



January 15, 2021

Mr. Bradley Roberts
Task Order Contracting Officer's Representative
U.S. Environmental Protection Agency, Region 7
11201 Renner Blvd.
Lenexa, Kansas 66219

Subject: Contract No. 68HERH19D0018; Task Order (TO) No. 68HE0719F0190
WE Building, 3230-3232 Washington Boulevard, St. Louis, Missouri
Targeted Brownfields Assessment Hazardous Materials Survey

Dear Mr. Roberts:

Toeroek Associates, Inc. (Toeroek) and our teaming subcontractor, Tetra Tech, Inc. (hereafter "Toeroek Team"), are pleased to present the attached Targeted Brownfields Assessment Hazardous Materials Survey of the WE Building site (the subject property) at 3230-3232 Washington Boulevard in St. Louis, Missouri. The Toeroek Team conducted this survey based on results of the Phase I ESA performed at the subject property by SCS Engineers in October 2019. This deliverable has been reviewed internally as part of Tech Tech's quality assurance program, as well as Toeroek's quality assurance program, and is consistent with Toeroek's Quality Management Plan for the Resource Conservation and Recovery Act (RCRA) Enforcement and Permitting Assistance (REPA) contract. Documentation of this review is retained in the Toeroek Team's project files.

If you have any questions or comments, please contact Paul Kieler at 303-407-0266 or Kaitlyn Mitchell at 816-412-1742.

Sincerely,

Paul Kieler
Toeroek Team Program Manager

Kaitlyn Mitchell
Toeroek Team Project Manager

Enclosure: Targeted Brownfields Assessment Hazardous Materials Survey

cc: Leeanna Balsley, EPA Region 7 (cover letter only)
Lisa Dunning, EPA Region 7
Heather Wood, Tetra Tech
Toeroek Team Project Files

**TARGETED BROWNFIELDS ASSESSMENT
HAZARDOUS MATERIALS SURVEY**

**WE BUILDING
3230-3232 WASHINGTON BOULEVARD, ST. LOUIS, MISSOURI**



Prepared for

**U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 7**

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1.0 INTRODUCTION

The U.S. Environmental Protection Agency (EPA) tasked Toeroek Associates, Inc. (Toeroek) and its teaming subcontractor, Tetra Tech, Inc. (hereafter “Toeroek Team”), with providing technical support to the EPA Region 7 Brownfields Program under Contract 68HERH19D0018, Task Order (TO) 68HE0719F0190. EPA Region 7 requested the Toeroek Team conduct a hazardous materials survey as part of a Targeted Brownfields Assessment (TBA) of the WE Building site (the subject property) at 3230-3232 Washington Boulevard in St. Louis, Missouri (see Appendix A, Figure 1). The subject property consists of a one-story warehouse encompassing approximately 26,230-square-feet (SF). The warehouse has an elevated half-story that is accessed by a concrete ramp (referred to as the “second floor” in the results tables and sample location map of this report).

The scope of the survey included an inspection of the subject property building for presence of asbestos-containing materials (ACM), polychlorinated biphenyls (PCBs) in caulk, and lead-based paint (LBP). Additionally, the Toeroek Team inventoried containerized hazardous waste (HW) and other hazardous materials within the subject property building. As part of this survey, the Toeroek Team also conducted a Phase II Environmental Site Assessment (ESA), report of which is submitted under separate cover. Appendix B is a photo log of observations during the survey.

The Toeroek Team Project Manager for the survey was Ms. Kaitlyn Mitchell. The field team included Mr. Ryan Slanczka, State of Missouri-licensed asbestos and lead Inspector, and Ms. Stephanie Caples, State of Missouri-licensed asbestos inspector. Inspector certifications are in Appendix C. Section 12.0 specifies assumptions and deviations regarding the survey at the subject property. Prior to any renovations or demolition of the subject property building, further survey work may be needed to comply with all local, state, and federal requirements regulating ACM, LBP, PCBs, or HW.

The Toeroek Team conducted the survey from September 14 through 18, 2020. The purpose of the asbestos survey was to evaluate the subject property building for presence, quantity, locations, and characterization of ACM that may require abatement prior to any development activities, in accordance with National Emissions Standards for Hazardous Air Pollutants (NESHAP) regulations as adopted by EPA. The intent of the asbestos NESHAP regulations is to protect the public (and workers) by minimizing release of asbestos fibers during activities involving processing, handling, and disposal of ACM. Inhalation of asbestos fibers can cause cancer and other lung diseases (Agency for Toxic Substances and Disease Registry [ATSDR] 2008). The survey accorded with industry standard practice

for hazardous materials surveys. Collection of samples of suspected ACM accorded with NESHAP regulations as adopted by EPA.

The Toeroek Team screened for presence, quantity, and locations of LBP exceeding lead hazard levels, which would require Occupational Safety and Health Administration (OSHA) worker safety precautions during development activities. The subject property building was constructed prior to 1978, and LBP was likely used in the build-out of the structure. The LBP survey proceeded according to protocols similar to the single-family housing inspection procedures in U.S. Department of Housing and Urban Development (HUD) guidelines (HUD 2012). The Toeroek Team screened paint-covered surfaces using an x-ray fluorescence (XRF) spectrometer.

Because portions of the subject property building could have been constructed between 1950 and 1978, PCBs may be present within the subject property building in materials such as caulk associated with windows, doors, and masonry columns. The Toeroek Team collected samples from materials suspected to contain PCBs for laboratory analysis to determine presence, quantity, and locations of PCBs exceeding the action level, which would require OSHA worker safety precautions during development remodeling activities.

As part of the survey, the Toeroek Team also completed an inventory of HW and other hazardous materials within the subject property building. The inventory included but was not limited to the following types of materials: thermostats and fluorescent light bulbs possibly containing mercury, fluorescent light ballasts potentially containing PCBs, emergency lighting and exit signs that house batteries containing heavy metals, appliances containing Freon (e.g., old refrigerators), product containers holding hazardous materials (such as cleaning supplies, paints, etc.), and any other HW items that may have to be removed during renovation/demolition of the building. The Toeroek Team made every effort to provide a complete inventory of these items; however, given the large size of the subject property building and the disorderly distribution of these items inside the building, the Toeroek Team cannot guarantee an accounting of every item.

The Toeroek Team submitted a site-specific quality assurance project plan (QAPP) in support of survey activities to EPA on July 15, 2020. EPA approved the QAPP via email on August 20, 2020, prior to the survey at the subject property (Toeroek Team 2020). Field activities accorded with the QAPP, except where noted in Section 12.0.

The Toeroek Team prepared this report in accordance with generally accepted industrial hygiene practices and procedures. This report does not cover or comment on structural areas not assessed either visibly or by sample collection. The data evaluation and assessment stated herein constitute a professional opinion; no other warranty is expressed or implied. Section 12.0 specifies assumptions and deviations regarding the survey at the subject property.

The Toeroek Team provided these services consistent with the level and skill ordinarily exercised by members of the profession currently practicing under similar conditions. This statement is in lieu of other statements either expressed or implied. The scope of services performed in execution of this evaluation may not be appropriate to satisfy the needs of other users, and use or re-use of this document, the findings, conclusions, or recommendations is at the risk of said user. This survey report does not warrant against future operations or conditions that may not be consistent with its recommendations. Moreover, because of some limitations on destructive sampling during the survey, completion of the survey does not guarantee identification of all ACM or PCBs—hazardous materials may be present in voids of walls, ceilings or other concealed areas.

Section 2.0 of this report describes the structure at the subject property. Section 3.0 specifies field and analytical protocols for the ACM survey. Section 4.0 specifies field and analytical protocols for the LBP screening. Section 5.0 presents field and analytical protocols for the PCB survey. Section 6.0 presents field protocols for the HW and hazardous materials inventory. Section 7.0 presents asbestos findings. Section 8.0 describes LBP findings. Section 9.0 conveys PCB findings. Section 10.0 describes HW and hazardous materials inventory findings. Section 11.0 offers recommendations based on survey findings. Section 12.0 specifies assumptions and deviations. Section 13.0 lists sources referenced during development of this report.

2.0 SUBJECT PROPERTY BUILDING

The subject property includes a one-story building encompassing approximately 26,230 SF. The warehouse has an elevated half-story that is accessed by a concrete ramp (referred to as the “second floor” in the results tables and sample location map of this report). The subject property building is constructed of brick, mortar, and concrete masonry units, and surrounded by urban development. Interior finishes include brick and mortar, concrete masonry units, drywall, and wood paneling walls. Flooring materials include vinyl and ceramic floor tile, carpet, and concrete.

3.0 ACM FIELD SURVEY AND ANALYTICAL PROTOCOLS

The Toeroek Team made every effort to inspect all areas of the interior of the subject property building. Minor demolition of materials (destructive sampling) was required during the survey effort. The inspector took care to ensure the subject property remained unoccupied during sample collection. Collection of suspect ACM samples accorded with NESHAP as adopted by EPA and Asbestos Hazard and Emergency Response Act of 1986 (AHERA) protocols. AHERA defines “asbestos-containing material” (ACM) as any material or product that contains more than 1 percent (%) asbestos. Suspected ACMs were grouped as homogeneous areas if the material was similar in appearance and texture; however, if the inspector decided a material (e.g., wall texturing) was not similar in appearance and texture to other materials in the subject property building, the inspector distinguished the material as unique and collected samples of each unique material accordingly. Because of limitations on destructive sampling methods, additional suspect materials not detected may be present in walls, voids, or other concealed areas. Section 12.0 specifies assumptions and deviations regarding the survey of the subject property building.

Bulk samples of suspected ACM were collected to ensure each distinct layer of material was represented in the sample. A wetting agent was applied to friable surfaces prior to sample collection to reduce potential for fiber release. All samples collected were placed in plastic bags, labeled, and sealed immediately upon collection. A unique sample identification number was assigned to each sample. To prevent cross-contamination between samples, the sampling instruments were wiped clean by use of a wet, lint-free cloth after collection of each sample.

The samples remained in the inspector’s custody until sent to the laboratory. Upon completion of sampling activities, the bulk samples were sent, along with the Toeroek Team’s chain-of-custody documentation, to Eurofins EMLab P&K Laboratories (Eurofins). Suspect ACM samples were analyzed per EPA Method 600/R-93/116 by Eurofins via polarized light microscopy (PLM) analysis. Samples determined by PLM analysis to contain less than 1% asbestos were analyzed via EPA Point Count 400 (EPA Method 600/R-93/116). Eurofins is a National Voluntary Laboratory Accreditation Program (NVLAP)-certified laboratory. Section 7.0 of this report summarizes ACM analytical results. Sample locations are shown on Figure 2 in Appendix A. Appendix D presents ACM analytical results and chain-of-custody forms for the bulk samples.

4.0 LBP SCREENING AND ANALYTICAL PROTOCOLS

The Toeroek Team made every effort to inspect all areas of the buildings. HUD *Guidelines for the Evaluation and Control of LBP in Housing* (2012) (HUD Guidelines) suggests paint applied before 1978 could contain lead.

An XRF screening of suspected LBP was performed according to protocols similar to the single-family housing inspection procedures in the HUD Guidelines. The Toeroek Team utilized an Innov-X 6000 Alpha Series analyzer to perform the LBP screening. The Innov-X 6000 Alpha Series is a state-of-the-art XRF spectrum analyzing system for quantitative measurement of lead in paint on various substrates. The Toeroek Team conducted XRF screening of suspect painted surfaces that possibly would be impacted during renovation activities.

The Toeroek Team utilized the XRF “Lead Paint Mode” for testing, standardized per the equipment instruction manual, and programmed the unit with an action level of 1.0 milligram per square centimeter (mg/cm²). Paint containing greater than or equal to 1.0 mg/cm² lead by XRF testing or 1.0 mg/cm² lead by laboratory analysis is considered LBP.

The Toeroek Team performed XRF calibration checks on the Innov-X 6000 XRF spectrometer according to Thermo Scientific’s recommended protocol and the HUD Guidelines. These quality control readings were used to monitor performance of the Innov-X 6000 XRF spectrometer. Calibration-check readings were taken at the beginning and end of operation from a Standard Reference Material (SRM) paint film, developed by the National Institute of Standards and Technology (NIST). Section 8.0 of this report summarizes results from XRF screening of painted surfaces at the subject property. Screening locations with positive results are shown on Figure 3 in Appendix A.

5.0 PCB FIELD SURVEY AND ANALYTICAL PROTOCOLS

The Toeroek Team made every effort to inspect all areas of the subject property building. Minor demolition of materials (destructive sampling) was required during the survey effort. The inspector took care to ensure the areas remained unoccupied during sample collection. Samples of caulk possibly containing PCBs were collected following EPA guidance. EPA has set an action level of 50 parts per million (ppm) for PCBs in materials, and that was the benchmark used for this survey (EPA 2016). Suspected PCB-containing caulk materials were grouped as homogeneous areas if the material was similar in appearance and texture; however, if the inspector decided a material was not similar in appearance and texture to other materials in the building, or that a material was associated with a different building construction date, the inspector distinguished the material as unique and collected samples of each unique material accordingly. Section 12.0 specifies assumptions and deviations regarding the survey of the subject property building.

Bulk samples were collected to ensure only suspect PCB-containing caulk materials were represented in the sample. A wetting agent was applied to the material prior to sample collection to reduce potential for particulate release. All samples collected were placed in plastic bags, labeled, and sealed immediately upon collection. A unique sample identification number was assigned to each sample. To prevent cross-contamination between samples, the sampling instruments were wiped clean by use of a wet, lint-free cloth after collection of each sample.

The samples remained in the inspector's custody until sent to the laboratory. Upon completion of sampling activities, the bulk samples were sent, along with Toeroek Team's chain-of-custody documentation, to Pace Analytical (Pace) laboratory in Lenexa, Kansas. Bulk samples of suspect PCB-containing caulk materials were analyzed via EPA Method 8082 by Pace. Appendix E includes PCB analytical results and chain-of-custody forms for those bulk samples, and Section 9.0 summarizes analytical results from those samples.

6.0 HAZARDOUS WASTE AND OTHER HAZARDOUS MATERIALS INVENTORY

The Toeroek Team completed an inventory of HW and other potentially hazardous materials in the subject property building. This inventory included but was not limited to the following types of materials: thermostats and fluorescent light bulbs possibly containing mercury, fluorescent light ballasts potentially containing PCBs, emergency lighting and exit signs that house batteries containing heavy metals, appliances containing Freon, product containers holding hazardous materials (such as cleaning supplies, paint, etc.), and any other HW items that may have been present.

The Toeroek Team used an inventory field sheet and went through every room in the subject property building identifying, categorizing, and quantifying HW and hazardous materials. The Toeroek Team made every effort to provide a complete inventory of these items; however, The Toeroek Team cannot guarantee an accounting of every item. The exterior of the building was not included in this inventory (excluding air conditioning units), based on professional judgment of the assessment team. Items at the subject property that would not be affected during any renovation activities—for example, pole-mounted transformers that may contain PCBs—were not included in the inventory. Notably, the assessment team walked the perimeter of the subject property building to identify any drums or other large containers that may contain HW. At the time of this assessment, no materials fitting this description had been identified outside the subject property building. A summary of HW and other hazardous materials inventoried during the survey is in Section 10.0 of this report.

7.0 ACM FINDINGS

PLM results from samples of suspect ACM collected at the building on the subject property are presented in the laboratory report in Appendix D and summarized in Table 1 below. Bolded results in Table 1 indicate where asbestos was detected at a concentration greater than 1 percent. Sample locations are shown on Figure 2 in Appendix A.

