Offices 2 Center N Wall Layer-1 Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023	Ceiling / Wall / Drywall Board - White - HA(2)	White Non-Fibrous Homogenous	PLM 2% Cellulose	PLM 98% Other	PLM None Detected

NVLAP LAB CODE 201028-0

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Certificate of Analysis

Polarized Light Microscopy Asbestos Analysis Report

To : Environmental Testing And Consulting Inc.
38900 Huron River Drive
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Location : 13400 W. Outer Drive , Detroit, MI 48239
Detroit Diesel

ETL Job : 260163
Client Project : 260163
Date Collected : 08/08/2023
Date Received : 08/08/2023

Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
1566553 003A Offices 2 Between Closets Layer-1 Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023	Ceiling / Panel - White - HA(3)	White Fibrous Homogenous	PLM 20% Cellulose	PLM 80% Other	PLM None Detected
1566554 003B Offices 2 NW Corner Layer-1 Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023	Ceiling / Panel - White - HA(3)	White Fibrous Homogenous	PLM 20% Cellulose	PLM 80% Other	PLM None Detected
1566555 003C Offices 2 Center Layer-1 Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023	Ceiling / Panel - White - HA(3)	White Fibrous Homogenous	PLM 20% Cellulose	PLM 80% Other	PLM None Detected
1566556 004A Entry 1 SW Corner Layer-1 Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023	Floor / Tile - 9x9 - Grey - HA(4)	Grey Non-Fibrous Non-Homogenous	PC 1% Cellulose	PC 97% Other	PC 2% Chrysotile
1566556 004A Entry 1 SW Corner Layer-2 Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023	Adhesive	Yellow Non-Fibrous Homogenous	PLM 1% Cellulose	PLM 99% Other	PLM None Detected

NVLAP LAB CODE 201028-0

Environmental Testing Laboratories, Inc.
37575 W Huron River Drive
Romulus, Michigan 48174
(734) 955-6600, Fax: (734) 955-6604

Certificate of Analysis

Polarized Light Microscopy Asbestos Analysis Report

To : Environmental Testing And Consulting Inc.
38900 Huron River Drive
Romulus,MI 48174

Location : 13400 W. Outer Drive , Detroit, MI 48239
Detroit Diesel

ETL Job : 260163
Client Project : 260163
Date Collected : 08/08/2023
Date Received : 08/08/2023

Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
1566557 004B Offices 2 Outside Of S Closet Layer-1 Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023		Positive Stop			
Layer Not Analyzed					
1566557 004B Offices 2 Outside Of S Closet Layer-2 Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023	Adhesive	Yellow Non-Fibrous Homogenous	PLM 1% Cellulose	PLM 99% Other	PLM None Detected
1566558 004C Offices 2 Outside Of N Closet Layer-1 Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023		Positive Stop			
Layer Not Analyzed					
1566558 004C Offices 2 Outside Of N Closet Layer-2 Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023	Adhesive	Yellow Non-Fibrous Homogenous	PLM 1% Cellulose	PLM 99% Other	PLM None Detected
1566559 005A Enrry 1 SW Corner Layer-1 Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023	Floor / Tile Mastic - Black - HA(5)	Black Non-Fibrous Homogenous	PLM 1% Cellulose	PLM 95% Other	PLM 4% Chrysotile
1566560 005B Offices 2 Outside Of S Closet Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023		Positive Stop			
Sample Not Analyzed					

NVLAP LAB CODE 201028-0

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Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
1566561 005C Offices 2 Outside Of N Closet Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023 Sample Not Analyzed		Positive Stop			
1566562 006A Entry 1 SE Corner Layer-1 Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023	Floor / Tile - 12x12 - Grey - HA(6)	Grey Non-Fibrous Homogenous	PLM 1% Cellulose	PLM 99% Other	PLM None Detected
1566563 006B Entry 1 SW Corner Layer-1 Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023	Floor / Tile - 12x12 - Grey - HA(6)	Grey Non-Fibrous Homogenous	PLM 2% Cellulose	PLM 98% Other	PLM None Detected
1566564 006C Entry 1 NE Corner Layer-1 Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023	Floor / Tile - 12x12 - Grey - HA(6)	Grey Non-Fibrous Homogenous	PLM 2% Cellulose	PLM 98% Other	PLM None Detected
1566565 007A Entry 1 SE Corner Layer-1 Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023	Floor / Tile Mastic - Yellow - HA(7)	Yellow Non-Fibrous Homogenous	PLM 2% Cellulose	PLM 98% Other	PLM None Detected
1566566 007B Entry 1 SW Corner Layer-1 Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023	Floor / Tile Mastic - Yellow - HA(7)	Yellow Non-Fibrous Homogenous	PLM 1% Cellulose	PLM 99% Other	PLM None Detected