TABLE 1

**SUMMARY OF RESULTS FROM LABORATORY ANALYSIS FOR SUSPECT ACM
WE BUILDING, 3230-3232 WASHINGTON BOULEVARD, ST. LOUIS, MISSOURI**

Figure Key	Sample ID	Material Description	Material Locations	Friable (F)/ Non-Friable (NF)	Analytical Result (% ACM ¹)	Quantity
1	WE-VFT-01	9" X 9" Red / Beige Vinyl Floor Tile with Black Mastic	Throughout First Floor North Room	NF	Red Floor Tile – 10% Chrysotile Black Mastic – ND	3,000 SF
2	WE-VFT-02					
3	WE-VFT-03					
4	WE-VFT2-01	12" X 12" Red Natural Facade Vinyl Floor Tile with Dark Brown Mastic	First Floor – North Room, West Half Open Area over Vinyl Floor Tile (VFT)	NF	Red Floor Tile – 7% Chrysotile Brown Mastic – ND	1,700 SF
5	WE-VFT2-02					
6	WE-VFT2-03					
7	WE-VFT3-01	12" X 12" Beige with Flecks Vinyl Floor Tile with Light Brown Mastic	First Floor – North Room, West Half Open Area over Vinyl Floor Tile (VFT2)	NF	ND	NA
8	WE-VFT3-02					
9	WE-VFT3-03					
10	WE-VFT4-01	12" X 12" Red Ornate Facade Vinyl Floor Tile with Yellow/Brown Mastic	First Floor – North Room, Offices and Southeast Corner over Vinyl Floor Tile (VFT)	NF	Red Floor Tile – 7% Chrysotile Yellow Mastic – ND	1,400 SF
11	WE-VFT4-02					
12	WE-VFT4-03					
13	WE-CT-01	12" X 12" Ceiling Tile with Pinholes	First Floor – North Room except Southeast Corner of Open Area	NF	ND	NA
14	WE-CT-02					
15	WE-CT-03					
16	WE-CT2-01	2" X 4" Ceiling Tile with Pinholes and Fissures	First Floor – North Room Offices	NF	ND	NA
17	WE-CT2-02					
18	WE-CT2-03					
19	WE-CM-01	Brown Carpet Mastic	First Floor – North Room and East Offices	NF	ND	NA
20	WE-CM-02					
21	WE-CM-03					
22	WE-CGB-01	Ceiling Gypsum Board	First Floor – North Room and Southeast Corner of Open Area	NF	ND	NA
23	WE-CGB-02					
24	WE-CGB-03					
25	WE-WM-01	Black Wall Mastic	First Floor – North Room, East Restroom, and Central Room North Wall	NF	ND	NA
26	WE-WM-02					
27	WE-WM-03					

TABLE 1

**SUMMARY OF RESULTS FROM LABORATORY ANALYSIS FOR SUSPECT ACM
WE BUILDING, 3230-3232 WASHINGTON BOULEVARD, ST. LOUIS, MISSOURI**

Figure Key	Sample ID	Material Description	Material Locations	Friable (F)/ Non-Friable (NF)	Analytical Result (% ACM ¹)	Quantity
28	WE-CWT-01	Ceramic Wall Tile with Adhesive and Grout	First Floor – North Room and West Restroom	NF	Beige Ceramic Tile – ND Off-white Grout – ND Dark Brown Adhesive – 3% Chrysotile	100 SF
29	WE-CWT-02					
30	WE-CWT-03					
31	WE-CFT-01	Ceramic Floor Tile with Bed and Grout	First Floor – North Room and West Restroom	NF	ND	NA
32	WE-CFT-02					
33	WE-CFT-03					
34	WE-DW-01	White Drywall	First Floor – North Room, North Offices, and East Restroom	NF	0.5% Chrysotile – Composite Drywall/Joint Compound ²	NA
35	WE-DW-02					
36	WE-DW-03					
37	WE-DW2-01	Beige Drywall	First Floor – Wall Separating Central Room and North Room and West Half	NF	ND	NA
38	WE-DW2-02					
39	WE-DW2-03					
40	WE-ST-01	Stair Tread	Central Room – Stairwell Steps	NF	ND	NA
41	WE-ST-02					
42	WE-ST-03					
43	WE-CB-01	Vinyl Cove Base with Black Mastic	Second Floor – North Room Southwest Office	NF	ND	NA
44	WE-CB-02					
45	WE-CB-03					
46	WE-CTX-01	Low Density Ceiling Texture	Second Floor – North Room Southwest Office	NF	ND	NA
47	WE-CTX-02					
48	WE-CTX-03					
49	WE-CM2-01	Beige Carpet Mastic with Grey Carpet Squares	Second Floor – North Room Throughout Offices	NF	ND	NA
50	WE-CM2-02					
51	WE-CM2-03					

TABLE 1

**SUMMARY OF RESULTS FROM LABORATORY ANALYSIS FOR SUSPECT ACM
WE BUILDING, 3230-3232 WASHINGTON BOULEVARD, ST. LOUIS, MISSOURI**

Figure Key	Sample ID	Material Description	Material Locations	Friable (F)/ Non-Friable (NF)	Analytical Result (% ACM ¹)	Quantity
52	WE-CLK-01	Interior White Window Caulk	Second Floor – North Room Open Area Windows, Central Room East Windows, South Room South and East Windows, and First Floor South Room Windows	NF	6% Chrysotile	3,000 LF
53	WE-CLK-02					
54	WE-CLK-03					
55	WE-CTX2-01	High Density Ceiling Texture	Second Floor – North Room Offices Except for Southwest Office	NF	ND	NA
56	WE-CTX2-02					
57	WE-CTX2-03					
58	WE-DW3-01	Thick Drywall	Second Floor – North Room Offices and North and Central Room Ceiling	NF	ND	NA
59	WE-DW3-02					
60	WE-DW3-03					
61	WE-CLK2-01	White Exterior Window Caulk	Second Floor – North Room Office Windows	NF	ND	NA
62	WE-CLK2-02					
63	WE-CLK2-03					
64	WE-CLK3-01	Beige Interior Window Caulk	First Floor – Central Room West Windows and South Room Windows; Second Floor – Central Room East Windows and South Room – South and East Windows	NF	ND	NA
65	WE-CLK3-02					
66	WE-CLK3-03					
67	WE-WM2-01	Brown Wall Mastic	Second Floor – North Room West Windows and on North Styrofoam Panels	NF	ND	NA
68	WE-WM2-02					
69	WE-WM2-03					
70	WE-TP-01	Transite Pipe	Second Floor – Central Room East Area Near Roof Collapse and South Room – Central Area from Ceiling	NF	10% Chrysotile 5% Crocidolite	36 LF (possibly more inaccessible on the roof)
71	WE-TP-02					
72	WE-TP-03					

TABLE 1

**SUMMARY OF RESULTS FROM LABORATORY ANALYSIS FOR SUSPECT ACM
WE BUILDING, 3230-3232 WASHINGTON BOULEVARD, ST. LOUIS, MISSOURI**

Figure Key	Sample ID	Material Description	Material Locations	Friable (F)/ Non-Friable (NF)	Analytical Result (% ACM ¹)	Quantity
73	WE-TSI-01	2" Pipe Thermal System Insulation	Second Floor – Central Room North Wall East of Stairway	F	3% Chrysotile	24 LF
74	WE-TSI-02					
75	WE-TSI-03					
76	WE-WM3-01	Light Brown Wall Mastic	Second Floor – South Room South Wall Hole	NF	ND	NA
77	WE-WM3-02					
78	WE-JC-01	Joint Compound	Second Floor – South Room South Wall Hole	NF	1.25% Chrysotile	3 LF
79	WE-JC-02					
80	WE-EF-01	Equipment Flashing	Roof Equipment Perimeters	NF	ND	NA
81	WE-EF-02					
82	WE-EF-03					
83	WE-R-01	Roofing	Roof and Second-Floor East Area Near Roof Collapse	NF	ND	NA
84	WE-R-02					
85	WE-R-03					
86	WE-DS-01	Duct Sealant	Roof and Second-Floor East Area Near Roof Collapse	NF	Gray Sealant – ND Black Mastic 5% Chrysotile	60 SF (possibly more inaccessible on the roof)
87	WE- DS -02					
88	WE- DS -03					
89	WE-SC-01	Skim Coat	North Room – East Office on the Closet Floor	NF	ND	NA
90	WE-SC-02					

TABLE 1

**SUMMARY OF RESULTS FROM LABORATORY ANALYSES FOR SUSPECT ACM
 WE BUILDING, 3230-3232 WASHINGTON BOULEVARD, ST. LOUIS, MISSOURI**

Notes:

Bolded result indicates detection of ACM.

Color description of a material may vary between field observation and laboratory description.

¹ AHERA defines ACM as any material or product that contains more than 1 percent asbestos.

² The U.S. Environmental Protection Agency (EPA) defines ACM as greater than 1% asbestos. These materials contain <1% asbestos; therefore, the materials are not regulated for disposal purposes; however, the materials do contain asbestos, so if the materials are disturbed, OSHA regulations must be followed, and personal protective equipment must be used.

%	Percent	PLM	Polarized light microscopy
"	Inches	NA	Not applicable
ACM	Asbestos-containing material	ND	Not detected
AHERA	Asbestos Hazard and Emergency Response Act of 1986	SF	Square Feet
LF	Linear feet	TSI	Thermal systems insulation
OSHA	Occupational Safety and Health Administration		

8.0 LBP FINDINGS

A summary of screening results for LBP by use of the XRF spectrometer at the subject property building appears in Table 2 below. Bolded results in Table 2 indicate where LBP was detected at a concentration greater than 1.0 mg/cm². Positive (greater than 1.0 mg/cm²) results for LBP are shown on Figure 3 in Appendix A.

TABLE 2
SUMMARY OF LBP SCREENING RESULTS
WE BUILDING, 3230-3232 WASHINGTON BOULEVARD, ST. LOUIS, MISSOURI

XRF Screening No.	Paint Color	Location	Component	Substrate	XRF Reading (mg/cm ²)	Damaged ¹	Quantity
1	Dark Brown	Exterior – West Side	Wall	Concrete Masonry Unit	0.21	NA	NA
2	Off-white	Exterior – West Side	Wall	Concrete Masonry Unit	0.01	NA	NA
3	Light Blue	Exterior – West Side	Door	Metal	0.10	NA	NA
4	Light Blue	Exterior – West Side	Door Frame	Metal	0.03	NA	NA
5	Yellow	Exterior – West Side	Garage Door Frame	Metal	>5.00	Yes	45 SF
6	Beige	Exterior – West Side	Garage Door Frame	Wood	2.2	Yes	100 SF
7	Dark Brown	Exterior – West Side	Wall	Brick	0.40	NA	NA
8	Off-white	Exterior – West Side	Wall	Brick	0.31	NA	NA
9	White	Exterior – West Side	Wall	Brick	0.21	NA	NA
10	Medium Blue	Exterior – Northeast Side	Door Frame	Metal	0.02	NA	NA
11	Medium Blue	Exterior – Northeast Side	Door	Metal	0.02	NA	NA
12	Medium Blue	Exterior – Northeast Side	Door Trim	Wood	0.01	NA	NA
13	Dark Brown	Exterior – Northeast Side	Siding	Wood	0.00	NA	NA
14	Medium Yellow	Exterior – East Side	Parking	Bollard	0.03	NA	NA
15	Medium Yellow	Exterior – West Side	Southwest Corner	Bollard	4.04	Yes	7 SF
16	Bright Yellow	Interior – First Floor Southwest Garage Entrance	Garage Door Beam	Metal	0.67	NA	NA
17	Silver	Interior – First Floor Southwest Garage Entrance	Ramp Beam	Metal	0.83	NA	NA
18	Brown	Interior – First Floor Southwest Garage Entrance	Loading Ramp Wall	Concrete Masonry Units	0.06	NA	NA
19	Red	Interior – First Floor South Room	Wall	Concrete Masonry Units	0.00	NA	NA

TABLE 2

SUMMARY OF LBP SCREENING RESULTS
WE BUILDING, 3230-3232 WASHINGTON BOULEVARD, ST. LOUIS, MISSOURI

XRF Screening No.	Paint Color	Location	Component	Substrate	XRF Reading (mg/cm ²)	Damaged ¹	Quantity
20	Beige	Interior – First Floor South Room	Wall	Concrete Masonry Units	0.25	NA	NA
21	Beige	Interior – First Floor South Room	Door Frame	Metal	0.07	NA	NA
22	Red	Interior – First Floor South Room	Window I-Beam	Metal	1.36	No	32 SF
23	Yellow	Interior – First Floor South Room	Stairway	Metal	0.76	NA	NA
24	Varnish	Interior – First Floor South Room Bathroom	Door Frame	Wood	0.00	NA	NA
25	Orange	Interior – First Floor South Room Bathroom	Wall	Concrete Masonry Units	0.00	NA	NA
26	Off-white	Interior – First Floor South Room Back Storage Room	Wall	Concrete	0.00	NA	NA
27	Aqua	Interior – First Floor South Room Back Storage	Shelving	Wood	0.04	NA	NA
28	Yellow	Interior – First Floor South Room East Side	Window Cover	Wood	0.06	NA	NA
29	Dark Blue	Interior – First Floor South Room	Shelving	Metal	0.02	NA	NA
30	Green	Interior – First Floor South Room	Shelving	Metal	0.39	NA	NA
31	Yellow	Interior – First Floor South Room	Shelving	Metal	0.16	NA	NA
32	Lime Green/ Yellow	Interior – First Floor Central Room	Wall	Concrete Masonry Units	0.00	NA	NA
33	Pink	Interior – First Floor Central Room near Northwest Garage Door	Floor	Concrete	0.01	NA	NA
34	Yellow	Interior – First Floor Central Room near Northwest Garage Door	Floor	Concrete	1.56	Yes	280 SF
35	Beige	Interior – First Floor Central Room	Drywall	Drywall	0.17	NA	NA
36	Lime Green/ Yellow	Interior – First Floor Central Room under Stair Storage	Door	Wood	0.04	NA	NA
37	White	Interior – First Floor Central Room under Stair Storage	Plank	Wood	0.00	NA	NA
38	Yellow	Interior – First Floor Central Room	Beam	Metal	>5.00	Yes	960 SF

TABLE 2
SUMMARY OF LBP SCREENING RESULTS
WE BUILDING, 3230-3232 WASHINGTON BOULEVARD, ST. LOUIS, MISSOURI

XRF Screening No.	Paint Color	Location	Component	Substrate	XRF Reading (mg/cm ²)	Damaged ¹	Quantity
39	Varnish	Interior – First Floor Central Room	Door Frame	Wood	0.03	NA	NA
40	Red	Interior – First Floor Central Room	Shelving	Metal	0.31	NA	NA
41	Light Blue	Interior – First Floor Central Room	Heating, Ventilation, Air Conditioning (HVAC) Unit	Metal	0.03	NA	NA
42	White	Interior – First Floor North Room	Bathroom	Drywall	>1.00	Yes	180 SF
43	Off-white	Interior – First Floor North Room Bathroom	Ceiling	Ceiling Tile	0.00	NA	NA
44	Dark Brown	Interior – First Floor North Room Bathroom	Runner	Wood	0.01	NA	NA
45	White	Interior – First Floor North Room Bathroom	Vanity	Wood	0.00	NA	NA
46	Varnish	Interior – First Floor North Room Bathroom	Door	Wood Panel	>5.00	No	20 SF
47	Dark Brown	Interior – First Floor North Room Bathroom	Door Frame	Wood	0.02	NA	NA
48	Grey	Interior – First Floor North Room Bathroom	Door Strike	Wood	0.03	NA	NA
49	Varnish	Interior – First Floor North Room	Paneling	Wood	0.03	NA	NA
50	White	Interior – First Floor North Room East Office	Ceiling Tile Frame	Metal	0.02	NA	NA
51	Varnish	Interior – First Floor North Room East Office	Door	Wood	0.00	NA	NA
52	White	Interior – First Floor North Room East Side	Wall	Concrete	0.04	NA	NA
53	White	Interior – First Floor North Room East Side	Wall	Brick	0.04	NA	NA
54	Red	Interior – First Floor North Room East Side	Floor	Concrete	0.38	NA	NA
55	White	Interior – First Floor North Room East Side	Wall	Wood	0.00	NA	NA

TABLE 2
SUMMARY OF LBP SCREENING RESULTS
WE BUILDING, 3230-3232 WASHINGTON BOULEVARD, ST. LOUIS, MISSOURI

XRF Screening No.	Paint Color	Location	Component	Substrate	XRF Reading (mg/cm²)	Damaged¹	Quantity
56	White	Interior – First Floor North Room North Wall	Wall Foundation	Concrete	>1.00	Yes	250 SF
57	White	Interior – First Floor North Room	Wall	Concrete Masonry Unit	0.00	NA	NA
58	White	Interior – First Floor North Room West Office	Wall Trim	Wood	0.03	NA	NA
59	White	Interior – First Floor North Room West Office	Wall	Drywall	0.00	NA	NA
60	White	Interior – First Floor North Room West Office	Column by Mercury Thermometer	Wood	0.00	NA	NA
61	Beige	Interior – First Floor North Room	I-Beam by Northwest Door	Metal	2.85	No	60 SF
62	White	Interior – First Floor North Room Northwest Entryway	Panels	Wood	0.00	NA	NA
63	Dark Brown	Interior – First Floor North Room Northwest Entryway	Door Frame	Wood	>5.00	Yes	100 SF
64	Dark Brown	Interior – First Floor North Room Northwest Entryway	Inner Door	Wood	>5.00	Yes	40 SF
65	Brown	Interior – Second Floor South Room	Deck I-Beam	Wood	0.23	NA	NA
66	Orange	Interior – Second Floor South Room	Deck I-Beam	Metal	3.94	Yes	100 SF
67	Peach	Interior – Second Floor South Room	Wall	Concrete Masonry Units	0.00	NA	NA
68	Peach	Interior – Second Floor South Room	Wall	Brick	0.01	NA	NA
69	Yellow	Interior – Second Floor South Room	Pipe	Metal	1.14	Yes	10 SF
70	Peach	Interior – Second Floor South Room	Pipe	Metal	0.03	NA	NA
71	Red	Interior – Second Floor South Room	Pipe	Metal	0.26	NA	NA
72	Peach	Interior – Second Floor South Room Southwest Corner	Garage Door	Wood	2.03	Yes	300 SF

TABLE 2
SUMMARY OF LBP SCREENING RESULTS
WE BUILDING, 3230-3232 WASHINGTON BOULEVARD, ST. LOUIS, MISSOURI

XRF Screening No.	Paint Color	Location	Component	Substrate	XRF Reading (mg/cm²)	Damaged¹	Quantity
73	Brown	Interior – Second Floor South Room South Bay	Window Frame	Metal	0.05	NA	NA
74	Yellow	Interior – Second Floor South Room East Bay	Window	Glass	0.07	NA	NA
75	Red	Interior – Second Floor South Room	Floor	Wood	0.00	NA	NA
76	Yellow	Interior – Second Floor South Room	Floor	Wood	0.01	NA	NA
77	Grey	Interior – Second Floor South Room	Floor	Wood	0.01	NA	NA
78	Yellow	Interior – Second Floor South Room	Shelving	Metal	0.85	NA	NA
79	Dark Blue	Interior – Second Floor Central Room	Wall	Brick	0.02	NA	NA
80	Pink	Interior – Second Floor Central Room	Wall	Brick	0.08	NA	NA
81	Grey	Interior – Second Floor North Room	I-Beam	Metal	1.12	No	120 SF
82	Green	Interior – Second Floor North Room East Office	Wall	Drywall	0.00	NA	NA
83	Dark Brown Varnish	Interior – Second Floor North Room East Office	Wall	Wood Panel	0.04	NA	NA
84	Dark Brown	Interior – Second Floor North Room East Office	Door	Wood	0.81	NA	NA
85	Beige	Interior – Second Floor North Room East Office	Door	Glass	0.16	NA	NA
86	Dark Brown	Interior – Second Floor North Room East Office	Door Frame	Wood	4.17	Yes	30 SF
87	Dark Brown	Interior – Second Floor North Room East Office	Wall	Drywall	0.01	NA	NA
88	Light Brown Varnish	Interior – Second Floor North Room East Office	Wall	Wood Panel	0.00	NA	NA
89	Yellow	Interior – Second Floor North Room East Office	Door Jam	Wood	0.46	NA	NA
90	White	Interior – Second Floor North Room East Office	Wall	Drywall	0.00	NA	NA

TABLE 2
SUMMARY OF LBP SCREENING RESULTS
WE BUILDING, 3230-3232 WASHINGTON BOULEVARD, ST. LOUIS, MISSOURI

XRF Screening No.	Paint Color	Location	Component	Substrate	XRF Reading (mg/cm ²)	Damaged ¹	Quantity
91	White	Interior – Second Floor North Room East Office	Ceiling	Drywall (Ceiling Texture)	0.00	NA	NA
92	Varnish	Interior – Second Floor North Room East Office	Built-in	Wood	0.00	NA	NA
93	Varnish	Interior – Second Floor North Room East Office	Door	Wood	0.00	NA	NA
94	White	Interior – Second Floor North Room East Office	Wall	Wood	0.00	NA	NA
95	White	Interior – Second Floor North Room East Office	Window Frame	Wood	0.00	NA	NA
96	Brown	Interior – Second Floor North Room East Office Closet	Wall	Drywall	0.00	NA	NA
97	White	Interior – Second Floor North Room East Office Closet	Shelf	Wood	0.03	NA	NA
98	Grey	Interior – Second Floor North Room Stairway	Gate	Wood	0.00	NA	NA
99	Blue	Interior – Second Floor North Room Stairway	Gate	Wood	0.00	NA	NA
100	White	Interior – Second Floor North Room near Stairs	Pipe	Metal	0.05	NA	NA
101	Calibration Standard				0.98/1.00/0.96	NA	NA
102	Calibration Blank				0.00/0.01/0.00	NA	NA

Notes:

¹ This column identifies damaged LBP surfaces. If no damage is present before renovation activities, preliminary removal of chipping and peeling paint is not necessary prior to the encapsulation process.

mg/cm² Milligrams per square centimeter
LBP Lead-based paint
LF Linear feet
XRF X-ray fluorescence

NA Not applicable
No. Number
SF Square feet

9.0 PCB FINDINGS

The laboratory report in Appendix E conveys analytical results from bulk samples of suspect PCB-containing caulk materials, and results are summarized in Table 3 below. Sample locations are shown on Figure 2 in Appendix A.