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Detroit Diesel

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Date Received : 08/08/2023

Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
1566567 007C Entry 1 NE Corner Layer-1 Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023	Floor / Tile Mastic - Yellow - HA(7)	Yellow Non-Fibrous Homogenous	PLM 2% Cellulose	PLM 98% Other	PLM None Detected
1566568 008A Offices 2 Outside Of S Closet Layer-1 Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023	Floor / Tile - 9x9 - Orange - HA(8)	Orange Non-Fibrous Homogenous	PLM 1% Cellulose	PLM 99% Other	PLM None Detected
1566569 008B Offices 2 Center Layer-1 Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023	Floor / Tile - 9x9 - Orange - HA(8)	Orange Non-Fibrous Homogenous	PLM 2% Cellulose	PLM 98% Other	PLM None Detected
1566570 008C Offices 2 Center Of S Wall Layer-1 Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023	Floor / Tile - 9x9 - Orange - HA(8)	Orange Non-Fibrous Homogenous	PLM 2% Cellulose	PLM 98% Other	PLM None Detected
1566571 009A Offices 2 Outside Of S Closet Layer-1 Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023	Floor / Tile Mastic - Tan - HA(9)	Tan Non-Fibrous Homogenous	PLM 3% Cellulose	PLM 97% Other	PLM None Detected
1566572 009B Offices 2 Center Layer-1 Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023	Floor / Tile Mastic - Tan - HA(9)	Tan Non-Fibrous Homogenous	PLM 2% Cellulose	PLM 98% Other	PLM None Detected

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Location : 13400 W. Outer Drive , Detroit, MI 48239
Detroit Diesel

ETL Job : 260163
Client Project : 260163
Date Collected : 08/08/2023
Date Received : 08/08/2023

Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
1566573 009C Offices 2 Center Of S Wall Layer-1 Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023	Floor / Tile Mastic - Tan - HA(9)	Tan Non-Fibrous Homogenous	PLM 2% Cellulose	PLM 98% Other	PLM None Detected
1566574 010A Offices 2 Outside Of N Closet Layer-1 Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023	Floor / Tile - 9x9 - Biege - HA(10)	Biege Non-Fibrous Homogenous	PC 2% Cellulose	PC 96.5% Other	PC 1.5% Chrysotile
1566575 010B Offices 2 In N Closet Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023 Sample Not Analyzed		Positive Stop			
1566576 010C Offices 2 Center Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023 Sample Not Analyzed		Positive Stop			
1566577 011A Offices 2 Outside Of N Closet Layer-1 Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023	Floor / Tile Mastic - Black - HA(11)	Black Non-Fibrous Homogenous	PLM 3% Cellulose	PLM 93% Other	PLM 4% Chrysotile
1566578 011B Offices 2 In N Closet Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023 Sample Not Analyzed		Positive Stop			

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To : Environmental Testing And Consulting Inc.
38900 Huron River Drive
Romulus,MI 48174

Location : 13400 W. Outer Drive , Detroit, MI 48239
Detroit Diesel

ETL Job : 260163
Client Project : 260163
Date Collected : 08/08/2023
Date Received : 08/08/2023

Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
1566579 011C Offices 2 Center Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023 Sample Not Analyzed		Positive Stop			
1566580 012A Offices 2 NE Corner Layer-1 Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023	Wall / Cove Base - Grey - HA(12)	Grey Non-Fibrous Homogenous	PLM Trace Cellulose	PLM 100% Other	PLM None Detected
1566581 012B Offices 2 Center N Wall Layer-1 Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023	Wall / Cove Base - Grey - HA(12)	Grey Non-Fibrous Homogenous	PLM Trace Cellulose	PLM 100% Other	PLM None Detected
1566582 012C Offices 2 Between Other Offices Layer-1 Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023	Wall / Cove Base - Grey - HA(12)	Grey Non-Fibrous Homogenous	PLM Trace Cellulose	PLM 100% Other	PLM None Detected
1566583 013A Office 2 NE Corner Layer-1 Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023	Wall / Cove Base Mastic - Tan - HA(13)	Tan Non-Fibrous Homogenous	PLM 1% Cellulose	PLM 99% Other	PLM None Detected
1566584 013B Offices 2 Center Of N Wall Layer-1 Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023	Wall / Cove Base Mastic - Tan - HA(13)	Tan Non-Fibrous Homogenous	PLM 1% Cellulose	PLM 99% Other	PLM None Detected

NVLAP LAB CODE 201028-0

Certificate of Analysis

Environmental Testing Laboratories, Inc.
37575 W Huron River Drive
Romulus, Michigan 48174
(734) 955-6600, Fax: (734) 955-6604