TABLE 3
SUMMARY OF PCB FINDINGS
WE BUILDING, 3230-3232 WASHINGTON BOULEVARD, ST. LOUIS, MISSOURI

Figure Key	Sample ID	Material Description	Material Locations	Analyte Description	Analytical Result (ppm)	Quantity
P1	WE-PCB-01	White Caulk	Interior – First Floor South Room Windows and throughout Second Floor Windows except Offices	Aroclor 1254	0.852	NA
P2	WE-PCB-02	White Caulk	Exterior – Second Floor North Room Office Windows	Aroclor 1254	0.408	NA
P3	WE-PCB-03	Beige Caulk	Interior – First Floor and Second Floor South and Central Room Windows	Aroclor 1254	0.650	NA

Notes:

Bolded results indicate positive identification of PCBs above the action level of 50 ppm.

ID Identification
NA Not applicable
PCB Polychlorinated biphenyl
ppm Parts per million

10.0 HAZARDOUS MATERIALS INVENTORY FINDINGS

The HW and hazardous materials inventory is summarized in Table 4 below. Due to large amounts of debris and solid waste throughout the building, the quantities presented in Table 4 are estimates.

TABLE 4
SUMMARY OF HAZARDOUS MATERIALS INVENTORY
WE BUILDING, 3230-3232 WASHINGTON BOULEVARD, ST. LOUIS, MISSOURI

Type of Household Hazardous Waste	Assessed Quantity
White Goods:	
Refrigerators	2
Water Heaters	2
Window Fan Units	7
Air Conditioning Units	3
Office Equipment:	
Printer/Scanners	4
Paper Shredder	1
Computer Monitor	1
Lighting:	
Fluorescent Tubes	120
Polychlorinated Biphenyl (PCB)-containing Ballasts	52
Batteries:	
Automotive Batteries	3
Household Batteries	3
Other:	
Mercury Thermometers	2
Small Tires	14
Compressed Gas Canisters (including 14-ounce propane, 75.4-kilogram helium, 11-gallon compressed air)	10
5-gallon Buckets (known contents include paint, hydraulic transmission oil, joint compound, wax stripper, and sand mix; other contents unknown)	24
Non-flammable Aerosol Cans	45
Flammable Solvents (Fuel)	8 containers (approximately 38 gallons)
55-gallon Drums	6
30-gallon Drums	4
Miscellaneous Small Containers (known contents include restorer spray, cleaning solution, herbicide, antifreeze, motor oil, acrylic floor finish, water proofer, windshield washer solution, car wax, wood stain, stain remover, lighter fluid, refrigerant, carpet shampoo, roof cement, hand soap, emulsifier, alkaline detergent, mineral spirits, paint thinner, power steering fluid, odor killer, boiler seal, leather cleaner, ceiling texture additive, 2-cycle oil, chain oil, bleach, rubber base sealant; other contents unknown)	176
Fire Extinguishers	10
Lawn Mowers	9
Generator	1
Small Bus	1

11.0 FINDINGS AND RECOMMENDATIONS

The following findings and recommendations are based on observations during the survey and analytical results from samples collected in the WE Building on the subject property:

11.1 ACM

- Regulated ACM was identified in vinyl floor tile (approximately 6,100 SF) on the first floor, throughout the north room.
- Regulated ACM was identified in adhesive associated with ceramic wall tile (approximately 100 SF) in the north room and west restroom on the first floor.
- Regulated ACM was identified in window caulk (approximately 3,000 LF) on the first floor south room windows and throughout the second floor.
- Regulated ACM was identified in transite pipe (approximately 36 LF) on the second floor and more transite (i.e. asbestos-cement) material may also be located in inaccessible areas on the roof.
- Regulated ACM was identified in pipe insulation (approximately 24 LF) in the central room on the second floor.
- Regulated ACM was identified in joint compound (approximately 3 LF) in the south room on the second floor.
- Regulated ACM was identified in black mastic (approximately 60 SF) on the roof and second floor near the collapsed part of the roof. More black mastic may also be located in inaccessible areas on the roof.

All regulated ACM listed above should be removed by a licensed asbestos abatement contractor before demolition work disturbs the material. The removed waste must be transported to a disposal site approved to accept both friable and non-friable ACM. If the building is to be renovated and any of the above ACM materials are not to be disturbed, they may remain in place.

11.2 LBP

Approximately 2,634 SF of various colors of LBP on a variety of substrates was identified throughout the building.

HUD considers LBP as paint with lead levels above 1.0 mg/cm². If the LBP surfaces are impacted during renovations or during demolition, the Toeroek Team recommends the contractor conducting the renovations comply with OSHA Lead in Construction Standard, Title 29 of *Code of Federal Regulations* (CFR), Part 1926.62. If the materials containing LBP are removed during renovation activities, a sample should be collected from the debris pile for Toxicity Characteristic Leaching Procedure (TCLP) analysis

(40 CFR 261.24). Representative samples should be collected and analyzed for all eight metals specified in 40 CFR Part 261.24 (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver). This would allow determination of the proper method of disposal of the materials.

11.3 PCBs

Laboratory results indicate no sampled building materials contain concentrations of PCBs above 50 ppm.

11.4 HW

HW and other hazardous materials were inventoried during the survey. The Toeroek Team recommends proper disposal of the materials based on their characteristics prior to demolition of the subject property building.

12.0 ASSUMPTIONS AND DEVIATIONS

The entire interior and exterior of the subject property building was inspected for suspect ACM, LBP, and PCB-containing caulk, except for the roof, which was inaccessible. In addition, an inventory of all HW and other hazardous materials occurred within the interior of the building; however, some quantities were estimated due to several large piles of miscellaneous equipment, containers, trash, and other waste that were not disturbed. Because of limitations on destructive sampling methods, additional suspect materials may be present but not detected in walls, voids, or other concealed areas.

13.0 REFERENCES

- Agency for Toxic Substance and Disease Registry (ATSDR). 2008. Asbestos: Health Effects. Accessed December 13, 2012. http://www.atsdr.cdc.gov/asbestos/asbestos/health_effects/
- SCS Engineers (SCS). 2019. Phase I Environmental Site Assessment. WE Building, 3230-3232 Washington Boulevard, St. Louis, Missouri. October.
- Toeroek Associates, Inc. and Tetra Tech, Inc. (Toeroek Team). 2020. Quality Assurance Project Plan, Phase II Environmental Site Assessment, WE Building, 3230-3232 Washington Boulevard, St. Louis, Missouri. September 9.
- U.S. Department of Housing and Urban Development (HUD). 2012. *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing*.
- U. S. Environmental Protection Agency (EPA). 2016. How to Test for PCBs and Characterize Suspect Materials. Accessed February 23.
<http://www3.epa.gov/epawaste/hazard/tsd/pcbs/pubs/caulk/guide/guide-sect3.htm>

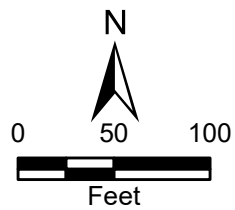
APPENDIX A

FIGURES



Legend

Approximate site boundary



Source: Esri, ArcGIS Online, World Imagery (Clarity)

WE Building
3230-3232 Washington Boulevard
St. Louis, Missouri

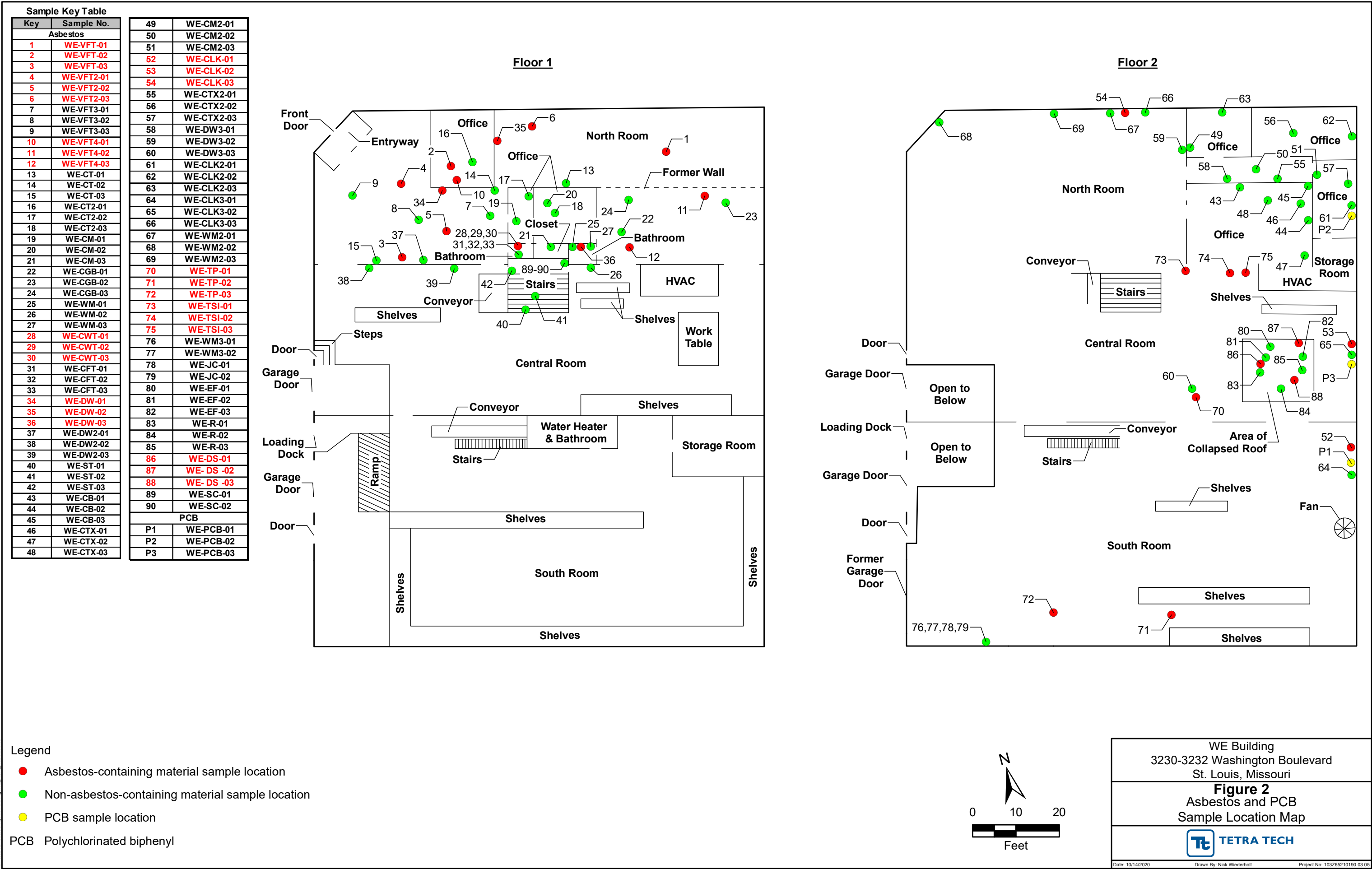
Figure 1 Site Layout Map



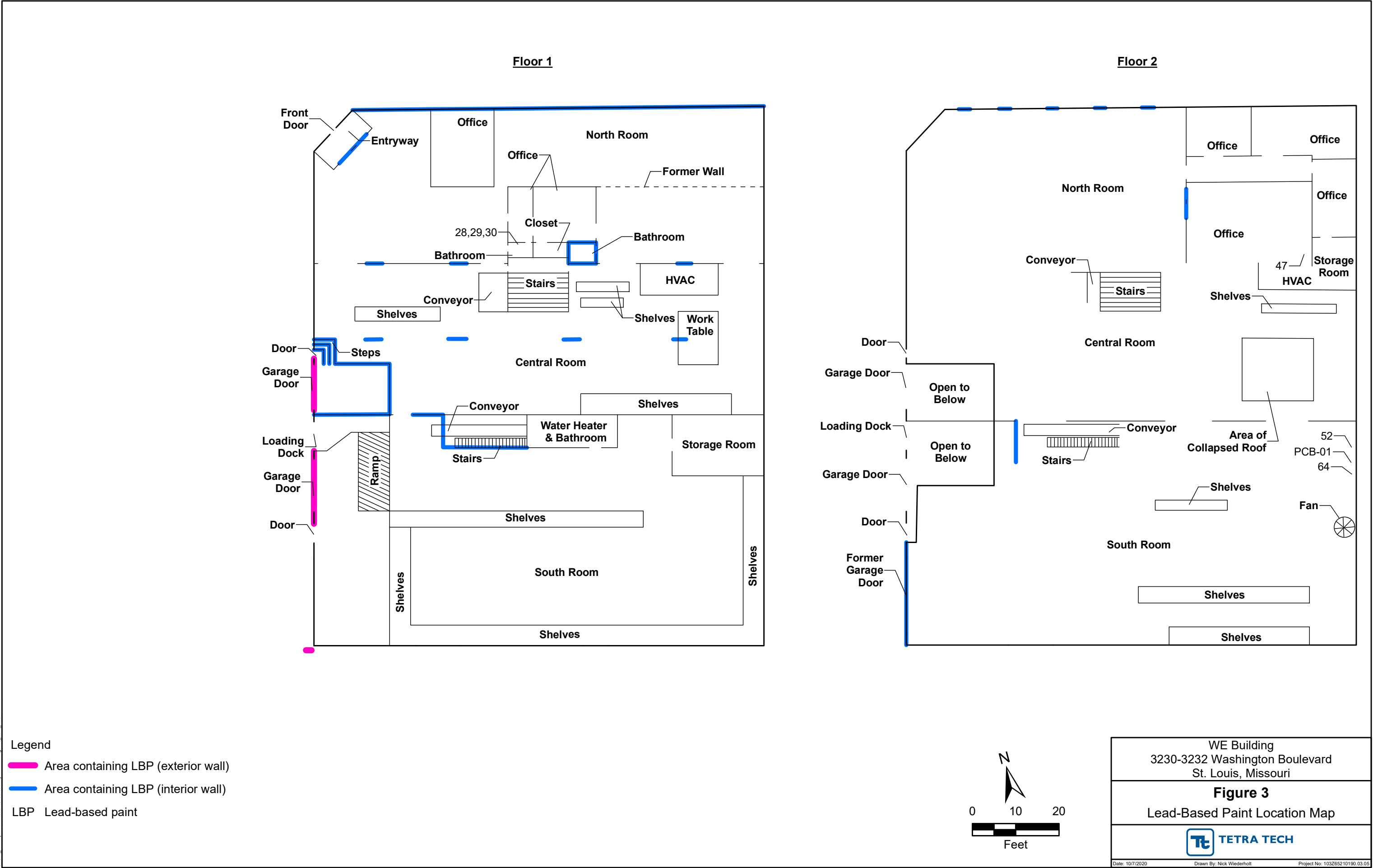
Date: 10/14/2020

Drawn By: Nick Wiederholt

Project No: 103265210190.03.05



C:\GIS\Workspaces\XPF6521\0190\03\Projects\mxd\Figure3_LBP_Hazmat.mxd



APPENDIX B
PHOTOGRAPHIC DOCUMENTATION

WE Building Hazardous Materials Survey St. Louis, Missouri



SUBTASK NO. 03.05 DIRECTION: Southeast	DESCRIPTION	This photograph shows the WE Building at 3230 Washington Avenue, St. Louis, Missouri.	1
	CLIENT	U.S. Environmental Protection Agency (EPA)	Date
	PHOTOGRAPHER	Ryan Slanczka	9/17/2020