Polarized Light Microscopy Asbestos Analysis Report

To : Environmental Testing And Consulting Inc.
38900 Huron River Drive
Romulus,MI 48174

Location : 13400 W. Outer Drive , Detroit, MI 48239
Detroit Diesel

ETL Job : 260163
Client Project : 260163
Date Collected : 08/08/2023
Date Received : 08/08/2023

Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
1566585 013C Offices 2 Between Other Offices Layer-1 Analyst: Shelby Fogelsong Date Analyzed : 08/11/2023	Wall / Cove Base Mastic - Tan - HA(13)	Tan Non-Fibrous Homogenous	PLM 1% Cellulose	PLM 99% Other	PLM None Detected

Lab Supervisor/Other Signatory

Analyst:

Shelby Fogelsong

400 Point Count Results by EPA 600/R-93/116 PLM (denoted by "PC")
Item 198.1: PLM Methods for Identifying and Quantitating Asbestos in Bulk Samples
Item 198.6: PLM Methods for Identifying and Quantitating Asbestos in Non-Friable Organically Bound Bulk Samples
EPA 600/R-93/116: Method for Determination of Asbestos in Bulk Building Materials
EPA 600/M4-82-020: Interim Method for Determination of Asbestos in Bulk Insulation Samples
A % Asbestos result of "Trace" indicates that the analyzed material was found to contain less than 1% asbestos and would not be considered an Asbestos Containing Material (ACM).

Electronic Chain of Custody

Environmental Testing Laboratories, Inc.

37575 W Huron River Drive
Romulus, Michigan 48174
(734) 955-6600, Fax: (734) 955-6604

Submitting Client: Detroit Diesel Corporation
13400 W. Outer Drive
Detroit, MI - 48239

Sample Type: Asbestos-Bulk

Turn Around: Standard

Positive Stop: Yes

Point Counting: Yes, 400.00 Points

P.C. Criteria: ETC Standard

Project Location: 13400 W. Outer Drive , Detroit, MI 48239

ETL Project : **260163**

Sample ID	Client Sample ID	Sample Location	Sample Description	Collection Date
1566547	001A	Offices 2 Between Closets	Pipe Insulation / Mag - White - HA(1)	2023-08-08
1566548	001B	Center Of Offices 2	Pipe Insulation / Mag - White - HA(1)	2023-08-08
1566549	001C	Offices 2 SW Corner	Pipe Insulation / Mag - White - HA(1)	2023-08-08
1566550	002A	Offices 2 S Closet	Ceiling / Wall / Drywall Board - White - HA(2)	2023-08-08
1566551	002B	Offices 2 North Closet	Ceiling / Wall / Drywall Board - White - HA(2)	2023-08-08
1566552	002C	Offices 2 Center N Wall	Ceiling / Wall / Drywall Board - White - HA(2)	2023-08-08
1566553	003A	Offices 2 Between Closets	Ceiling / Panel - White - HA(3)	2023-08-08
1566554	003B	Offices 2 NW Corner	Ceiling / Panel - White - HA(3)	2023-08-08
1566555	003C	Offices 2 Center	Ceiling / Panel - White - HA(3)	2023-08-08
1566556	004A	Entry 1 SW Corner	Floor / Tile - 9x9 - Grey - HA(4)	2023-08-08
1566557	004B	Offices 2 Outside Of S Closet	Floor / Tile - 9x9 - Grey - HA(4)	2023-08-08
1566558	004C	Offices 2 Outside Of N Closet	Floor / Tile - 9x9 - Grey - HA(4)	2023-08-08
1566559	005A	Enrry 1 SW Corner	Floor / Tile Mastic - Black - HA(5)	2023-08-08
1566560	005B	Offices 2 Outside Of S Closet	Floor / Tile Mastic - Black - HA(5)	2023-08-08
1566561	005C	Offices 2 Outside Of N Closet	Floor / Tile Mastic - Black - HA(5)	2023-08-08
1566562	006A	Entry 1 SE Corner	Floor / Tile - 12x12 - Grey - HA(6)	2023-08-08
1566563	006B	Entry 1 SW Corner	Floor / Tile - 12x12 - Grey - HA(6)	2023-08-08
1566564	006C	Entry 1 NE Corner	Floor / Tile - 12x12 - Grey - HA(6)	2023-08-08
1566565	007A	Entry 1 SE Corner	Floor / Tile Mastic - Yellow - HA(7)	2023-08-08
1566566	007B	Entry 1 SW Corner	Floor / Tile Mastic - Yellow - HA(7)	2023-08-08
1566567	007C	Entry 1 NE Corner	Floor / Tile Mastic - Yellow - HA(7)	2023-08-08

Project Location: 13400 W. Outer Drive , Detroit, MI 48239 **ETL Project :** **260163**