SUBTASK NO. 03.05 DIRECTION: NA	DESCRIPTION	This photograph shows asbestos-containing 9" X 9" red/beige floor tile with black mastic throughout the north room on the first floor.	2
	CLIENT	EPA	Date
	PHOTOGRAPHER	Ryan Slanczka	9/17/2020

**WE Building Hazardous Materials Survey
St. Louis, Missouri**



SUBTASK NO. 03.05 DIRECTION: NA	DESCRIPTION	This photograph shows asbestos-containing 12" X 12" red, natural façade floor tile with dark brown mastic in the western portion of the north room on the first floor.	3
	CLIENT	EPA	Date 9/17/2020
	PHOTOGRAPHER	Ryan Slanczka	

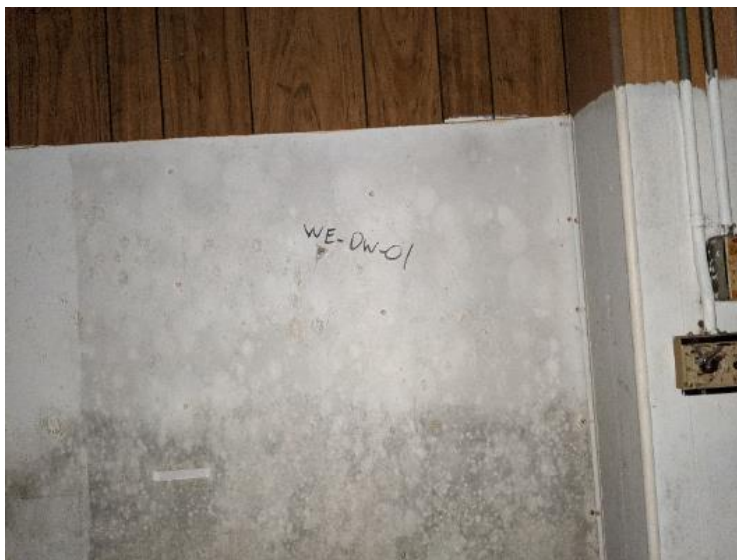


SUBTASK NO. 03.05 DIRECTION: NA	DESCRIPTION	This photograph shows asbestos-containing 12" X 12" red, ornate façade floor tile with yellow/brown mastic in the offices and the southeast portion of the north room on the first floor.	4
	CLIENT	EPA	Date 9/17/2020
	PHOTOGRAPHER	Ryan Slanczka	

**WE Building Hazardous Materials Survey
St. Louis, Missouri**



SUBTASK NO. 03.05 DIRECTION: NA	DESCRIPTION	This photograph shows ceramic wall tile with grout and asbestos-containing adhesive in the west restroom in the north room on the first floor.	5
	CLIENT	EPA	Date
	PHOTOGRAPHER	Ryan Slanczka	9/17/2020



SUBTASK NO. 03.05 DIRECTION: NA	DESCRIPTION	This photograph shows drywall with asbestos-containing joint compound as the wall system of the northwest office and east restroom in the north room on the first floor.	6
	CLIENT	EPA	Date
	PHOTOGRAPHER	Ryan Slanczka	9/17/2020

**WE Building Hazardous Materials Survey
St. Louis, Missouri**

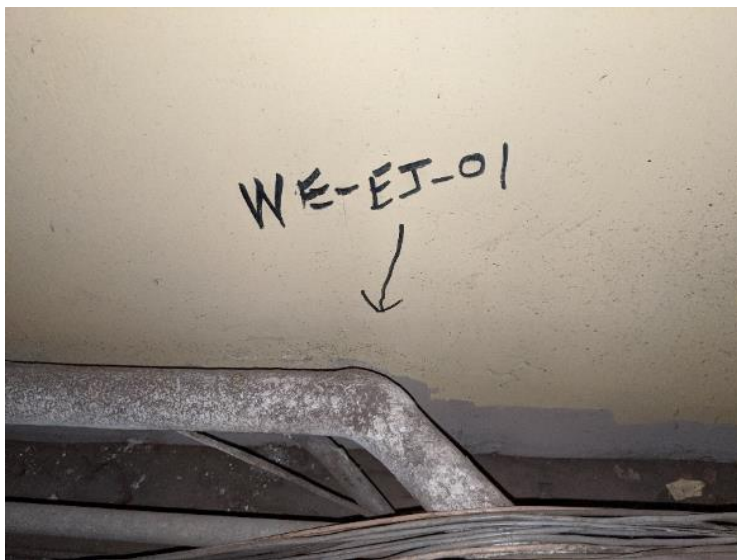


SUBTASK NO. 03.05 DIRECTION: NA	DESCRIPTION	This photograph shows asbestos-containing white caulk on the interior frames of windows throughout the WE Building, except office room windows.	7
	CLIENT	EPA	Date
	PHOTOGRAPHER	Ryan Slanczka	9/17/2020



SUBTASK NO. 03.05 DIRECTION: NA	DESCRIPTION	This photograph shows asbestos-containing grey transite piping protruding through the roof at multiple locations in the central and south rooms on the second floor.	8
	CLIENT	EPA	Date
	PHOTOGRAPHER	Ryan Slanczka	9/17/2020

**WE Building Hazardous Materials Survey
St. Louis, Missouri**



SUBTASK NO. 03.05 DIRECTION: NA	DESCRIPTION	This photograph shows asbestos-containing insulation on a 2" pipe running along the north wall in the central room on the second floor, east of the stairwell. (Sample ID incorrect--should be WE-TSI-01)	9
	CLIENT	EPA	Date
	PHOTOGRAPHER	Ryan Slanczka	9/17/2020

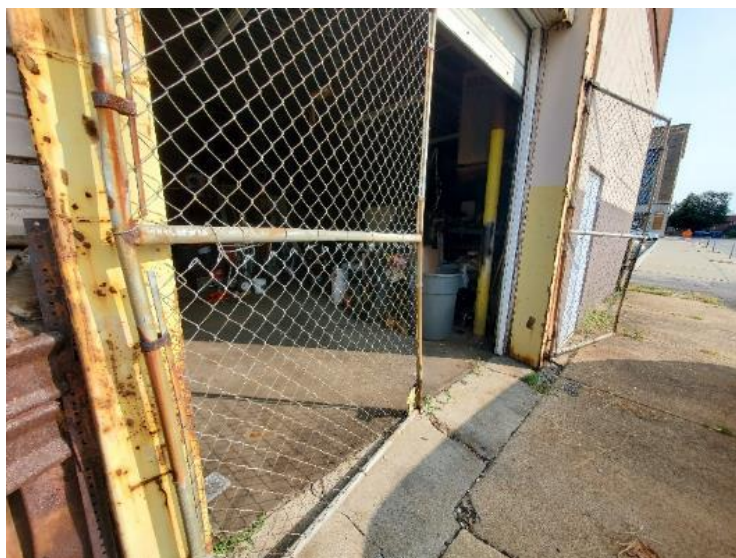


SUBTASK NO. 03.05 DIRECTION: NA	DESCRIPTION	This photograph shows asbestos-containing joint compound along the perimeter of a hole in the south wall of the south room on the second floor.	10
	CLIENT	EPA	Date
	PHOTOGRAPHER	Ryan Slanczka	9/17/2020

**WE Building Hazardous Materials Survey
St. Louis, Missouri**



SUBTASK NO. 03.05	DESCRIPTION	This photograph shows asbestos-containing duct sealant on equipment at the collapsed portion of roofing on the second floor.	11
	CLIENT	EPA	Date
DIRECTION: NA	PHOTOGRAPHER	Ryan Slanczka	9/17/2020



SUBTASK NO. 03.05	DESCRIPTION	This photograph shows yellow and beige lead-based paint (LBP) on the garage door frame on the west side of the building.	12
	CLIENT	EPA	Date
DIRECTION: South	PHOTOGRAPHER	Ryan Slanczka	9/17/2020

**WE Building Hazardous Materials Survey
St. Louis, Missouri**

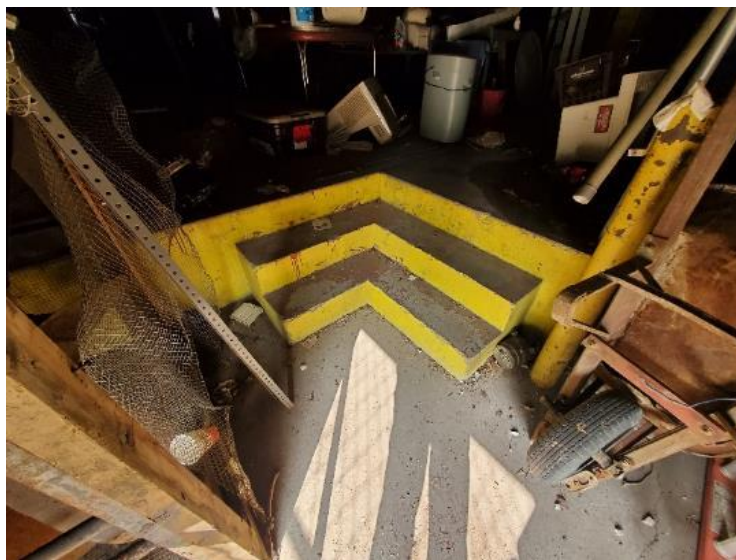


SUBTASK NO. 03.05 DIRECTION: East	DESCRIPTION	This photograph shows yellow LBP on a bollard at the southwest corner of the building's exterior perimeter.	13
	CLIENT	EPA	Date
	PHOTOGRAPHER	Ryan Slanczka	9/17/2020

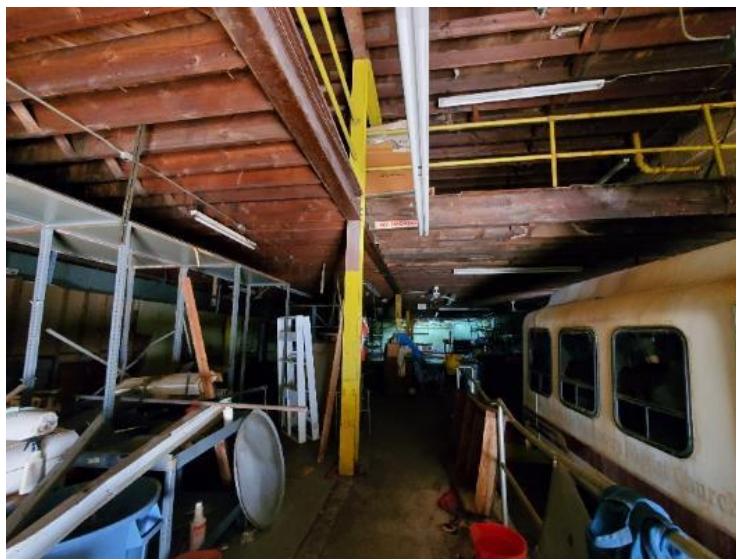


SUBTASK NO. 03.05 DIRECTION: NA	DESCRIPTION	This photograph shows red LBP on I-beams forming the perimeter of an opening in the wall between the south and central rooms on the first floor.	14
	CLIENT	EPA	Date
	PHOTOGRAPHER	Ryan Slanczka	9/17/2020

**WE Building Hazardous Materials Survey
St. Louis, Missouri**



SUBTASK NO. 03.05 DIRECTION: NA	DESCRIPTION	This photograph shows yellow LBP on steps and the concrete slab surrounding the parking area at the southwest corner of the central room on the first floor.	15
	CLIENT	EPA	Date
	PHOTOGRAPHER	Ryan Slanczka	9/17/2020



SUBTASK NO. 03.05 DIRECTION: NA	DESCRIPTION	This photograph shows yellow LBP on I-beams in the central room on the first and second floors.	16
	CLIENT	EPA	Date
	PHOTOGRAPHER	Ryan Slanczka	9/17/2020

**WE Building Hazardous Materials Survey
St. Louis, Missouri**



SUBTASK NO. 03.05 DIRECTION: NA	DESCRIPTION	This photograph shows white LBP on the wall in the east restroom within the north room on the first floor.	17
	CLIENT	EPA	Date
	PHOTOGRAPHER	Ryan Slanczka	9/17/2020

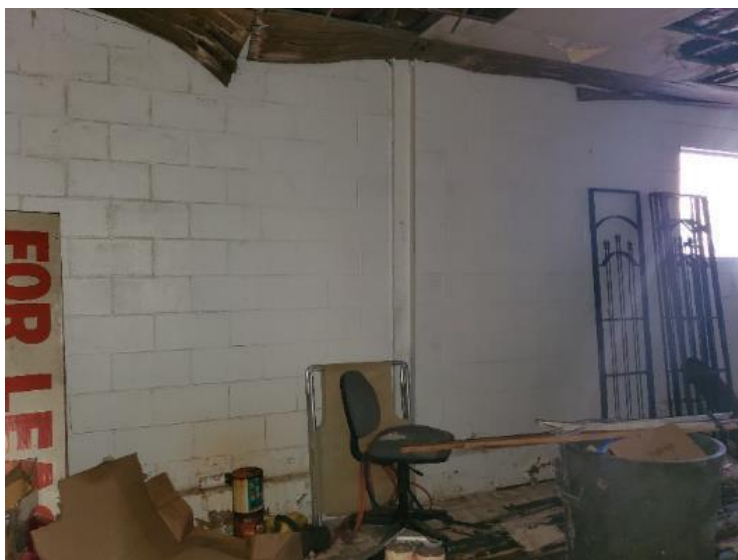


SUBTASK NO. 03.05 DIRECTION: NA	DESCRIPTION	This photograph shows lead-containing wood varnish on the door to the east restroom within the north room on the first floor.	18
	CLIENT	EPA	Date
	PHOTOGRAPHER	Ryan Slanczka	9/17/2020

**WE Building Hazardous Materials Survey
St. Louis, Missouri**

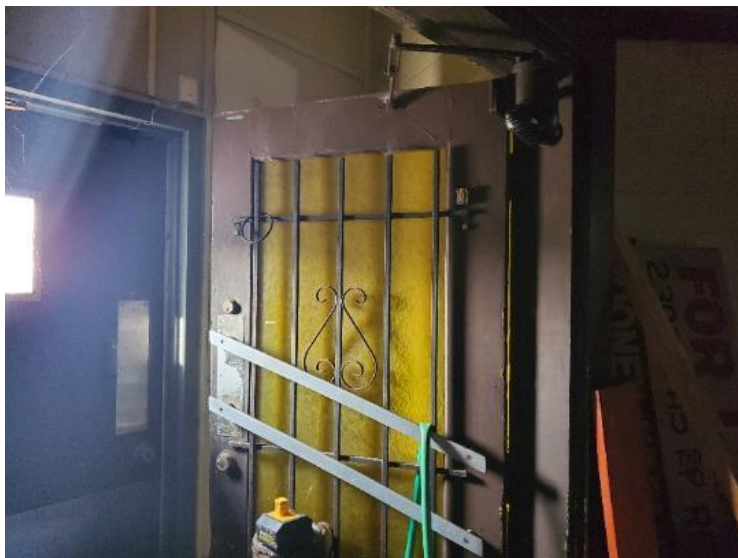


SUBTASK NO. 03.05 DIRECTION: NA	DESCRIPTION	This photograph shows white LBP on the foundation portion of the north wall within the north room on the first floor.	19
	CLIENT	EPA	Date
	PHOTOGRAPHER	Ryan Slanczka	9/17/2020



SUBTASK NO. 03.05 DIRECTION: NA	DESCRIPTION	This photograph shows white LBP on an I-beam in the north wall near the northwest entryway, within the north room on the first floor.	20
	CLIENT	EPA	Date
	PHOTOGRAPHER	Ryan Slanczka	9/17/2020

**WE Building Hazardous Materials Survey
St. Louis, Missouri**



SUBTASK NO. 03.05 DIRECTION: NA	DESCRIPTION	This photograph shows brown LBP on the inner door and doorframe of the northwest entryway, within the north room on the first floor.	21
	CLIENT	EPA	Date
	PHOTOGRAPHER	Ryan Slanczka	9/17/2020



SUBTASK NO. 03.05 DIRECTION: NA	DESCRIPTION	This photograph shows orange LBP on beams near the stairwell in the south room.	22
	CLIENT	EPA	Date
	PHOTOGRAPHER	Ryan Slanczka	9/17/2020

**WE Building Hazardous Materials Survey
St. Louis, Missouri**



SUBTASK NO. 03.05 DIRECTION: NA	DESCRIPTION	This photograph shows yellow LBP on a pipe near the north wall in the south room on the second floor.	23
	CLIENT	EPA	Date
	PHOTOGRAPHER	Ryan Slanczka	9/17/2020



SUBTASK NO. 03.05 DIRECTION: NA	DESCRIPTION	This photograph shows peach/pink LBP on a garage door at the west wall in the south room.	24
	CLIENT	EPA	Date
	PHOTOGRAPHER	Ryan Slanczka	9/17/2020

**WE Building Hazardous Materials Survey
St. Louis, Missouri**



SUBTASK NO. 03.05 DIRECTION: NA	DESCRIPTION	This photograph shows grey LBP on an I-beam along the north wall within the north room on the second floor.	25
	CLIENT	EPA	Date
	PHOTOGRAPHER	Ryan Slanczka	9/17/2020



SUBTASK NO. 03.05 DIRECTION: NA	DESCRIPTION	This photograph shows dark brown LBP on a door frame at the eastern office room area within the north room on the second floor.	26
	CLIENT	EPA	Date
	PHOTOGRAPHER	Ryan Slanczka	9/17/2020

**WE Building Hazardous Materials Survey
St. Louis, Missouri**



SUBTASK NO. 03.05 DIRECTION: NA	DESCRIPTION	This photograph shows miscellaneous debris, equipment, and containers in the western portion of the south room on the first floor.	27
	CLIENT	EPA	Date
	PHOTOGRAPHER	Ryan Slanczka	9/17/2020

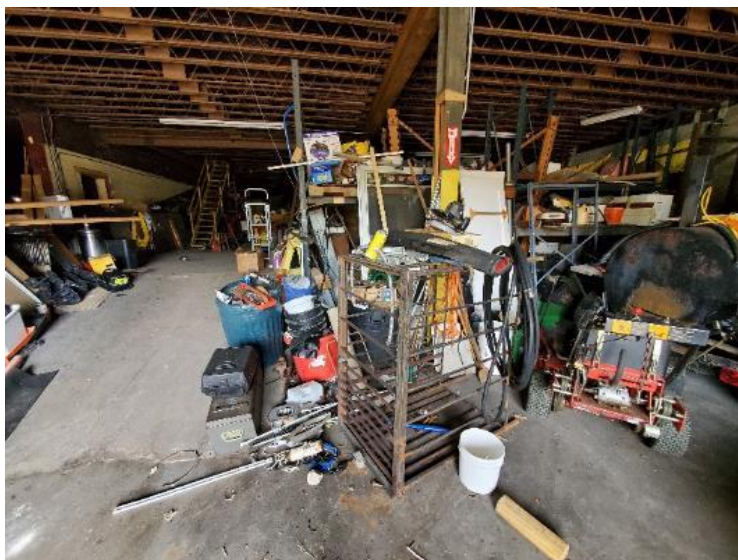


SUBTASK NO. 03.05 DIRECTION: NA	DESCRIPTION	This photograph shows aerosol containers in the western portion of the south room on the first floor.	28
	CLIENT	EPA	Date
	PHOTOGRAPHER	Ryan Slanczka	9/17/2020

**WE Building Hazardous Materials Survey
St. Louis, Missouri**



SUBTASK NO. 03.05 DIRECTION: NA	DESCRIPTION	This photograph shows miscellaneous debris, equipment, white goods, and containers in the western portion of the south room on the first floor.	29
	CLIENT	EPA	Date
	PHOTOGRAPHER	Ryan Slanczka	9/17/2020



SUBTASK NO. 03.05 DIRECTION: NA	DESCRIPTION	This photograph shows miscellaneous debris, equipment, and containers in the western portion of the south room on the first floor.	30
	CLIENT	EPA	Date
	PHOTOGRAPHER	Ryan Slanczka	9/17/2020

**WE Building Hazardous Materials Survey
St. Louis, Missouri**



SUBTASK NO. 03.05 DIRECTION: NA	DESCRIPTION	This photograph shows miscellaneous debris, equipment, and containers in the south room on the first floor.	31
	CLIENT	EPA	Date
	PHOTOGRAPHER	Ryan Slanczka	9/17/2020



SUBTASK NO. 03.05 DIRECTION: NA	DESCRIPTION	This photograph shows an automotive battery in the south room on the first floor.	32
	CLIENT	EPA	Date
	PHOTOGRAPHER	Ryan Slanczka	9/17/2020

**WE Building Hazardous Materials Survey
St. Louis, Missouri**



SUBTASK NO. 03.05	DESCRIPTION	This photograph shows 5-gallon buckets and other miscellaneous containers in the south room on the first floor.	33
	CLIENT	EPA	Date
DIRECTION: NA	PHOTOGRAPHER	Ryan Slanczka	9/17/2020



SUBTASK NO. 03.05	DESCRIPTION	This photograph shows a water heater in the south room on the first floor.	34
	CLIENT	EPA	Date
DIRECTION: NA	PHOTOGRAPHER	Ryan Slanczka	9/17/2020

**WE Building Hazardous Materials Survey
St. Louis, Missouri**



SUBTASK NO. 03.05	DESCRIPTION	This photograph shows 55-gallon drums and other miscellaneous containers next to a non-functioning bus in the western portion of the central room on the first floor.	35
	CLIENT	EPA	Date
DIRECTION: NA	PHOTOGRAPHER	Ryan Slanczka	9/17/2020

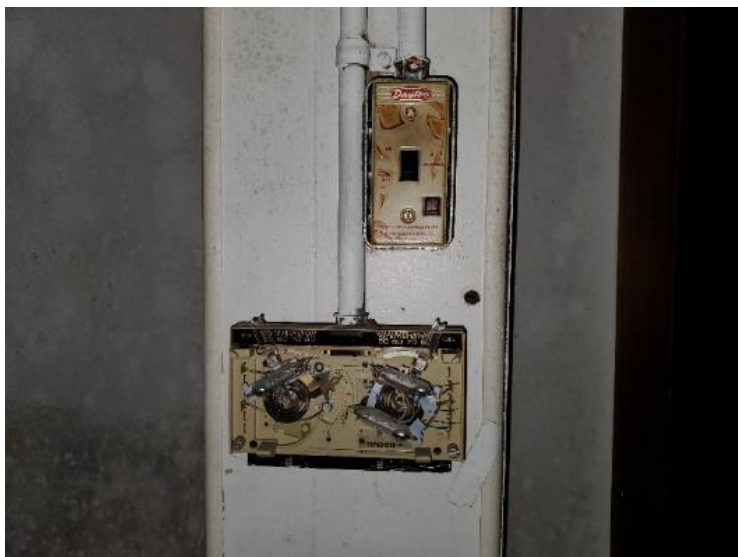


SUBTASK NO. 03.05	DESCRIPTION	This photograph shows miscellaneous debris (including intact and broken fluorescent lamps), equipment, and containers in the western portion of the central room on the first floor.	36
	CLIENT	EPA	Date
DIRECTION: NA	PHOTOGRAPHER	Ryan Slanczka	9/17/2020

**WE Building Hazardous Materials Survey
St. Louis, Missouri**



SUBTASK NO. 03.05	DESCRIPTION	This photograph shows miscellaneous debris, equipment, and containers in the western portion of the north room on the first floor.	37
	CLIENT	EPA	Date
DIRECTION: NA	PHOTOGRAPHER	Ryan Slanczka	9/17/2020



SUBTASK NO. 03.05	DESCRIPTION	This photograph shows a mercury-containing thermostat in the north room on the first floor.	38
	CLIENT	EPA	Date
DIRECTION: NA	PHOTOGRAPHER	Ryan Slanczka	9/17/2020

**WE Building Hazardous Materials Survey
St. Louis, Missouri**



SUBTASK NO. 03.05 DIRECTION: NA	DESCRIPTION	This photograph shows a heating, ventilation, and air conditioning (HVAC) unit that has collapsed through the roof onto the second floor in the central room.	39
	CLIENT	EPA	Date
	PHOTOGRAPHER	Ryan Slanczka	9/17/2020



SUBTASK NO. 03.05 DIRECTION: NA	DESCRIPTION	This photograph shows a printer/scanner and other miscellaneous debris in the north room on the first floor.	40
	CLIENT	EPA	Date
	PHOTOGRAPHER	Ryan Slanczka	9/17/2020

APPENDIX C
INSPECTOR CERTIFICATIONS



**Missouri Department of Health
and Senior Services**

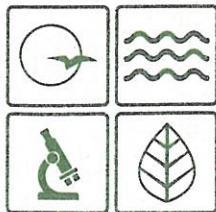


Lead Occupation License - ID Badge
License Number: 170912-300005383

Lead Inspector

**Ryan
Slanczka**

Expiration Date: **09/12/2021**



Missouri Department of NATURAL RESOURCES

dnr.mo.gov

Michael L. Parson, Governor

Carol S. Comer, Director

February 24, 2020

Stepanie Caples
4152 Indiana Ave
Kansas City, MO 64130

RE: Missouri Asbestos Occupation Certification Card

Enclosed is your certification card for Asbestos Inspector, as issued by the Asbestos Unit of the Missouri Department of Natural Resources' Air Pollution Control Program.

Missouri Certification Number: 7011012420MOII20969

Course Training Date: January 24, 2020

Missouri Certification Approval Date: February 24, 2020

Missouri Certification Expiration Date: January 24, 2021

Note:

- All Missouri-certified asbestos personnel must comply with the following statutes and regulations:
 - Sections 643.225 to 643.250, RSMo;
 - 10 CSR 10-6.241 *Asbestos Projects-Registration, Abatement, Notification, Inspection, Demolition, and Performance Requirements*; and
 - 10 CSR 10-6.250 *Asbestos Projects-Certification, Accreditation and Business Exemption Requirements*.
- To keep your occupation certification up-to-date, you must complete an annual refresher course and submit a renewal application each year.
- In order to be eligible to renew your certification, you must successfully complete a refresher course with a Missouri-accredited training provider within 12 months of the expiration date of your current training certificate. If you exceed this grace period, you will be required to retake a Missouri-accredited initial course in order to be eligible for Missouri certification.

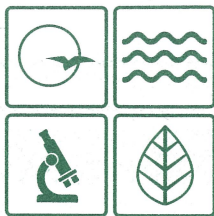
To obtain a copy of the certification renewal application, or review regulations and requirements, please visit our website at <http://dnr.mo.gov/env/apcp/asbestos/index.htm>.

If you have any questions please call the Air Pollution Control Program at 573-751-4817.

AIR POLLUTION CONTROL PROGRAM

Director of Air Pollution Control Program





Missouri Department of NATURAL RESOURCES

dnr.mo.gov

Michael L. Parson, Governor

Carol S. Comer, Director

January 6, 2020

Ryan J Slanczka
8151 Renner Rd Apt 9
Lenexa, KS 66219

RE: **Missouri Asbestos Occupation Certification Card**

Enclosed is your certification card for Asbestos Inspector, as issued by the Asbestos Unit of the Missouri Department of Natural Resources' Air Pollution Control Program.

Missouri Certification Number: 7011121219MOIR19454

Course Training Date: December 12, 2019

Missouri Certification Approval Date: January 07, 2020

Missouri Certification Expiration Date: January 07, 2021

Note:

- All Missouri-certified asbestos personnel must comply with the following statutes and regulations:
 - Sections 643.225 to 643.250, RSMo;
 - 10 CSR 10-6.241 *Asbestos Projects-Registration, Abatement, Notification, Inspection, Demolition, and Performance Requirements*; and
 - 10 CSR 10-6.250 *Asbestos Projects-Certification, Accreditation and Business Exemption Requirements*.
- To keep your occupation certification up-to-date, you must complete an annual refresher course and submit a renewal application each year.
- In order to be eligible to renew your certification, you must successfully complete a refresher course with a Missouri-accredited training provider within 12 months of the expiration date of your current training certificate. If you exceed this grace period, you will be required to retake a Missouri-accredited initial course in order to be eligible for Missouri certification.

To obtain a copy of the certification renewal application, or review regulations and requirements, please visit our website at <http://dnr.mo.gov/env/apcp/asbestos/index.htm>.

If you have any questions please call the Air Pollution Control Program at 573-751-4817.

AIR POLLUTION CONTROL PROGRAM

Director of Air Pollution Control Program



APPENDIX D

ACM ANALYTICAL RESULTS AND CHAIN-OF-CUSTODY FORMS

Report for:

Mr. Jeffrey Mitchell
Tetra Tech-KCMO
415 Oak Street
Kansas City, MO 64106

Regarding: Project: 103G65210190.03.05; 3230 Washington Blvd., St. Louis, MO
EML ID: 2489696

Approved by:

Dates of Analysis:
Asbestos PLM: 09-28-2020 and 09-29-2020



Approved Signatory
David Andrews

Service SOPs: Asbestos PLM (EPA 40CFR App E to Sub E of Part 763 & EPA METHOD 600/R-93-116, SOP EM-AS-S-1267)
NVLAP Lab Code 600266-0

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. The results relate only to the samples as received. The results include an inherent uncertainty of measurement associated with estimating percentages by polarized light microscopy. Measurement uncertainty data for sample results with >1% asbestos concentration can be provided when requested.

Eurofins EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Client: Tetra Tech-KCMO

C/O: Mr. Jeffrey Mitchell

Re: 103G65210190.03.05; 3230 Washington Blvd.,
St. Louis, MO

Date of Sampling: 09-17-2020

Date of Receipt: 09-25-2020

Date of Report: 09-29-2020

ASBESTOS PLM REPORT**Total Samples Submitted:** 90**Total Samples Analyzed:** 73**Total Samples with Layer Asbestos Content > 1%:** 9**Location: WE-VFT-01, Red/beige 9x9 vinyl floor tile with black mastic**

Lab ID-Version‡: 11866668-1

Sample Layers	Asbestos Content
Red Floor Tile	10% Chrysotile
Black Mastic	ND
Sample Composite Homogeneity: Moderate	

Comments: Samples WE-VFT-02 and -03 were not analyzed due to prior positive series.**Location: WE-VFT2-01, Red natural facade 12x12 vinyl floor tile with dark brown mastic**

Lab ID-Version‡: 11866671-1

Sample Layers	Asbestos Content
Red Floor Tile	7% Chrysotile
Brown Mastic	ND
Sample Composite Homogeneity: Moderate	

Comments: Samples WE-VFT2-02 and -03 were not analyzed due to prior positive series.**Location: WE-VFT3-01, Beige with flecks 12x12 vinyl floor tile with light brown mastic**

Lab ID-Version‡: 11866674-1

Sample Layers	Asbestos Content
Beige Floor Tile	ND
Brown Mastic	ND
Sample Composite Homogeneity: Moderate	

The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by any agency of the federal government. Eurofins EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.

‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Client: Tetra Tech-KCMO

C/O: Mr. Jeffrey Mitchell

Re: 103G65210190.03.05; 3230 Washington Blvd.,
St. Louis, MO

Date of Sampling: 09-17-2020

Date of Receipt: 09-25-2020

Date of Report: 09-29-2020

ASBESTOS PLM REPORT**Location: WE-VFT3-02, Beige with flecks 12x12 vinyl floor tile with light brown mastic**

Lab ID-Version‡: 11866675-1

Sample Layers	Asbestos Content
Beige Floor Tile	ND
Brown Mastic	ND
Sample Composite Homogeneity: Moderate	

Location: WE-VFT3-03, Beige with flecks 12x12 vinyl floor tile with light brown mastic

Lab ID-Version‡: 11866676-1

Sample Layers	Asbestos Content
Beige Floor Tile	ND
Brown Mastic	ND
Sample Composite Homogeneity: Moderate	

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Client: Tetra Tech-KCMO

C/O: Mr. Jeffrey Mitchell

Re: 103G65210190.03.05; 3230 Washington Blvd.,
St. Louis, MO

Date of Sampling: 09-17-2020

Date of Receipt: 09-25-2020

Date of Report: 09-29-2020

ASBESTOS PLM REPORT**Location: WE-VFT4-01, Red ornate facade 12x12 VFT with yellowish brown mastic**

Lab ID-Version‡: 11866677-1

Sample Layers	Asbestos Content
Red Floor Tile	7% Chrysotile
Yellow Mastic	ND
Sample Composite Homogeneity: Moderate	

Comments: Samples WE-VFT4-02 and -03 were not analyzed due to prior positive series.**Location: WE-CT-01, 12x12 ceiling tile with pinholes**

Lab ID-Version‡: 11866680-1

Sample Layers	Asbestos Content
Beige Ceiling Tile	ND
Composite Non-Asbestos Content:	50% Glass Fibers 40% Cellulose
Sample Composite Homogeneity:	Good

Location: WE-CT-02, 12x12 ceiling tile with pinholes

Lab ID-Version‡: 11866681-1

Sample Layers	Asbestos Content
Beige Ceiling Tile	ND
Composite Non-Asbestos Content:	50% Glass Fibers 40% Cellulose
Sample Composite Homogeneity:	Good

Location: WE-CT-03, 12x12 ceiling tile with pinholes

Lab ID-Version‡: 11866682-1

Sample Layers	Asbestos Content
Beige Ceiling Tile	ND
Composite Non-Asbestos Content:	50% Glass Fibers 40% Cellulose
Sample Composite Homogeneity:	Good

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‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Client: Tetra Tech-KCMO

C/O: Mr. Jeffrey Mitchell

Re: 103G65210190.03.05; 3230 Washington Blvd.,
St. Louis, MO

Date of Sampling: 09-17-2020

Date of Receipt: 09-25-2020

Date of Report: 09-29-2020

ASBESTOS PLM REPORT**Location: WE-CT2-01, 12x12 ceiling tile with pinholes and fissures**

Lab ID-Version‡: 11866683-1

Sample Layers	Asbestos Content
Beige Ceiling Tile	ND
Composite Non-Asbestos Content:	50% Glass Fibers 40% Cellulose
Sample Composite Homogeneity:	Good

Location: WE-CT2-02, 12x12 ceiling tile with pinholes and fissures

Lab ID-Version‡: 11866684-1

Sample Layers	Asbestos Content
Beige Ceiling Tile	ND
Composite Non-Asbestos Content:	50% Glass Fibers 40% Cellulose
Sample Composite Homogeneity:	Good

Location: WE-CT2-03, 12x12 ceiling tile with pinholes and fissures

Lab ID-Version‡: 11866685-1

Sample Layers	Asbestos Content
Beige Ceiling Tile	ND
Composite Non-Asbestos Content:	50% Glass Fibers 40% Cellulose
Sample Composite Homogeneity:	Good

Location: WE-CM-01, Brown carpet mastic

Lab ID-Version‡: 11866686-1

Sample Layers	Asbestos Content
Brown Mastic	ND
Sample Composite Homogeneity:	Good

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‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Client: Tetra Tech-KCMO

C/O: Mr. Jeffrey Mitchell

Re: 103G65210190.03.05; 3230 Washington Blvd.,
St. Louis, MO

Date of Sampling: 09-17-2020

Date of Receipt: 09-25-2020

Date of Report: 09-29-2020

ASBESTOS PLM REPORT**Location: WE-CM-02, Brown carpet mastic**

Lab ID-Version‡: 11866687-1

Sample Layers	Asbestos Content
Brown Mastic	ND
Sample Composite Homogeneity:	Good

Location: WE-CM-03, Brown carpet mastic

Lab ID-Version‡: 11866688-1

Sample Layers	Asbestos Content
Brown Mastic	ND
Sample Composite Homogeneity:	Good

Location: WE-CGB-01, Ceiling gypsum board

Lab ID-Version‡: 11866689-1

Sample Layers	Asbestos Content
White Drywall with Brown Paper	ND
Composite Non-Asbestos Content:	15% Cellulose
Sample Composite Homogeneity:	Good

Location: WE-CGB-02, Ceiling gypsum board

Lab ID-Version‡: 11866690-1

Sample Layers	Asbestos Content
White Drywall with Brown Paper	ND
Composite Non-Asbestos Content:	15% Cellulose
Sample Composite Homogeneity:	Good

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Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.

‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Client: Tetra Tech-KCMO

C/O: Mr. Jeffrey Mitchell

Re: 103G65210190.03.05; 3230 Washington Blvd.,
St. Louis, MO

Date of Sampling: 09-17-2020

Date of Receipt: 09-25-2020

Date of Report: 09-29-2020

ASBESTOS PLM REPORT**Location: WE-CGB-03, Ceiling gypsum board**

Lab ID-Version‡: 11866691-1

Sample Layers	Asbestos Content
White Drywall with Brown Paper	ND
Composite Non-Asbestos Content:	15% Cellulose
Sample Composite Homogeneity:	Good

Location: WE-WM-01, Black wall mastic

Lab ID-Version‡: 11866692-1

Sample Layers	Asbestos Content
Black Mastic	ND
Sample Composite Homogeneity:	Good

Location: WE-WM-02, Black wall mastic

Lab ID-Version‡: 11866693-1

Sample Layers	Asbestos Content
Black Mastic	ND
Sample Composite Homogeneity:	Good

Location: WE-WM-03, Black wall mastic

Lab ID-Version‡: 11866694-1

Sample Layers	Asbestos Content
Black Mastic	ND
Sample Composite Homogeneity:	Good

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‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Client: Tetra Tech-KCMO

C/O: Mr. Jeffrey Mitchell

Re: 103G65210190.03.05; 3230 Washington Blvd.,
St. Louis, MO

Date of Sampling: 09-17-2020

Date of Receipt: 09-25-2020

Date of Report: 09-29-2020

ASBESTOS PLM REPORT**Location: WE-CWT-01, Ceramic wall tile with adhesive and grout**

Lab ID-Version‡: 11866695-1

Sample Layers	Asbestos Content
Beige Ceramic Tile	ND
Off-White Grout	ND
Dark Brown Adhesive	3% Chrysotile
Sample Composite Homogeneity: Moderate	

Comments: Samples WE-CWT-02 and -03 were not analyzed due to prior positive series.**Location: WE-CFT-01, Ceramic floor tile with bed and grout**

Lab ID-Version‡: 11866698-1

Sample Layers	Asbestos Content
Gray Ceramic Tile	ND
Brown Grout	ND
Sample Composite Homogeneity: Moderate	

Location: WE-CFT-02, Ceramic floor tile with bed and grout

Lab ID-Version‡: 11866699-1

Sample Layers	Asbestos Content
Gray Ceramic Tile	ND
Brown Grout	ND
Sample Composite Homogeneity: Moderate	

Location: WE-CFT-03, Ceramic floor tile with bed and grout

Lab ID-Version‡: 11866700-1

Sample Layers	Asbestos Content
Gray Ceramic Tile	ND
Brown Grout	ND
Sample Composite Homogeneity: Moderate	

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Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.

‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Client: Tetra Tech-KCMO
C/O: Mr. Jeffrey Mitchell
Re: 103G65210190.03.05; 3230 Washington Blvd.,
St. Louis, MO

Date of Sampling: 09-17-2020

Date of Receipt: 09-25-2020

Date of Report: 09-29-2020

ASBESTOS PLM REPORT**Location: WE-DW-01, White drywall**

Lab ID-Version‡: 11866701-1

Sample Layers	Asbestos Content
White Drywall with Brown Paper	ND
Composite Non-Asbestos Content:	20% Cellulose
Sample Composite Homogeneity:	Good

Location: WE-DW-02, White drywall

Lab ID-Version‡: 11866702-1

Sample Layers	Asbestos Content
White Texture	ND
White Drywall with Brown Paper	ND
Composite Non-Asbestos Content:	15% Cellulose
Sample Composite Homogeneity:	Moderate

Location: WE-DW-03, White drywall

Lab ID-Version‡: 11866703-1

Sample Layers	Asbestos Content
Off-White Texture	2% Chrysotile
Cream Tape	ND
Off-White Joint Compound	2% Chrysotile
White Drywall with Brown Paper	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	15% Cellulose
Sample Composite Homogeneity:	Moderate

Comments: Composite asbestos content provided is only for Drywall/Joint compound. Composite content provided for this analysis has been performed by following the NESHAP guidelines.

Location: WE-DW2-01, Beige drywall

Lab ID-Version‡: 11866704-1

Sample Layers	Asbestos Content
Beige Drywall with Brown Paper	ND
Composite Non-Asbestos Content:	20% Cellulose
Sample Composite Homogeneity:	Good

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‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Client: Tetra Tech-KCMO
 C/O: Mr. Jeffrey Mitchell
 Re: 103G65210190.03.05; 3230 Washington Blvd.,
 St. Louis, MO

Date of Sampling: 09-17-2020
 Date of Receipt: 09-25-2020
 Date of Report: 09-29-2020

ASBESTOS PLM REPORT**Location: WE-DW2-02, Beige drywall**

Lab ID-Version‡: 11866705-1

Sample Layers	Asbestos Content
Beige Drywall with Brown Paper	ND
Composite Non-Asbestos Content:	20% Cellulose
Sample Composite Homogeneity:	Good

Location: WE-DW2-03, Beige drywall

Lab ID-Version‡: 11866706-1

Sample Layers	Asbestos Content
Beige Drywall with Brown Paper	ND
Composite Non-Asbestos Content:	20% Cellulose
Sample Composite Homogeneity:	Good

Location: WE-ST-01, Stair tread

Lab ID-Version‡: 11866707-1

Sample Layers	Asbestos Content
Black Non-Fibrous Material	ND
Transparent Adhesive	ND
Sample Composite Homogeneity:	Moderate

Location: WE-ST-02, Stair tread

Lab ID-Version‡: 11866708-1

Sample Layers	Asbestos Content
Black Non-Fibrous Material	ND
Transparent Adhesive	ND
Sample Composite Homogeneity:	Moderate

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Client: Tetra Tech-KCMO

C/O: Mr. Jeffrey Mitchell

Re: 103G65210190.03.05; 3230 Washington Blvd.,
St. Louis, MO

Date of Sampling: 09-17-2020

Date of Receipt: 09-25-2020

Date of Report: 09-29-2020

ASBESTOS PLM REPORT**Location: WE-ST-03, Stair tread**

Lab ID-Version‡: 11866709-1

Sample Layers	Asbestos Content
Black Non-Fibrous Material	ND
Transparent Adhesive	ND
Sample Composite Homogeneity: Moderate	

Location: WE-CB-01, Black vinyl cove base with mastic

Lab ID-Version‡: 11866710-1

Sample Layers	Asbestos Content
Black Baseboard	ND
Beige Mastic	ND
Sample Composite Homogeneity: Moderate	

Location: WE-CB-02, Black vinyl cove base with mastic

Lab ID-Version‡: 11866711-1

Sample Layers	Asbestos Content
Black Baseboard	ND
Beige Mastic	ND
Sample Composite Homogeneity: Moderate	

Location: WE-CB-03, Black vinyl cove base with mastic

Lab ID-Version‡: 11866712-1

Sample Layers	Asbestos Content
Black Baseboard	ND
Beige Mastic	ND
Sample Composite Homogeneity: Moderate	

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‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Client: Tetra Tech-KCMO

C/O: Mr. Jeffrey Mitchell

Re: 103G65210190.03.05; 3230 Washington Blvd.,
St. Louis, MO

Date of Sampling: 09-17-2020

Date of Receipt: 09-25-2020

Date of Report: 09-29-2020

ASBESTOS PLM REPORT**Location: WE-CTX-01, Low density pattern ceiling texture**

Lab ID-Version‡: 11866713-1

Sample Layers	Asbestos Content
White Ceiling Texture	ND
Sample Composite Homogeneity:	Good

Location: WE-CTX-02, Low density pattern ceiling texture

Lab ID-Version‡: 11866714-1

Sample Layers	Asbestos Content
White Ceiling Texture	ND
Sample Composite Homogeneity:	Good

Location: WE-CTX-03, Low density pattern ceiling texture

Lab ID-Version‡: 11866715-1

Sample Layers	Asbestos Content
White Ceiling Texture	ND
Sample Composite Homogeneity:	Good

Location: WE-CM2-01, Grey carpet squares with beige mastic

Lab ID-Version‡: 11866716-1

Sample Layers	Asbestos Content
Gray Carpet	ND
Beige Mastic	ND
Composite Non-Asbestos Content:	50% Synthetic Fibers 10% Glass Fibers
Sample Composite Homogeneity:	Moderate

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Client: Tetra Tech-KCMO

C/O: Mr. Jeffrey Mitchell

Re: 103G65210190.03.05; 3230 Washington Blvd.,
St. Louis, MO

Date of Sampling: 09-17-2020

Date of Receipt: 09-25-2020

Date of Report: 09-29-2020

ASBESTOS PLM REPORT**Location: WE-CM2-02, Grey carpet squares with beige mastic**

Lab ID-Version‡: 11866717-1

Sample Layers	Asbestos Content
Gray Carpet	ND
Beige Mastic	ND
Composite Non-Asbestos Content:	50% Synthetic Fibers 10% Glass Fibers
Sample Composite Homogeneity:	Moderate

Location: WE-CM2-03, Grey carpet squares with beige mastic

Lab ID-Version‡: 11866718-1

Sample Layers	Asbestos Content
Gray Carpet	ND
Beige Mastic	ND
Composite Non-Asbestos Content:	50% Synthetic Fibers 10% Glass Fibers
Sample Composite Homogeneity:	Moderate

Location: WE-CLK-01, White interior window caulk

Lab ID-Version‡: 11866719-1

Sample Layers	Asbestos Content
White Caulk	6% Chrysotile
Sample Composite Homogeneity:	Good

Comments: Samples WE-CLK-02 and -03 were not analyzed due to prior positive series.**Location: WE-CTX2-01, High density pattern ceiling texture**

Lab ID-Version‡: 11866722-1

Sample Layers	Asbestos Content
White Ceiling Texture	ND
Sample Composite Homogeneity:	Good

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Client: Tetra Tech-KCMO

C/O: Mr. Jeffrey Mitchell

Re: 103G65210190.03.05; 3230 Washington Blvd.,
St. Louis, MO

Date of Sampling: 09-17-2020

Date of Receipt: 09-25-2020

Date of Report: 09-29-2020

ASBESTOS PLM REPORT**Location: WE-CTX2-02, High density pattern ceiling texture**

Lab ID-Version‡: 11866723-1

Sample Layers	Asbestos Content
White Ceiling Texture	ND
Sample Composite Homogeneity:	Good

Location: WE-CTX2-03, High density pattern ceiling texture

Lab ID-Version‡: 11866724-1

Sample Layers	Asbestos Content
White Ceiling Texture	ND
Sample Composite Homogeneity:	Good

Location: WE-DW3-01, Thick drywall

Lab ID-Version‡: 11866725-1

Sample Layers	Asbestos Content
Cream Tape	ND
Off-White Joint Compound	ND
White Drywall with Brown Paper	ND
Composite Non-Asbestos Content:	15% Cellulose
Sample Composite Homogeneity:	Moderate

Location: WE-DW3-02, Thick drywall

Lab ID-Version‡: 11866726-1

Sample Layers	Asbestos Content
White Drywall with Brown Paper	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

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Client: Tetra Tech-KCMO

C/O: Mr. Jeffrey Mitchell

Re: 103G65210190.03.05; 3230 Washington Blvd.,
St. Louis, MO

Date of Sampling: 09-17-2020

Date of Receipt: 09-25-2020

Date of Report: 09-29-2020

ASBESTOS PLM REPORT**Location: WE-DW3-03, Thick drywall**

Lab ID-Version‡: 11866727-1

Sample Layers	Asbestos Content
White Drywall with Brown Paper	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Location: WE-CLK2-01, White exterior window caulk

Lab ID-Version‡: 11866728-1

Sample Layers	Asbestos Content
White Caulk	ND
Sample Composite Homogeneity:	Good

Location: WE-CLK2-02, White exterior window caulk

Lab ID-Version‡: 11866729-1

Sample Layers	Asbestos Content
White Caulk	ND
Sample Composite Homogeneity:	Good

Location: WE-CLK2-03, White exterior window caulk

Lab ID-Version‡: 11866730-1

Sample Layers	Asbestos Content
White Caulk	ND
Sample Composite Homogeneity:	Good

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Client: Tetra Tech-KCMO

C/O: Mr. Jeffrey Mitchell

Re: 103G65210190.03.05; 3230 Washington Blvd.,
St. Louis, MO

Date of Sampling: 09-17-2020

Date of Receipt: 09-25-2020

Date of Report: 09-29-2020

ASBESTOS PLM REPORT**Location: WE-CLK3-01, Beige interior window caulk**

Lab ID-Version‡: 11866731-1

Sample Layers	Asbestos Content
Beige Caulk	ND
Sample Composite Homogeneity:	Good

Location: WE-CLK3-02, Beige interior window caulk

Lab ID-Version‡: 11866732-1

Sample Layers	Asbestos Content
Beige Caulk	ND
Sample Composite Homogeneity:	Good

Location: WE-CLK3-03, Beige interior window caulk

Lab ID-Version‡: 11866733-1

Sample Layers	Asbestos Content
Beige Caulk	ND
Sample Composite Homogeneity:	Good

Location: WE-WM2-01, Brown wall mastic

Lab ID-Version‡: 11866734-1

Sample Layers	Asbestos Content
Brown Mastic	ND
Sample Composite Homogeneity:	Good

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Client: Tetra Tech-KCMO

C/O: Mr. Jeffrey Mitchell

Re: 103G65210190.03.05; 3230 Washington Blvd.,
St. Louis, MO

Date of Sampling: 09-17-2020

Date of Receipt: 09-25-2020

Date of Report: 09-29-2020

ASBESTOS PLM REPORT**Location: WE-WM2-02, Brown wall mastic**

Lab ID-Version‡: 11866735-1

Sample Layers	Asbestos Content
Brown Mastic	ND
Sample Composite Homogeneity: Good	

Location: WE-WM2-03, Brown wall mastic

Lab ID-Version‡: 11866736-1

Sample Layers	Asbestos Content
Brown Mastic	ND
Sample Composite Homogeneity: Good	

Location: WE-TP-01, Transite pipe

Lab ID-Version‡: 11866737-1

Sample Layers	Asbestos Content
Gray Transite	10% Chrysotile 5% Crocidolite
Sample Composite Homogeneity: Good	

Comments: Samples WE-TP-02 and -03 were not analyzed due to prior positive series.**Location: WE-TSI-01, 2" pipe insulation**

Lab ID-Version‡: 11866740-1

Sample Layers	Asbestos Content
Gray Insulation	3% Chrysotile
Composite Non-Asbestos Content: 20% Glass Fibers	
Sample Composite Homogeneity: Good	

Comments: Samples WE-TSI-02 and -03 were not analyzed due to prior positive series.