Sample ID	Client Sample ID	Sample Location	Sample Description	Collection Date
1566568	008A	Offices 2 Outside Of S Closet	Floor / Tile - 9x9 - Orange - HA(8)	2023-08-08
1566569	008B	Offices 2 Center	Floor / Tile - 9x9 - Orange - HA(8)	2023-08-08
1566570	008C	Offices 2 Center Of S Wall	Floor / Tile - 9x9 - Orange - HA(8)	2023-08-08
1566571	009A	Offices 2 Outside Of S Closet	Floor / Tile Mastic - Tan - HA(9)	2023-08-08
1566572	009B	Offices 2 Center	Floor / Tile Mastic - Tan - HA(9)	2023-08-08
1566573	009C	Offices 2 Center Of S Wall	Floor / Tile Mastic - Tan - HA(9)	2023-08-08
1566574	010A	Offices 2 Outside Of N Closet	Floor / Tile - 9x9 - Biege - HA(10)	2023-08-08
1566575	010B	Offices 2 In N Closet	Floor / Tile - 9x9 - Biege - HA(10)	2023-08-08
1566576	010C	Offices 2 Center	Floor / Tile - 9x9 - Biege - HA(10)	2023-08-08
1566577	011A	Offices 2 Outside Of N Closet	Floor / Tile Mastic - Black - HA(11)	2023-08-08
1566578	011B	Offices 2 In N Closet	Floor / Tile Mastic - Black - HA(11)	2023-08-08
1566579	011C	Offices 2 Center	Floor / Tile Mastic - Black - HA(11)	2023-08-08
1566580	012A	Offices 2 NE Corner	Wall / Cove Base - Grey - HA(12)	2023-08-08
1566581	012B	Offices 2 Center N Wall	Wall / Cove Base - Grey - HA(12)	2023-08-08
1566582	012C	Offices 2 Between Other Offices	Wall / Cove Base - Grey - HA(12)	2023-08-08
1566583	013A	Office 2 NE Corner	Wall / Cove Base Mastic - Tan - HA(13)	2023-08-08
1566584	013B	Offices 2 Center Of N Wall	Wall / Cove Base Mastic - Tan - HA(13)	2023-08-08
1566585	013C	Offices 2 Between Other Offices	Wall / Cove Base Mastic - Tan - HA(13)	2023-08-08

Seal Intact: **Yes**

Preservative (if required): **Yes**

Containers Labled : **Yes**

Analyst

Relinquished By: James A. Brown

Relinquished Date: Aug 8 2023 11:22AM

Received By: Luke Powell

Received Date: 2023-08-08 04:45 PM

Shelby Fogelsong

2023-08-11

Material List

Environmental Testing Laboratories, Inc.

37575 W Huron River Drive
Romulus, Michigan 48174
(734) 955-6600, Fax: (734) 955-6604

Client : Detroit Diesel Corporation
13400 W. Outer Drive
Detroit, MI - 48239

Project Location:

Job #: 260163

Material ID	Material Description	Material Sub	Classification	Size	Quantity	Locations
1	Pipe Insulation/Mag-White	Mag	T		348 LF	FS-01,FS-02,FS-03,FS-04,FS-05
2	Ceiling / Wall/Drywall Board-White	Drywall Board	M		8763 SF	FS-01,FS-02,FS-03,FS-04,FS-05
3	Ceiling/Panel-White	Panel	M		5464 SF	FS-01,FS-02,FS-03,FS-04,FS-05
4	Floor/Tile-9x9-Grey	Tile	M	9x9	5464 SF	FS-01,FS-02,FS-03,FS-04,FS-05
5	Floor/Tile Mastic-Black	Tile Mastic	M		5464 SF	FS-01,FS-02,FS-03,FS-04,FS-05
6	Floor/Tile-12x12-Grey	Tile	M	12x12	48 SF	FS-01
7	Floor/Tile Mastic-Yellow	Tile Mastic	M		64 SF	FS-01
8	Floor/Tile-9x9-Orange	Tile	M	9x9	1708 SF	FS-02
9	Floor/Tile Mastic-Tan	Tile Mastic	M		1708 SF	FS-02
10	Floor/Tile-9x9-Biege	Tile	M	9x9	3782 SF	FS-02,FS-03,FS-04,FS-05
11	Floor/Tile Mastic-Black	Tile Mastic	M		3782 SF	FS-02,FS-03,FS-04,FS-05
12	Wall/Cove Base-Grey	Cove Base	M		631 SF	FS-01,FS-02,FS-03,FS-04,FS-05
13	Wall/Cove Base Mastic-Tan	Cove Base Mastic	M		631 SF	FS-01,FS-02,FS-03,FS-04,FS-05