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Client: Tetra Tech-KCMO

C/O: Mr. Jeffrey Mitchell

Re: 103G65210190.03.05; 3230 Washington Blvd.,
St. Louis, MO

Date of Sampling: 09-17-2020

Date of Receipt: 09-25-2020

Date of Report: 09-29-2020

ASBESTOS PLM REPORT**Location: WE-WM3-01, Light brown wall mastic**

Lab ID-Version‡: 11866743-1

Sample Layers	Asbestos Content
Light Brown Mastic	ND
Sample Composite Homogeneity:	Good

Location: WE-WM3-02, Light brown wall mastic

Lab ID-Version‡: 11866744-1

Sample Layers	Asbestos Content
Light Brown Mastic	ND
Sample Composite Homogeneity:	Good

Location: WE-JC-01, Joint compound

Lab ID-Version‡: 11866745-1

Sample Layers	Asbestos Content
White Joint Compound	< 1% Chrysotile
Sample Composite Homogeneity:	Good

Comments: Sample WE-JC-02 was not analyzed due to prior positive series.**Location: WE-EF-01, Equipment flashing**

Lab ID-Version‡: 11866747-1

Sample Layers	Asbestos Content
Black Mastic	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

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Client: Tetra Tech-KCMO

C/O: Mr. Jeffrey Mitchell

Re: 103G65210190.03.05; 3230 Washington Blvd.,
St. Louis, MO

Date of Sampling: 09-17-2020

Date of Receipt: 09-25-2020

Date of Report: 09-29-2020

ASBESTOS PLM REPORT**Location: WE-EF-02, Equipment flashing**

Lab ID-Version‡: 11866748-1

Sample Layers	Asbestos Content
Black Mastic	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Location: WE-EF-03, Equipment flashing

Lab ID-Version‡: 11866749-1

Sample Layers	Asbestos Content
Black Mastic	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Location: WE-R-01, Roofing

Lab ID-Version‡: 11866750-1

Sample Layers	Asbestos Content
Black Roofing Shingle	ND
Black Roofing Tar	ND
Black Roofing Felt	ND
Composite Non-Asbestos Content:	35% Glass Fibers
Sample Composite Homogeneity:	Moderate

Location: WE-R-02, Roofing

Lab ID-Version‡: 11866751-1

Sample Layers	Asbestos Content
Black Roofing Shingle	ND
Black Roofing Tar	ND
Black Roofing Felt	ND
Composite Non-Asbestos Content:	20% Cellulose 15% Glass Fibers
Sample Composite Homogeneity:	Moderate

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Client: Tetra Tech-KCMO

C/O: Mr. Jeffrey Mitchell

Re: 103G65210190.03.05; 3230 Washington Blvd.,
St. Louis, MO

Date of Sampling: 09-17-2020

Date of Receipt: 09-25-2020

Date of Report: 09-29-2020

ASBESTOS PLM REPORT**Location: WE-R-03, Roofing**

Lab ID-Version‡: 11866752-1

Sample Layers	Asbestos Content
Black Roofing Shingle	ND
Black Roofing Tar	ND
Black Roofing Felt	ND
Composite Non-Asbestos Content:	20% Cellulose 15% Glass Fibers
Sample Composite Homogeneity:	Moderate

Location: WE-DS-01, Duct sealant

Lab ID-Version‡: 11866753-1

Sample Layers	Asbestos Content
Gray Sealant	ND
Black Mastic	5% Chrysotile
Sample Composite Homogeneity:	Moderate

Comments: Samples WE-DS-02 and -03 were not analyzed due to prior positive series.**Location: WE-SC-01, Skim coat**

Lab ID-Version‡: 11866756-1

Sample Layers	Asbestos Content
White Skim Coat	ND
Sample Composite Homogeneity:	Good

Location: WE-SC-02, Skim coat

Lab ID-Version‡: 11866757-1

Sample Layers	Asbestos Content
White Skim Coat	ND
Sample Composite Homogeneity:	Good

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EMLab P&K

002489696

002489696

1st Positive

Asbestos CDC Doc # 04074 Rev 12 Revised 12/18/15 Page 1 of 1 04

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CONTACT INFORMATION

Company:	Tetra Tech, Inc.	Address:	415 Oak Street, Kansas City, MO 64106
Contact:	Jeffrey Mitchell	Special Instructions:	Stop on 1 st Positive
Phone:	(816) 412-1773		

PROJECT INFORMATION

Project ID:	103G65210190.03.05	STD - Standard (DEFAULT)	TURN AROUND TIME CODES (TAT)
Project Description:	3230 Washington Blvd., St. Louis, MO	ND - Next Business Day	
Project Zip Code:		SD - Same Business Day Rush*	
PO Number:		*Please call Client Services for locations with Rush services	

Sample ID	Description	Sample Type (Below)	TAT (Above)	Total Volume (Av Samples only)	Notes
WE-VFT4-03	See above	B	STD	NA	Stop on 1 st Positive
WE-CT-01		B	STD	NA	Stop on 1 st Positive
WE-CT-02	12x12 Ceiling Tile w/ Pinholes	B	STD	NA	Stop on 1 st Positive
WE-CT-03		B	STD	NA	Stop on 1 st Positive
WE-CT2-01		B	STD	NA	Stop on 1 st Positive
WE-CT2-02	2x4 Ceiling Tile w/ Pinholes and Fissures	B	STD	NA	Stop on 1 st Positive
WE-CT2-03		B	STD	NA	Stop on 1 st Positive
WE-CM-01		B	STD	NA	Stop on 1 st Positive
WE-CM-02	Brown Carpet Mastic	B	STD	NA	Stop on 1 st Positive
WE-CM-03		B	STD	NA	Stop on 1 st Positive
WE-CGB-01	Ceiling Gypsum Board	B	STD	NA	Stop on 1 st Positive

SAMPLE TYPE CODES		RELINQUISHED BY	DATE & TIME
A - Air	W - Wipe		
B - Bulk	T - Tape		
D - Dust	R - Rock		
SO - Soil	O - Other		

ASBESTOS ANALYSIS

REQUESTED SERVICES (C)



PCM Air	Bulk	Soil
Fiber Count (NIOSH 7400)		
OSHA with TWA		
EPA Method 600/R-93/116		
EPA Point Count (200 Point Count)		
EPA Point Count (400 Point Count)		
EPA Point Count (1000 Point Count)		
Gravimetric Point Count		
CARB 435 Method (Pre-crushed Sample)		
CARB 435 Method (Regular Sample)		
Lead Analysis		

RECEIVED BY	DATE & TIME

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CONTACT INFORMATION

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Contact:	Jeffrey Mitchell	Special Instructions:	Stop on 1 st Positive
Phone:	(816) 412-1773		

PROJECT INFORMATION

Project ID:	103G65210190.03.05	TURN AROUND TIME CODES (TAT)	STD - Standard (DEFAULT)
Project Description:	3230 Washington Blvd., St. Louis, MO	ND - Next Business Day	Flushes received after 2pm or on weekends, will be considered received the next business day. Please alert us in advance of weekend analysis needs.
Project Zip:	63107	SD - Same Business Day Rush*	
PO Number:		Sampled By:	Ryan Slanczka

Sample ID	Description	Sample Type (Below)	TAT (Above)	Total Volume (Air Samples only)	Notes
WE-CGB-02	Ceiling Gypsum Board	B	STD	NA	Stop on 1 st Positive
WE-CGB-03		B	STD	NA	Stop on 1 st Positive
WE-WM-01		B	STD	NA	Stop on 1 st Positive
WE-WM-02	Black Wall Mastic	B	STD	NA	Stop on 1 st Positive
WE-WM-03		B	STD	NA	Stop on 1 st Positive
WE-CWT-01		B	STD	NA	Stop on 1 st Positive
WE-CWT-02	Ceramic Wall Tile w/ Adhesive and Grout	B	STD	NA	Stop on 1 st Positive
WE-CWT-03		B	STD	NA	Stop on 1 st Positive
WE-CFT-01		B	STD	NA	Stop on 1 st Positive
WE-CFT-02	Ceramic Floor Tile w/ Bed and Grout	B	STD	NA	Stop on 1 st Positive
WE-CFT-03		B	STD	NA	Stop on 1 st Positive

SAMPLE TYPE CODES		RELINQUISHED BY		DATE & TIME	
A - Air	W - Wipe			9/23/2010	
B - Bulk	T - Tape				
D - Dust	R - Rock				
SO - Soil	O - Other:				

ASBESTOS ANALYSIS

REQUESTED SERVICE

PCM

PLM

002489696



PCM	Air	Bulk	PLM	DATE & TIME
Fiber Count (NIOSH 7400)				
OSHA with TWA				
EPA Method 600/R-93/116	X			
EPA Point Count (200 Point Count)				
EPA Point Count (400 Point Count)				
EPA Point Count (1000 Point Count)				
Gravimetric Point Count				
CARB 435 Method (Pre-crushed Sample)				
CARB 435 Method (Regular Sample)				
Lead Analysis				

RECEIVED BY		DATE & TIME	
		9-25-20	
		10-20-20	

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CONTACT INFORMATION

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Contact:	Jeffrey Mitchell	Special Instructions:	Stop on 1 st Positive
Phone:	(816) 412-1773		

PROJECT INFORMATION

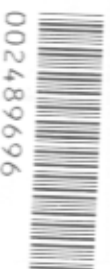
Project ID:	103G65210190.03.05	TURN AROUND TIME CODES (TAT)	STD - Standard (DEFAULT)
Project Description:	3230 Washington Blvd., St. Louis, MO	ND - Next Business Day	Flushes received after 2pm or on weekends, will be considered received the next business day. Please alert us in advance of weekend analysis needs.
Project Zip:		SD - Same Business Day Rush*	
PO Number:		Sampling Date & Time:	9/17/2020
		Sampled By:	Ryan Slanczka

Sample ID	Description	Sample Type (Below)	TAT (Above)	Total Volume (Air Samples only)	Notes
WE-DW-01	White Drywall	B	STD	NA	Stop on 1 st Positive
WE-DW-02		B	STD	NA	Stop on 1 st Positive
WE-DW-03		B	STD	NA	Stop on 1 st Positive
WE-DW2-01	Beige Drywall	B	STD	NA	Stop on 1 st Positive
WE-DW2-02		B	STD	NA	Stop on 1 st Positive
WE-DW2-03		B	STD	NA	Stop on 1 st Positive
WE-ST-01	Stair Tread	B	STD	NA	Stop on 1 st Positive
WE-ST-02		B	STD	NA	Stop on 1 st Positive
WE-ST-03		B	STD	NA	Stop on 1 st Positive
WE-CB-01	Black Vinyl Cove Base w/ Mastic	B	STD	NA	Stop on 1 st Positive
WE-CB-02		B	STD	NA	Stop on 1 st Positive

SAMPLE TYPE CODES		RELINQUISHED BY	DATE & TIME
A - Air	W - Wipe		
B - Bulk	T - Tape		
D - Dust	R - Rock		
SO - Soil	O - Other:		

ASBESTOS ANALYSIS

REQUESTED SERVICES (C)



PCM Air	PLM Bulk	
Fiber Count (NIOSH 7400)		
OSHA with TWA		
EPA Method 600/R-93/116		
EPA Point Count (200 Point Count)		
EPA Point Count (400 Point Count)		
EPA Point Count (1000 Point Count)		
Gravimetric Point Count		
CARB 435 Method (Pre-crushed Sample)		
CARB 435 Method (Regular Sample)		
Lead Analysis		

RECEIVED BY	DATE & TIME

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SF, CA: 6000 Shoreline Court, Suite 205, South San Francisco, CA 94080 • (866) 888-6653

CONTACT INFORMATION

Company:	Tetra Tech, Inc.	Address:	415 Oak Street, Kansas City, MO 64106
Contact:	Jeffrey Mitchell	Special Instructions:	Stop on 1 st Positive
Phone:	(816) 412-1773		


PROJECT INFORMATION

Project ID:	103G65210190.03.05	Project Description:	3230 Washington Blvd., St. Louis, MO
Zip:		Sampling Date & Time:	9/17/2020
PO Number:		Sampled By:	Ryan Slanczka

TURN AROUND TIME CODES (TAT)

STD - Standard (DEFAULT)	Rushes received after 2pm or on weekends, will be considered received the next business day. Please alert us in advance of weekend analysis needs.
ND - Next Business Day	
SD - Same Business Day Rush*	

Sample ID	Description	Sample Type (Below)	TAT (Above)	Total Volume (Av Samples only)	Notes
WE-CB-03	Black Vinyl Cove Base w/ Mastic	B	STD	NA	Stop on 1 st Positive
WE-CTX-01		B	STD	NA	Stop on 1 st Positive
WE-CTX-02	Low-density Pattern Ceiling Texture	B	STD	NA	Stop on 1 st Positive
WE-CTX-03		B	STD	NA	Stop on 1 st Positive
WE-CM2-01		B	STD	NA	Stop on 1 st Positive
WE-CM2-02		B	STD	NA	Stop on 1 st Positive
WE-CM2-03	Grey Carpet Squares w/ Beige Mastic	B	STD	NA	Stop on 1 st Positive
WE-CLK-01		B	STD	NA	Stop on 1 st Positive
WE-CLK-02	White Interior Window Caulk	B	STD	NA	Stop on 1 st Positive
WE-CLK-03		B	STD	NA	Stop on 1 st Positive
WE-CTX2-01	High-density Pattern Ceiling Texture	B	STD	NA	Stop on 1 st Positive

SAMPLE TYPE CODES		RELINQUISHED BY		DATE & TIME
A - Air	W - Wipe			9/23/2020
B - Bulk	T - Tape			
D - Dust	R - Rock			
SO - Soil	O - Other:			

ASBESTOS AI

REQUESTED SERVICES (I)

002489696



PCM Air	Bulk	Soil	Requests
Fiber Count (NIOSH 7400)			
OSHA with TWA			
EPA Method 600/R-93/116			
EPA Point Count (200 Point Count)			
EPA Point Count (400 Point Count)			
EPA Point Count (1000 Point Count)			
Gravimetric Point Count			
CARB 435 Method (Pre-crushed Sample)			
CARB 435 Method (Regular Sample)			
Lead Analysis			

RECEIVED BY	DATE & TIME
	9-25-20

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CHAIN OF CUSTODY



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CONTACT INFORMATION

Company:	Tetra Tech, Inc.	Address:	415 Oak Street, Kansas City, MO 64106
Contact:	Jeffrey Mitchell	Special Instructions:	Stop on 1 st Positive
Phone:	(816) 412-1773		

PROJECT INFORMATION

Project ID:	103G65210190.03.05	Project Description:	3230 Washington Blvd., St. Louis, MO
Zip:		Sampling Date & Time:	9/17/2020
PO Number:		Sampled By:	Ryan Slanczka

TURN AROUND TIME CODES (TAT)

STD - Standard (DEFAULT)	ND - Next Business Day	SD - Same Business Day Rush*
*Please call Client Services for locations with Rush services		

Sample ID	Description	Sample Type (Below)	TAT (Above)	Total Volume (Avg Samples only)	Notes
WE-CTX2-02	High-density Pattern Ceiling Texture	B	STD	NA	Stop on 1 st Positive
WE-CTX2-03		B	STD	NA	Stop on 1 st Positive
WE-DW3-01		B	STD	NA	Stop on 1 st Positive
WE-DW3-02	Thick Drywall	B	STD	NA	Stop on 1 st Positive
WE-DW3-03		B	STD	NA	Stop on 1 st Positive
WE-CLK2-01		B	STD	NA	Stop on 1 st Positive
WE-CLK2-02	White Exterior Window Caulk	B	STD	NA	Stop on 1 st Positive
WE-CLK2-03		B	STD	NA	Stop on 1 st Positive
WE-CLK3-01		B	STD	NA	Stop on 1 st Positive
WE-CLK3-02	Beige Interior Window Caulk	B	STD	NA	Stop on 1 st Positive
WE-CLK3-03		B	STD	NA	Stop on 1 st Positive

SAMPLE TYPE CODES		RELINQUISHED BY		DATE & TIME	
A - Air	W - Wipe			9/23/2020	
B - Bulk	T - Tape				
D - Dust	R - Rock				
SO - Soil	O - Other:				

ASBESTOS ANALYSIS

REQUESTED SERVICES



002489696

PCM Air	Bulk	Other
Fiber Count (NIOSH 7400)		
OSHA with TWA		
EPA Method 600/R-93/116		
EPA Point Count (200 Point Count)		
EPA Point Count (400 Point Count)		
EPA Point Count (1000 Point Count)		
Gravimetric Point Count		
CARB 435 Method (Pre-crushed Sample)		
CARB 435 Method (Regular Sample)		
Lead Analysis		

RECEIVED BY		DATE & TIME	
		9-25-20	

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CONTACT INFORMATION

Company:	Tetra Tech, Inc.	Address:	415 Oak Street, Kansas City, MO 64106
Contact:	Jeffrey Mitchell	Special Instructions:	Stop on 1 st Positive
Phone:	(816) 412-1773		

PROJECT INFORMATION

Project ID:	103G65210190.03.05	STD - Standard (DEFAULT)	TURN AROUND TIME CODES (TAT)
Project Description:	3230 Washington Blvd., St. Louis, MO	ND - Next Business Day	
Project Zip:		SD - Same Business Day Rush*	Rushes received after 2pm or on weekends, will be considered received the next business day. Please alert us in advance of weekend analysis needs.
PO Number:		Sampled By: Ryan Slanczka	

Sample ID	Description	Sample Type (Below)	TAT (Above)	Total Volume (Avg Samples only)	Notes
WE-WM2-01	Brown Wall Mastic	B	STD	NA	Stop on 1 st Positive
WE-WM2-02		B	STD	NA	Stop on 1 st Positive
WE-WM2-03		B	STD	NA	Stop on 1 st Positive
WE-TP-01	Transite Pipe	B	STD	NA	Stop on 1 st Positive
WE-TP-02		B	STD	NA	Stop on 1 st Positive
WE-TP-03		B	STD	NA	Stop on 1 st Positive
WE-TSI-01	2" Pipe Insulation	B	STD	NA	Stop on 1 st Positive
WE-TSI-02		B	STD	NA	Stop on 1 st Positive
WE-TSI-03		B	STD	NA	Stop on 1 st Positive
WE-WM3-01	Light Brown Wall Mastic	B	STD	NA	Stop on 1 st Positive
WE-WM3-02		B	STD	NA	Stop on 1 st Positive

SAMPLE TYPE CODES		RELINQUISHED BY		DATE & TIME
A - Air	W - Wipe			9/29/2010
B - Bulk	T - Tape			
D - Dust	R - Rock			
SO - Soil	O - Other:			

ASBESTOS ANALYSIS

REQUESTED SERVICES



002489696

PCM Air	Bulk	PLM
Fiber Count (NIOSH 7400)		
OSHA with TWA		
EPA Method 600/R-93/116		
EPA Point Count (200 Point Count)		
EPA Point Count (400 Point Count)		
EPA Point Count (1000 Point Count)		
Gravimetric Point Count		
CARB 435 Method (Pre-crushed Sample)		
CARB 435 Method (Regular Sample)		
Lead Analysis		

RECEIVED BY	DATE & TIME
	9-25-20 10:20

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CONTACT INFORMATION

Company:	Tetra Tech, Inc.	Address:	415 Oak Street, Kansas City, MO 64106
Contact:	Jeffrey Mitchell	Special Instructions:	Stop on 1 st Positive
Phone:	(816) 412-1773		

PROJECT INFORMATION

Project ID:	103G65210190.03.05	TURN AROUND TIME CODES (TAT)	STD - Standard (DEFAULT)
Project Description:	3230 Washington Blvd., St. Louis, MO	ND - Next Business Day	Rushes received after 2pm or on weekends, will be considered received the next business day. Please alert us in advance of weekend analysis needs.
Project Zip:		SD - Same Business Day Rush*	
PO Number:		Sampled By:	Ryan Slanczka

Sample ID	Description	Sample Type (Below)	TAT (Above)	Total Volume (Air Samples only)	Notes
WE-JC-01	Joint Compound	B	STD	NA	Stop on 1 st Positive
WE-JC-02		B	STD	NA	Stop on 1 st Positive
WE-EF-01		B	STD	NA	Stop on 1 st Positive
WE-EF-02	Equipment Flashing	B	STD	NA	Stop on 1 st Positive
WE-EF-03		B	STD	NA	Stop on 1 st Positive
WE-R-01		B	STD	NA	Stop on 1 st Positive
WE-R-02	Roofing	B	STD	NA	Stop on 1 st Positive
WE-R-03		B	STD	NA	Stop on 1 st Positive
WE-DS-01		B	STD	NA	Stop on 1 st Positive
WE-DS-02	Duct Sealant	B	STD	NA	Stop on 1 st Positive
WE-DS-03		B	STD	NA	Stop on 1 st Positive

SAMPLE TYPE CODES	RELINQUISHED BY	DATE & TIME
A - Air		
B - Bulk		
D - Dust		
SO - Soil		

ASBESTOS

REQUESTED SERVICES

PCM Air PLM 002489696

PCM Air	Bulk	Sur
Fiber Count (NIOSH 7400)		
OSHA with TWA		
EPA Method 600/R-93/116		
EPA Point Count (200 Point Count)		
EPA Point Count (400 Point Count)		
EPA Point Count (1000 Point Count)		
Gravimetric Point Count		
CARB 435 Method (Pre-crushed Sample)		
CARB 435 Method (Regular Sample)		
Lead Analysis		

RECEIVED BY	DATE & TIME
	9-25-20
	10-20-20

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ASBESTOS ANALYSIS	
REQUESTED SERVICES	
PCM	PLM
002489696	

[illegible]

Asbestos CDC, Doc. # 04071, Rev 12, Revised 12/18/15, Page 1 of 1 NA

Report for:

Mr. Jeffrey Mitchell
Tetra Tech-KCMO
415 Oak Street
Kansas City, MO 64106

Regarding: Project: 103G65210190.03.05; 3230 Washington Blvd., St. Louis, MO
EML ID: 2489696

Approved by:

Dates of Analysis:
Asbestos-EPA 400 point count: 10-06-2020



Approved Signatory
David Andrews

Service SOPs: Asbestos-EPA 400 point count (EPA 40CFR App E to Sub E of Part 763 & EPA METHOD 600/R-93-116, SOP EM-AS-S-1262)
NVLAP Lab Code 600266-0

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the samples as received.

Eurofins EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Client: Tetra Tech-KCMO

C/O: Mr. Jeffrey Mitchell

Re: 103G65210190.03.05; 3230 Washington Blvd.,
St. Louis, MO

Date of Sampling: 09-17-2020

Date of Receipt: 09-25-2020

Date of Report: 10-06-2020

ASBESTOS POINT COUNT REPORT

Location:	WE-JC-01 Joint compound		
Total Points Counted:	400		
Lab ID-Version‡:	11894862-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
Joint Compound	Chrysotile	5	1.25
Layer Totals:		5	1.25

The analytical sensitivity is 1 asbestos point. The limit of detection is 1 asbestos point divided by the total number of points counted and multiplied by 100.

The results relate only to the items tested. Interpretation is left to the company and/or persons who conducted the field work. The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by any agency of the federal government.

All samples were received in acceptable condition unless otherwise noted. Eurofins EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.

‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

APPENDIX E

PCB ANALYTICAL RESULTS AND CHAIN-OF-CUSTODY FORMS

October 06, 2020

Kaitlyn Mitchell
Tetra Tech EMI
415 Oak
Kansas City, MO 64106

RE: Project: 103G65210190.03.05
Pace Project No.: 60349359

Dear Kaitlyn Mitchell:

Enclosed are the analytical results for sample(s) received by the laboratory on September 24, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Minneapolis

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

Sincerely,



Jeffrey Shopper
jeff.shopper@pacelabs.com
1(913)563-1408
Project Manager

Enclosures

cc: Ryan Slanczka, Tetra Tech



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 103G65210190.03.05

Pace Project No.: 60349359

Pace Analytical Services - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414

A2LA Certification #: 2926.01

Alabama Certification #: 40770

Alaska Contaminated Sites Certification #: 17-009

Alaska DW Certification #: MN00064

Arizona Certification #: AZ0014

Arkansas DW Certification #: MN00064

Arkansas WW Certification #: 88-0680

California Certification #: 2929

Colorado Certification #: MN00064

Connecticut Certification #: PH-0256

EPA Region 8+Wyoming DW Certification #: via MN 027-053-137

Florida Certification #: E87605

Georgia Certification #: 959

Hawaii Certification #: MN00064

Idaho Certification #: MN00064

Illinois Certification #: 200011

Indiana Certification #: C-MN-01

Iowa Certification #: 368

Kansas Certification #: E-10167

Kentucky DW Certification #: 90062

Kentucky WW Certification #: 90062

Louisiana DEQ Certification #: AI-03086

Louisiana DW Certification #: MN00064

Maine Certification #: MN00064

Maryland Certification #: 322

Massachusetts DWP Certification #: via MN 027-053-137

Michigan Certification #: 9909

Minnesota Certification #: 027-053-137

Minnesota Dept of Ag Certification #: via MN 027-053-137

Minnesota Petrofund Certification #: 1240

Mississippi Certification #: MN00064

Missouri Certification #: 10100

Montana Certification #: CERT0092

Nebraska Certification #: NE-OS-18-06

Nevada Certification #: MN00064

New Hampshire Certification #: 2081

New Jersey Certification #: MN002

New York Certification #: 11647

North Carolina DW Certification #: 27700

North Carolina WW Certification #: 530

North Dakota Certification #: R-036

Ohio DW Certification #: 41244

Ohio VAP Certification #: CL101

Oklahoma Certification #: 9507

Oregon Primary Certification #: MN300001

Oregon Secondary Certification #: MN200001

Pennsylvania Certification #: 68-00563

Puerto Rico Certification #: MN00064

South Carolina Certification #: 74003001

Tennessee Certification #: TN02818

Texas Certification #: T104704192

Utah Certification #: MN00064

Vermont Certification #: VT-027053137

Virginia Certification #: 460163

Washington Certification #: C486

West Virginia DEP Certification #: 382

West Virginia DW Certification #: 9952 C

Wisconsin Certification #: 999407970

Wyoming UST Certification #: via A2LA 2926.01

USDA Permit #: P330-19-00208

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 103G65210190.03.05

Pace Project No.: 60349359

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60349359001	WE-PCB-01	Solid	09/17/20 08:00	09/24/20 09:50
60349359002	WE-PCB-02	Solid	09/17/20 08:00	09/24/20 09:50
60349359003	WE-PCB-03	Solid	09/17/20 08:00	09/24/20 09:50

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SAMPLE ANALYTE COUNT

Project: 103G65210190.03.05

Pace Project No.: 60349359

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60349359001	WE-PCB-01	EPA 8082	RAG	11	PASI-M
		ASTM D2974	JDL	1	PASI-M
60349359002	WE-PCB-02	EPA 8082	RAG	11	PASI-M
		ASTM D2974	JDL	1	PASI-M
60349359003	WE-PCB-03	EPA 8082	RAG	11	PASI-M
		ASTM D2974	JDL	1	PASI-M

PASI-M = Pace Analytical Services - Minneapolis

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 103G65210190.03.05

Pace Project No.: 60349359

Sample: WE-PCB-01 **Lab ID: 60349359001** Collected: 09/17/20 08:00 Received: 09/24/20 09:50 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB								
Analytical Method: EPA 8082 Preparation Method: EPA 3546								
Pace Analytical Services - Minneapolis								
PCB-1016 (Aroclor 1016)	ND	ug/kg	50.0	1	10/01/20 12:41	10/06/20 12:30	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/kg	50.0	1	10/01/20 12:41	10/06/20 12:30	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/kg	50.0	1	10/01/20 12:41	10/06/20 12:30	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/kg	50.0	1	10/01/20 12:41	10/06/20 12:30	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/kg	50.0	1	10/01/20 12:41	10/06/20 12:30	12672-29-6	
PCB-1254 (Aroclor 1254)	852	ug/kg	50.0	1	10/01/20 12:41	10/06/20 12:30	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/kg	50.0	1	10/01/20 12:41	10/06/20 12:30	11096-82-5	
PCB-1262 (Aroclor 1262)	ND	ug/kg	50.0	1	10/01/20 12:41	10/06/20 12:30	37324-23-5	
PCB-1268 (Aroclor 1268)	ND	ug/kg	50.0	1	10/01/20 12:41	10/06/20 12:30	11100-14-4	
Surrogates								
Tetrachloro-m-xylene (S)	90	%.	30-150	1	10/01/20 12:41	10/06/20 12:30	877-09-8	
Decachlorobiphenyl (S)	76	%.	30-150	1	10/01/20 12:41	10/06/20 12:30	2051-24-3	

Dry Weight / %M by ASTM D2974

Analytical Method: ASTM D2974

Pace Analytical Services - Minneapolis

Percent Moisture	1.2	%	0.10	1		09/30/20 15:56		N2
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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 103G65210190.03.05

Pace Project No.: 60349359

Sample: WE-PCB-02 **Lab ID: 60349359002** Collected: 09/17/20 08:00 Received: 09/24/20 09:50 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB								
Analytical Method: EPA 8082 Preparation Method: EPA 3546								
Pace Analytical Services - Minneapolis								
PCB-1016 (Aroclor 1016)	ND	ug/kg	50.0	1	10/01/20 12:41	10/06/20 12:46	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/kg	50.0	1	10/01/20 12:41	10/06/20 12:46	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/kg	50.0	1	10/01/20 12:41	10/06/20 12:46	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/kg	50.0	1	10/01/20 12:41	10/06/20 12:46	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/kg	50.0	1	10/01/20 12:41	10/06/20 12:46	12672-29-6	
PCB-1254 (Aroclor 1254)	408	ug/kg	50.0	1	10/01/20 12:41	10/06/20 12:46	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/kg	50.0	1	10/01/20 12:41	10/06/20 12:46	11096-82-5	
PCB-1262 (Aroclor 1262)	ND	ug/kg	50.0	1	10/01/20 12:41	10/06/20 12:46	37324-23-5	
PCB-1268 (Aroclor 1268)	ND	ug/kg	50.0	1	10/01/20 12:41	10/06/20 12:46	11100-14-4	
Surrogates								
Tetrachloro-m-xylene (S)	76	%.	30-150	1	10/01/20 12:41	10/06/20 12:46	877-09-8	
Decachlorobiphenyl (S)	84	%.	30-150	1	10/01/20 12:41	10/06/20 12:46	2051-24-3	

Dry Weight / %M by ASTM D2974

Analytical Method: ASTM D2974

Pace Analytical Services - Minneapolis

Percent Moisture	0.44	%	0.10	1		09/30/20 15:56		N2
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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 103G65210190.03.05

Pace Project No.: 60349359

Sample: WE-PCB-03 **Lab ID: 60349359003** Collected: 09/17/20 08:00 Received: 09/24/20 09:50 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB								
Analytical Method: EPA 8082 Preparation Method: EPA 3546								
Pace Analytical Services - Minneapolis								
PCB-1016 (Aroclor 1016)	ND	ug/kg	50.3	1	10/01/20 12:41	10/06/20 13:02	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/kg	50.3	1	10/01/20 12:41	10/06/20 13:02	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/kg	50.3	1	10/01/20 12:41	10/06/20 13:02	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/kg	50.3	1	10/01/20 12:41	10/06/20 13:02	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/kg	50.3	1	10/01/20 12:41	10/06/20 13:02	12672-29-6	
PCB-1254 (Aroclor 1254)	650	ug/kg	50.3	1	10/01/20 12:41	10/06/20 13:02	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/kg	50.3	1	10/01/20 12:41	10/06/20 13:02	11096-82-5	
PCB-1262 (Aroclor 1262)	ND	ug/kg	50.3	1	10/01/20 12:41	10/06/20 13:02	37324-23-5	
PCB-1268 (Aroclor 1268)	ND	ug/kg	50.3	1	10/01/20 12:41	10/06/20 13:02	11100-14-4	
Surrogates								
Tetrachloro-m-xylene (S)	84	%.	30-150	1	10/01/20 12:41	10/06/20 13:02	877-09-8	
Decachlorobiphenyl (S)	90	%.	30-150	1	10/01/20 12:41	10/06/20 13:02	2051-24-3	

Dry Weight / %M by ASTM D2974

Analytical Method: ASTM D2974

Pace Analytical Services - Minneapolis

Percent Moisture	0.58	%	0.10	1		09/30/20 15:56		N2
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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 103G65210190.03.05

Pace Project No.: 60349359

QC Batch: 701623

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight / %M by ASTM D2974

Laboratory:

Pace Analytical Services - Minneapolis

Associated Lab Samples: 60349359001, 60349359002, 60349359003

SAMPLE DUPLICATE: 3747889

Parameter	Units	10533609001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	2.5	2.3	8	30	N2

SAMPLE DUPLICATE: 3747890

Parameter	Units	10533637004 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	3.0	2.9	3	30	N2

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL DATA

Project: 103G65210190.03.05

Pace Project No.: 60349359

QC Batch:	701866	Analysis Method:	EPA 8082
QC Batch Method:	EPA 3546	Analysis Description:	8082 GCS PCB
		Laboratory:	Pace Analytical Services - Minneapolis
Associated Lab Samples: 60349359001, 60349359002, 60349359003			

METHOD BLANK: 3749310 Matrix: Solid

Associated Lab Samples: 60349359001, 60349359002, 60349359003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	ND	50.0	10/06/20 10:26	
PCB-1221 (Aroclor 1221)	ug/kg	ND	50.0	10/06/20 10:26	
PCB-1232 (Aroclor 1232)	ug/kg	ND	50.0	10/06/20 10:26	
PCB-1242 (Aroclor 1242)	ug/kg	ND	50.0	10/06/20 10:26	
PCB-1248 (Aroclor 1248)	ug/kg	ND	50.0	10/06/20 10:26	
PCB-1254 (Aroclor 1254)	ug/kg	ND	50.0	10/06/20 10:26	
PCB-1260 (Aroclor 1260)	ug/kg	ND	50.0	10/06/20 10:26	
PCB-1262 (Aroclor 1262)	ug/kg	ND	50.0	10/06/20 10:26	
PCB-1268 (Aroclor 1268)	ug/kg	ND	50.0	10/06/20 10:26	
Decachlorobiphenyl (S)	%.	95	30-150	10/06/20 10:26	
Tetrachloro-m-xylene (S)	%.	75	30-150	10/06/20 10:26	

LABORATORY CONTROL SAMPLE & LCSD: 3749311

Parameter	Units	3749312								Qualifiers
		Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	
PCB-1016 (Aroclor 1016)	ug/kg	1000	839	840	84	84	51-125	0	20	
PCB-1260 (Aroclor 1260)	ug/kg	1000	890	893	89	89	49-125	0	20	
Decachlorobiphenyl (S)	%.				92	94	30-150			
Tetrachloro-m-xylene (S)	%.				79	80	30-150			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALIFIERS

Project: 103G65210190.03.05

Pace Project No.: 60349359

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: 702378

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 103G65210190.03.05

Pace Project No.: 60349359

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60349359001	WE-PCB-01	EPA 3546	701866	EPA 8082	702378
60349359002	WE-PCB-02	EPA 3546	701866	EPA 8082	702378
60349359003	WE-PCB-03	EPA 3546	701866	EPA 8082	702378
60349359001	WE-PCB-01	ASTM D2974	701623		
60349359002	WE-PCB-02	ASTM D2974	701623		
60349359003	WE-PCB-03	ASTM D2974	701623		

REPORT OF LABORATORY ANALYSIS

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Sample Receiving Non-Conformance Form (NCF)

Date: 9.25.20	Evaluated by: <i>WZ/pt/LA</i>
Client: Tetra Tec	

Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

1. If Chain-of-Custody (COC) is not received: contact client and if necessary, fill out a COC and indicate that it was filled out by lab personnel. Note issues on this NCF.

2. If COC is incomplete, check applicable issues below and add details where appropriate:

<input checked="" type="checkbox"/> Collection date/time missing or incorrect	Analyses or analytes: missing or clarification needed	Samples listed on COC do not match samples received (missing, additional, etc.)
Sample IDs on COC do not match sample labels	Required trip blanks were not received	Required signatures are missing

Comments/Details/Other Issues not listed above:

No times on COC or container

3. Sample integrity issues: check applicable issues below and add details where appropriate:

Samples: Past holding time	Samples: Condition needs to be brought to lab personnel's attention (details below)	Preservation: Improper
Samples: Not field filtered	Containers: Broken or compromised	Temperature: not within acceptance criteria (typically 0-6C)
Samples: Insufficient volume received	Containers: Incorrect	Temperature: Samples arrived frozen
Samples: Cooler damaged or compromised	Custody Seals: Missing or compromised on samples, trip blanks or coolers	Vials received with improper headspace
Samples: contain chlorine or sulfides	Packing Material: Insufficient/Improper	Other:

Comments/Details:

4. If Samples not preserved properly and Sample Receiving adjusts pH, add details below:

Sample ID:	Date/Time:	Amount/type pres added:
Preserved by:	Initial and Final pH:	Lot # of pres added:
Sample ID:	Date/Time:	Amount/type pres added:
Preserved by:	Initial and Final pH:	Lot # of pres added:
Sample ID:	Date/Time:	Amount/type pres added:
Preserved by:	Initial and Final pH:	Lot # of pres added:

5. Client Contact: If client is contacted for any issue listed above, fill in details below:

Client:	Contacted per:	
PM Initials:	Date/Time:	

Client Comments/Instructions: