

ANALYSIS OF BROWNFIELD CLEANUP ALTERNATIVES

13800 TERRACE ROAD
EAST CLEVELAND, OHIO 44112

OCTOBER 2024

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EAST CLEVELAND, OHIO 44112

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TABLE OF CONTENTS

<u>SECTION:</u>	<u>PAGE NO.:</u>
EXECUTIVE SUMMARY	ES-1
1.0 INTRODUCTION	1
1.1 Site Description	1
1.2 Forecasted Climate Conditions	1
1.3 Site History	1
1.4 Previous Environmental Investigations.....	1
1.5 Current Environmental Concerns	2
2.0 APPLICABLE REGULATIONS	4
3.0 EVALUATION OF CLEANUP ALTERNATIVES	5
3.1 Remedial Objectives.....	5
3.2 Potential Cleanup Alternatives	5
3.2.1 Alternative No. 1 – No Action	5
3.2.2 Alternative No. 2 – Complete Abatement of ACM	5
3.2.3 Alternative No. 3 – Controlled Building Demolition with Partial Abatement of ACM	6
3.3 Recommended Brownfield Cleanup Alternatives	7
3.4 Green and Sustainable Remediation Measures for the Selected Alternatives	7
4.0 CONCLUSIONS	8
5.0 REFERENCES	9

1.0 INTRODUCTION

The Mannik & Smith Group, Inc. (MSG) has prepared this Draft Analysis of Brownfield Cleanup Alternatives (ABCA) for the Cuyahoga County Land Reutilization Corporation (CCLRC), as a requirement for applying for a Fiscal Year 2025 (FY25) U.S. Environmental Protection Agency (EPA) Brownfields Cleanup Grant. If the Cleanup Grant is awarded, CCLRC will finalize this ABCA which will be used as the basis for the cleanup.

The property is comprised of Cuyahoga County parcel number 672-28-009 addressed as 13800 Terrace Road in East Cleveland, Ohio 44112 (hereinafter referred to as the "Site"). A Site Location map is presented as Figure 1, which is located in Appendix A.

In preparing this Draft ABCA, MSG and CCLRC considered environmental factors, various Site characteristics, surrounding properties, land use restrictions, potential future uses, and cleanup goals.

1.1 Site Description

The Site is an irregular-shaped parcel of land, located along the east side of Terrace Road between Forest Hills Boulevard and Belmore Road, and is comprised of approximately 2.55 acres. The Site is developed with a vacant 13-story apartment building which closed in 2014. Access to the Site is from Terrace Road. A Site Layout map is presented as Figure 2, which is located in Appendix A.

1.2 Forecasted Climate Conditions

According to the U.S. Global Change Research Program (USGCRP), climate trends for the Midwest region of the United States include increased temperatures, increased precipitation with greater variability, increased extreme precipitation events, decreased biodiversity, and increased ground-level ozone concentrations (USGCRP, 2018). Some of these factors, most specifically increased precipitation that may affect storm water runoff and flood waters, may be applicable to the cleanup of the Site.

According to the Federal Emergency Management Agency (FEMA) Flood Zone Map 39035C0089E, the Site is located within an area of minimal flood hazard (Zone X) of the Doan Brook-Frontal Lake Erie watershed. Although located within an area of minimal flood hazard, greater storm frequency and intensity in a changing climate may result in more frequent and more powerful flood waters within the Doan Brook-Frontal Lake Erie watershed, which may result in changes to the flood zone and increased risk of flooding of the Site.

Given the characteristics of the Site, fluctuations in temperature, increased precipitation, and more variable stormwater runoff or floodwaters are unlikely to have a significant impact on the Site or disrupt the cleanup objectives.

1.3 Site History

Historical documentation indicates that the Site was likely wooded, undeveloped / residential land prior to 1960. A multi-story apartment building and parking deck were constructed on the Site as early as 1961. The on-site building was closed in 2014 after the City of East Cleveland declared the building unfit for occupancy. The Site and on-site building have remained vacant since.

1.4 Previous Environmental Investigations

Brownfield Restoration Group, LLC (BRG) completed an Ohio EPA Voluntary Action Program (VAP) and ASTM compliant Phase I Environmental Site Assessment (ESA) of the Site in February 2023. The Phase I

ESA found no recognized environmental conditions (RECs), historical RECs, or Controlled RECs in connection with the Site.

Additionally, EA Group completed a pre-demolition hazardous materials assessment and report in February 2023 which included a survey for asbestos containing materials (ACMs), sampling and analysis of paints on representative surfaces to determine lead content, representative sampling of building construction materials that would become demolition debris for waste characterization purposes, and waste characterization for incinerator ash for toxicity characteristic leaching procedure (TCLP) metals.

Asbestos Survey Results

Suspect bulk ACM samples were collected from the Site building in December 2022 with the objective of identifying suspect ACM associated with the former apartment building, which is planned for demolition, pursuant to National Emission Standard for Hazardous Air Pollutants (NESHAP) and Occupational Safety and Health Administration (OSHA) regulations. Over 230 suspect ACM samples were collected from the building/building material and were analyzed by polarized light microscopy for asbestos content. Composite or layered analyses were performed, depending on the nature of the material, with additional analysis (point count) if an initial analysis indicated less than between 5% and 10% asbestos.

Over 30 individual bulk ACM samples throughout the Site building, including, but not limited to, flooring mastic, drywall, floor tile, aircell pipe insulation, elevator door core and brake shoes, and caulking on windows, doors, and vents were identified as ACM.

ACM tables depicting sample locations and results are included in Appendix B.

Paint Chip Sampling of Suspect Lead-Based Paint

A total of 25 representative painted surfaces throughout the Site building were sampled for lead content analysis. Each sample was analyzed in accordance with U.S. EPA SW846 Method 6010B for total lead. The U.S. EPA defines paint that contains more than 5,000 milligrams per kilogram (mg/kg) as lead-based paint (LBP). The consumer Product Safety Action "Ban of Lead-containing Paint and Certain Consumer Products Bearing Lead-Based Paint defines paint that contains more than 600 mg/kg as lead-containing paint.

According to laboratory analytical results, eighteen of the samples contained detectable concentrations of lead, one sample at a concentration representative of lead-based paint and eight samples at concentrations consistent with lead-containing paint. The information on these specific paints should be provided to any contractors who will be disturbing the painted surfaces.

Characterization of Demolition Debris

Representative subsamples of the building that would become demolition debris were secured and used to form 26 composite samples. The samples were analyzed according to TCLP protocol for lead. According to the analytical results, no detectable concentrations of TCLP lead were found in the samples. Accordingly, the demolition debris type materials would not be considered a characteristic hazardous waste due to lead toxicity.

1.5 Current Environmental Concerns

The Phase I ESA did not identify RECs related to soil or groundwater contamination, hazardous materials such as ACMs and lead-based paint within the building remain a significant environmental and public health concern. Therefore, CCLRC has prepared this ABCA to address these hazards through a comprehensive abatement strategy for the eventual demolition of the building on the Site and to ensure the Site can be safely redeveloped for future use.

Appendix B contains copies of ACM tables depicting sample locations and results from EA Group's pre-demolition hazardous materials assessment and report.

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2.0 APPLICABLE REGULATIONS

As described in Section 1.4, ACM is present in the Site building. Accordingly, CCLRC intends to abate the ACM prior to their planned demolition of the Site building.

Based on the results of EA Group's 2023 Pre-Demolition Hazardous Materials Assessment, positively identified ACM has been made per NESHAP regulations and OSHA regulations.

NESHAP regulated ACM's must be removed from the designated building prior to demolition. The asbestos removal must be performed in accordance with Ohio EPA, Ohio Department of Health (ODH), and OSHA regulatory requirements by personnel trained and licensed in the handling of asbestos containing materials.

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3.0 EVALUATION OF CLEANUP ALTERNATIVES

The following sections summarize the objectives of the proposed remedial actions, alternative remedial options, the recommended remedial alternatives, and justification for the recommendations.

3.1 Remedial Objectives

CCLRC plans to raze the Site building and plans to complete pre-demolition asbestos abatement activities to help prepare the building for demolition. If awarded, the Cleanup Grant will allow CCLRC to abate ACM within the Site building to prevent a release of asbestos to the environment during demolition activities as well as reduce potential exposure to demolition personnel. Removing the ACM from the Site building will facilitate redevelopment of the Site.

3.2 Potential Cleanup Alternatives

3.2.1 Alternative No. 1 – No Action

The no action alternative would be the lowest cost alternative. However, the no action alternative would not mitigate the potential threats to human health and the environment that are known to exist in the Site building. In addition, the no action alternative would not facilitate preparation of the Site building for demolition and therefore the ACM in the building would remain an impediment for the planned Site redevelopment.

3.2.2 Alternative No. 2 – Complete Abatement of ACM

This alternative includes the removal and proper off-Site disposal of all ACM identified within the Site building by a licensed asbestos abatement contractor prior to the demolition of the building.

The asbestos abatement work would be performed in accordance with the requirements of 29 CFR 1926.1101 (Asbestos Construction Standard), Ohio EPA Ohio Administrative Code (OAC) 3745-20, and 40 CFR Part 61, Subpart M. Notification of intent to raze the building would be provided to the Ohio EPA per NESHAP requirements at least 10 working days before initiating the ACM abatement activities. The notification would specify the facility owner and the selected/approved contractor, and include a summary of the project description, the planned schedule, planned waste disposal (Type II Municipal Solid Waste Landfill) location, and necessary engineering controls. NESHAP requirements would also be met for asbestos identification, adequate wetting of surfaces to be abated, lack of visible emissions, and proper packaging and labelling of waste materials for disposal.

Final air clearance samples would be collected to verify the adequacy of the abatement activities upon completion. Properly trained and equipped personnel would be used for all required work. Required notifications would be provided to the Ohio EPA and/or local oversight entities in a timely manner.

One consideration that may make abatement slightly more difficult to implement is the increased frequency of heavy rainfall and extreme weather events (storms of unusual intensity, increased frequency, and intensity of localized flooding) that northeast Ohio has experienced in recent years. Although efforts will be made to schedule work in the dry weather months and in months less susceptible to extreme weather, the amount of precipitation over a short period of time from one of these heavy rainfall events could cause delays in the implementation of the proposed abatement work.

Cost: The cost to complete ACM abatement activities is estimated to be approximately \$850,000.

This alternative would remove the identified ACM from the Site building and would meet the remediation objectives. Human health and environmental risks posed by the ACM would be mitigated and the impediments to Site redevelopment would be removed. This alternative has the greatest ability to meet the objectives of preparing the Site building for demolition.

3.2.3 Alternative No. 3 – Controlled Building Demolition with Partial Abatement of ACM

This alternative includes the removal and proper off-Site disposal of all regulated ACM (RACM) identified within the Site building by a licensed asbestos abatement contractor prior to the demolition of the building while leaving some nonfriable ACM in place during demolition activities. RACM is defined as asbestos material that can be crumbled, pulverized, or reduced to powder by hand pressure or by demolition or renovation activities.

Some nonfriable ACM would remain in place during building demolition, depending on the type of material and condition of the ACM. ACM identified as Category 1 nonfriable, including but not limited to, certain flooring tiles and flooring mastics and Category II nonfriable, including but not limited to, asbestos cement shingles, transite boards/pipes, and wallboard could be controlled and remain in place during demolition activities.

Nonfriable ACM is defined as a material that cannot be crumbled, pulverized, or reduced to powder by hand pressure when dry. While nonfriable ACM is less dangerous to human health than friable ACM, it can become friable over time due to weather or age. RACM and Category II nonfriable ACM that has a high probability of being crumbled, pulverized, or reduced to powder during demolition or renovation must be removed before demolition begins.

During the controlled building demolition, the asbestos abatement work would be performed in accordance with the requirements of 29 CFR 1926.1101 (Asbestos Construction Standard), Ohio EPA Ohio Administrative Code (OAC) 3745-20, and 40 CFR Part 61, Subpart M. Notification of intent to raze the building would be provided to the Ohio EPA per NESHAP requirements at least 10 working days before initiating the ACM abatement activities. The notification would specify the facility owner and the selected/approved contractor, and include a summary of the project description, the planned schedule, planned waste disposal (Type II Municipal Solid Waste Landfill) location, and necessary engineering controls. NESHAP requirements would also be met for asbestos identification, adequate wetting of surfaces to be abated, lack of visible emissions, and proper packaging and labelling of waste materials for disposal.

Final air clearance samples would be collected to verify the adequacy of the abatement activities upon completion. Properly trained and equipped personnel would be used for all required work. Required notifications would be provided to the Ohio EPA and/or local oversight entities in a timely manner.

Potential disadvantages of this alternative include errors in identifying RACM, Category I and Category II ACMs which could potentially release fibers to the environment during building demolitions activities. In addition, damage to nonfriable ACM could occur during building demolition which could release fibers to the environment and Site workers. Also, increased frequency of heavy rainfall and extreme weather events (storms of unusual intensity, increased frequency, and intensity of localized flooding) that northeast Ohio has experienced in recent years could impact abatement activities. Although efforts will be made to schedule work in the dry weather months and in months less susceptible to extreme weather, the amount of precipitation over a short period of

time from one of these heavy rainfall events could cause delays in the implementation of the proposed abatement work.

Cost: Although certain nonfriable ACM could remain in place during building demolition activities, the pre-demolition hazardous materials assessment was completed in February 2023. Due to the poor building conditions, active trespassing, and vandalism at the Site and Site building, conditions of the identified ACMs are likely to have deteriorated since the February 2023 assessment. Accordingly, a cost to complete a controlled building demolition could not be calculated at this time.

This alternative would remove the identified RACM from the Site building while leaving certain ACM in place. This option does not fully meet the remediation objectives. Human health and environmental risks posed by the ACM would be partially mitigated and the impediments to Site redevelopment would be removed. This alternative does not have the greatest ability to meet the objectives of preparing the Site building for demolition.

3.3 Recommended Brownfield Cleanup Alternatives

Alternative No. 1 (No Action Alternative) would leave ACM in place, would not reduce human health or environmental risk, and would not meet the project goals. The ACM within the Site building would therefore remain an impediment for the planned Site redevelopment.

Alternative No. 2 (Complete Abatement of ACM) would meet the project objectives by mitigating human health and environmental risks posed by the ACM prior to planned demolition activities, without the requirement for future obligations or actions.

Alternative No. 3 (Controlled Building Demolition with Partial Abatement of ACM) does not fully meet the remediation objectives. Human health and environmental risks posed by the ACM would be partially mitigated and the impediments to Site redevelopment would be removed. This alternative does not have the greatest ability to meet the project objectives by mitigating human health and environmental risks posed by the ACM prior to planned demolition activities.

Alternative No. 2 is, therefore, recommended for implementation to protect human health and to enable safe redevelopment of the Site.

3.4 Green and Sustainable Remediation Measures for the Selected Alternatives

To make the selected alternatives greener or more sustainable, several techniques are planned. The most recent Best Management Practices (BMPs) issued under ASTM Standard E-2893: Standard Guide for Greener Cleanups will be used as a reference in the cleanup efforts. CCLRC will recommend that all contractors follow an idle-reduction policy and use heavy equipment with advanced emissions controls operated on ultra-low sulfur diesel. The excavation work will be completed during the dry-weather months (i.e. summertime) in order to minimize potential groundwater infiltration into work areas, thereby reducing potential dewatering needs and the amount of dewatering liquids requiring disposal/treatment. The number of mobilizations to the Site will be minimized to reduce the amount of vehicle exhaust from project vehicles and erosion control measures will be used to minimize runoff into environmentally sensitive areas.

4.0 CONCLUSIONS

The remedial alternatives were evaluated based on effectiveness in meeting the remedial objectives, ability to be implemented, cost-effectiveness, ability to meet project time constraints, and the intended future use of the Site. We consider Alternative No. 2 to be the most technically feasible, the most likely to protect human health and the environment, and a cost-effective and timely option.

We understand that CCLRC has decided to proceed with the ACM abatement and removal response actions described as Alternative No. 2. This alternative is necessary to reduce human health and environmental risks and to support demolition of the Site building.

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5.0 REFERENCES

- ASTM E2893-16e1, Standard Guide for Greener Cleanups, ASTM International, West Conshohocken, PA, 2016, www.astm.org.
- Brownfield Restoration Group, LLC. VAP AAI Phase I Environmental Site Assessment, Terrace Road Property, 13800 Terrace Road, East Cleveland, Ohio 44112. February 10, 2023.
- EA Group. Pre-Demolition Hazardous Materials Assessment, Former Apartment Building, 13800 Terrace Road, East Cleveland, Ohio 44112. February 7, 2023.
- FEMA, December 3, 2010. Flood Zone Map No. 39035C0089E <https://msc.fema.gov/portal/search#searchresultsanchor>
- USGCRP, 2018: Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II [Reidmiller, D.R., C.W. Avery, D.R. Easterling, K.F. Kunkel, K.L.M. Lewis, T.K. Maycock, and B.C. Stewart (eds.)]. U.S. Global Change Research Program, Washington, DC, USA, 1515 pp. doi: 10.7930/NCA4.2018.

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**APPENDIX A
FIGURES**





Figure 1 – Subject Property Location - 13800 Terrace Road, East Cleveland, Ohio

Notes
 USGS Quadrangle, The National Map
 Shaker Heights, OH 2019





**Figure 2 – Subject
Property Location - 13800
Terrace Road, East
Cleveland, Ohio**



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APPENDIX B
ACM SUMMARY TABLES



Table 1 Summary of Results - Former Apartment Building, 13800 Terrace Road, East Cleveland, Ohio

Group	ID # OH45193	MATERIAL DESCRIPTION	Material Type	RESULT
A	01	Plaster; Ceiling 1	M/NF2	0
A	07	Plaster; Ceiling 1	M/NF2	0
A	18	Plaster; Ceiling 1	M/NF2	0
A	27	Plaster; Ceiling 1	M/NF2	0
A	210	Plaster; Ceiling 1	M/NF2	0
B	08	Plaster; Wall 1	M/NF2	0
B	30	Plaster; Wall 1	M/NF2	0
B	211	Plaster; Wall 1	M/NF2	0
B	212	Plaster; Wall 1	M/NF2	0
C	02	Hard Fitting on Fiberglass Line	T	0,B
C	04	Hard Fitting on Fiberglass Line	T	[+]
C	26	Hard Fitting on Fiberglass Line	T	0,B
C	36	Hard Fitting on Fiberglass Line	T	[+]
D	05	Fiberglass Insulation w/ Bituminous Cover	T	0
D	28	Fiberglass Insulation w/ Bituminous Cover	T	0
D	235	Fiberglass Insulation w/ Bituminous Cover	T	0
E	11	Texture Coating	M/NF2	0
E	12	Texture Coating	M/NF2	0
E	72	Texture Coating	M/NF2	0
E	106	Texture Coating	M/NF2	0
E	141	Texture Coating	M/NF2	0
F	03	Flooring Mastic, residual	M/NF1	[+]
F	25	Flooring Mastic, residual	M/NF1	0,B
F	41	Flooring Mastic, residual	M/NF1	[+]
G	06	Drywall System 1	M/NF2	[+],B
G	29	Drywall System 1	M/NF2	0
H	09	12"x12" Floor Tile & mastic; Tan w/ brown specks	M/NF1	[+][FT]
H	10	12"x12" Floor Tile & mastic; Tan w/ brown specks	M/NF1	[+][FT]
I	13	2'x2' Ceiling Panel; Textured	M	0
I	14	2'x2' Ceiling Panel; Textured	M	0
J	15	4" Cove Base & mastic; Brown	M/NF1	0
J	107	4" Cove Base & mastic; Brown	M/NF1	0
K	16	12"x12" Floor Tile & mastic; Yellow & gray patterned	M/NF1	0
K	17	12"x12" Floor Tile & mastic; Yellow & gray patterned	M/NF1	0
L	19	1'x1' Ceiling Tile; Fissured	M	0
L	20	1'x1' Ceiling Tile; Fissured	M	0
M	64	12"x12" Floor Tile & mastic; Blue	M/NF1	0
M	92	12"x12" Floor Tile & mastic; Blue	M/NF1	0
M	183	12"x12" Floor Tile & mastic; Blue	M/NF1	0

Table 1 Summary of Results - Former Apartment Building, 13800 Terrace Road, East Cleveland, Ohio

Group	ID # OH45193	MATERIAL DESCRIPTION	Material Type	RESULT
N	21	12"x12" Floor Tile & mastic; Green	M/NF1	[+][M],B
N	22	12"x12" Floor Tile & mastic; Green	M/NF1	[+][M],B
O	23	4" Cove Base & mastic; Black	M/NF1	0
O	24	4" Cove Base & mastic; Black	M/NF1	0
P	37	4" Cove Base & mastic; Light Gray	M/NF1	0
P	38	4" Cove Base & mastic; Light Gray	M/NF1	0
Q	69	Aircell Pipe Insulation	T	[+]
Q	70	Aircell Pipe Insulation	T	[+]
Q	71	Aircell Pipe Insulation	T	[+]
R	31	Refractory Brick & mortar	M/NF2	0
R	32	Refractory Brick & mortar	M/NF2	0
S	33	Boiler Caulk	M/NF2	0
S	34	Boiler Caulk	M/NF2	0
S	35	Boiler Caulk	M/NF2	0
T	40	Plaster; Wall 2	M/NF2	0
T	42	Plaster; Wall 2	M/NF2	0
T	43	Plaster; Wall 2	M/NF2	0
T	52	Plaster; Wall 2	M/NF2	0
T	54	Plaster; Wall 2	M/NF2	0
T	56	Plaster; Wall 2	M/NF2	0
T	213	Plaster; Wall 2	M/NF2	0
U	39	Plaster; Ceiling 2	M/NF2	0
U	44	Plaster; Ceiling 2	M/NF2	0
U	51	Plaster; Ceiling 2	M/NF2	0
U	55	Plaster; Ceiling 2	M/NF2	0
U	214	Plaster; Ceiling 2	M/NF2	0
V	45	Texture Coating	M/NF2	0
V	46	Texture Coating	M/NF2	0
V	155	Texture Coating	M/NF2	0
V	178	Texture Coating	M/NF2	0
W	47	Carpet Mastic	M/NF1	U
W	63	Carpet Mastic	M/NF1	0
W	154	Carpet Mastic	M/NF1	0
W	174	Carpet Mastic	M/NF1	0
X	48	12"x12" Floor Tile & mastic; Red	M/NF1	0
X	78	12"x12" Floor Tile & mastic; Red	M/NF1	0
Y	49	Linoleum Flooring; Cream	M/NF1	0
Y	50	Linoleum Flooring; Cream	M/NF1	0
Y	53	Linoleum Flooring; Cream	M/NF1	0

Table 1 Summary of Results - Former Apartment Building, 13800 Terrace Road, East Cleveland, Ohio

Group	ID # OH45193	MATERIAL DESCRIPTION	Material Type	RESULT
Z	57	9"x9" Floor Tile & mastic; Gray w/ cream streaks	M/NF1	[+],B
Z	58	9"x9" Floor Tile & mastic; Gray w/ cream streaks	M/NF1	[+],B
Z	167	9"x9" Floor Tile & mastic; Gray w/ cream streaks	M/NF1	[+],B
Z	181	9"x9" Floor Tile & mastic; Gray w/ cream streaks	M/NF1	[+],B
AA	60	Plaster; Wall 3	M/NF2	0
AA	62	Plaster; Wall 3	M/NF2	0
AA	66	Plaster; Wall 3	M/NF2	0
AA	68	Plaster; Wall 3	M/NF2	0
AA	215	Plaster; Wall 3	M/NF2	0
AB	59	Plaster; Ceiling 3	M/NF2	0
AB	61	Plaster; Ceiling 3	M/NF2	0
AB	65	Plaster; Ceiling 3	M/NF2	0
AB	67	Plaster; Ceiling 3	M/NF2	0
AB	216	Plaster; Ceiling 3	M/NF2	0
AC	73	Plaster; Wall 4	M/NF2	0
AC	76	Plaster; Wall 4	M/NF2	0
AC	81	Plaster; Wall 4	M/NF2	0
AC	84	Plaster; Wall 4	M/NF2	0
AC	217	Plaster; Wall 4	M/NF2	0
AD	74	Plaster; Ceiling 4	M/NF2	0
AD	75	Plaster; Ceiling 4	M/NF2	0
AD	82	Plaster; Ceiling 4	M/NF2	0
AD	83	Plaster; Ceiling 4	M/NF2	0
AD	218	Plaster; Ceiling 4	M/NF2	0
AE	77	Wall Mastic; Tan	M/NF2	0
AE	89	Wall Mastic; Tan	M/NF2	0
AE	158	Wall Mastic; Tan	M/NF2	0
AE	175	Wall Mastic; Tan	M/NF2	0
AE	223	Wall Mastic; Tan	M/NF2	0
AE	228	Wall Mastic; Tan	M/NF2	0
AF	79	Elevator Door Core	M	[+]
AF	116	Elevator Door Core	M	[+]
AG	80	Wall Mastic; White	M/NF2	0
AG	100	Wall Mastic; White	M/NF2	0
AH	88	Plaster; Wall 5	M/NF2	0
AH	91	Plaster; Wall 5	M/NF2	0
AH	95	Plaster; Wall 5	M/NF2	0
AH	97	Plaster; Wall 5	M/NF2	0
AH	219	Plaster; Wall 5	M/NF2	0



Table 1 Summary of Results - Former Apartment Building, 13800 Terrace Road, East Cleveland, Ohio

Group	ID # OH45193	MATERIAL DESCRIPTION	Material Type	RESULT
AI	87	Plaster; Ceiling 5	M/NF2	0
AI	90	Plaster; Ceiling 5	M/NF2	0
AI	94	Plaster; Ceiling 5	M/NF2	0
AI	96	Plaster; Ceiling 5	M/NF2	0
AI	220	Plaster; Ceiling 5	M/NF2	0
AJ	85	Ceramic Tile & mastic	M/NF2	0
AJ	86	Ceramic Tile & mastic	M/NF2	0
AK	93	4" Cove Base & mastic; Blue	M/NF1	0
AK	115	4" Cove Base & mastic; Blue	M/NF1	0
AK	182	4" Cove Base & mastic; Blue	M/NF1	0
AL	99	Plaster; Wall 6	M/NF2	0
AL	102	Plaster; Wall 6	M/NF2	0
AL	104	Plaster; Wall 6	M/NF2	0
AL	150	Plaster; Wall 6	M/NF2	0
AL	221	Plaster; Wall 6	M/NF2	0
AM	98	Plaster; Ceiling 6	M/NF2	0
AM	101	Plaster; Ceiling 6	M/NF2	0
AM	103	Plaster; Ceiling 6	M/NF2	0
AM	105	Plaster; Ceiling 6	M/NF2	0
AM	222	Plaster; Ceiling 6	M/NF2	0
AN	108	Plaster; Wall 7	M/NF2	0
AN	109	Plaster; Wall 7	M/NF2	0
AN	111	Plaster; Wall 7	M/NF2	0
AN	113	Plaster; Wall 7	M/NF2	0
AN	224	Plaster; Wall 7	M/NF2	0
AO	110	Plaster; Ceiling 7	M/NF2	0
AO	112	Plaster; Ceiling 7	M/NF2	0
AO	114	Plaster; Ceiling 7	M/NF2	0
AO	151	Plaster; Ceiling 7	M/NF2	0
AO	225	Plaster; Ceiling 7	M/NF2	0
AP	117	Plaster; Wall 8	M/NF2	0
AP	119	Plaster; Wall 8	M/NF2	0
AP	121	Plaster; Wall 8	M/NF2	0
AP	123	Plaster; Wall 8	M/NF2	0
AP	226	Plaster; Wall 8	M/NF2	0
AQ	118	Plaster; Ceiling 8	M/NF2	0
AQ	120	Plaster; Ceiling 8	M/NF2	0
AQ	122	Plaster; Ceiling 8	M/NF2	0
AQ	124	Plaster; Ceiling 8	M/NF2	0
AQ	227	Plaster; Ceiling 8	M/NF2	0

Table 1 Summary of Results - Former Apartment Building, 13800 Terrace Road, East Cleveland, Ohio

Group	ID # OH45193	MATERIAL DESCRIPTION	Material Type	RESULT
AR	125	Plaster; Wall 9	M/NF2	0
AR	127	Plaster; Wall 9	M/NF2	0
AR	129	Plaster; Wall 9	M/NF2	0
AR	131	Plaster; Wall 9	M/NF2	0
AR	229	Plaster; Wall 9	M/NF2	0
AS	126	Plaster; Ceiling 9	M/NF2	0
AS	128	Plaster; Ceiling 9	M/NF2	0
AS	130	Plaster; Ceiling 9	M/NF2	0
AS	132	Plaster; Ceiling 9	M/NF2	0
AS	230	Plaster; Ceiling 9	M/NF2	0
AT	133	Plaster; Wall 10	M/NF2	0
AT	135	Plaster; Wall 10	M/NF2	0
AT	137	Plaster; Wall 10	M/NF2	0
AT	139	Plaster; Wall 10	M/NF2	0
AT	231	Plaster; Wall 10	M/NF2	0
AU	134	Plaster; Ceiling 10	M/NF2	0
AU	136	Plaster; Ceiling 10	M/NF2	0
AU	138	Plaster; Ceiling 10	M/NF2	0
AU	140	Plaster; Ceiling 10	M/NF2	0
AU	232	Plaster; Ceiling 10	M/NF2	0
AV	142	Plaster; Wall 11	M/NF2	0
AV	144	Plaster; Wall 11	M/NF2	0
AV	146	Plaster; Wall 11	M/NF2	0
AV	148	Plaster; Wall 11	M/NF2	0
AV	233	Plaster; Wall 11	M/NF2	0
AW	143	Plaster; Ceiling 11	M/NF2	0
AW	145	Plaster; Ceiling 11	M/NF2	0
AW	147	Plaster; Ceiling 11	M/NF2	0
AW	149	Plaster; Ceiling 11	M/NF2	0
AW	234	Plaster; Ceiling 11	M/NF2	0
AX	206	Window, Door, Vent Caulking; Gray	M/NF2	[+],B
AX	207	Window, Door, Vent Caulking; Gray	M/NF2	[+],B
AY	208	Transite Pipe	M/NF2	[+]
AY	209	Transite Pipe	M/NF2	[+]
AZ	Assumed	Vapor Barrier; Building	M/NF1	[+]
BA	Assumed	Vapor Barrier; Garage	M/NF1	[+]



Table 1 Summary of Results - Former Apartment Building, 13800 Terrace Road, East Cleveland, Ohio

Group	ID # OH45193	MATERIAL DESCRIPTION	Material Type	RESULT
BB	152	Plaster; Wall 12	M/NF2	0
BB	156	Plaster; Wall 12	M/NF2	0
BB	159	Plaster; Wall 12	M/NF2	0
BB	161	Plaster; Wall 12	M/NF2	0
BB	163	Plaster; Wall 12	M/NF2	0
BB	165	Plaster; Wall 12	M/NF2	0
BB	168	Plaster; Wall 12	M/NF2	0
BB	170	Plaster; Wall 12	M/NF2	0
BB	172	Plaster; Wall 12	M/NF2	0
BC	153	Plaster; Ceiling 12	M/NF2	0
BC	157	Plaster; Ceiling 12	M/NF2	0
BC	160	Plaster; Ceiling 12	M/NF2	0
BC	162	Plaster; Ceiling 12	M/NF2	0
BC	164	Plaster; Ceiling 12	M/NF2	0
BC	166	Plaster; Ceiling 12	M/NF2	0
BC	169	Plaster; Ceiling 12	M/NF2	0
BC	171	Plaster; Ceiling 12	M/NF2	0
BC	173	Plaster; Ceiling 12	M/NF2	0
BD	176	Plaster; Wall 13	M/NF2	0
BD	179	Plaster; Wall 13	M/NF2	0
BD	184	Plaster; Wall 13	M/NF2	0
BD	186	Plaster; Wall 13	M/NF2	0
BD	188	Plaster; Wall 13	M/NF2	0
BD	190	Plaster; Wall 13	M/NF2	0
BE	177	Plaster; Ceiling 13	M/NF2	0
BE	180	Plaster; Ceiling 13	M/NF2	0
BE	185	Plaster; Ceiling 13	M/NF2	0
BE	187	Plaster; Ceiling 13	M/NF2	0
BE	189	Plaster; Ceiling 13	M/NF2	0
BE	191	Plaster; Ceiling 13	M/NF2	0
BF	199	Plaster; Wall Stairs	M/NF2	0
BF	203	Plaster; Wall Stairs	M/NF2	0
BF	205	Plaster; Wall Stairs	M/NF2	0
BG	198	Plaster; Ceiling Stairs	M/NF2	0
BG	202	Plaster; Ceiling Stairs	M/NF2	0
BG	204	Plaster; Ceiling Stairs	M/NF2	0
BH	196	Elevator Brake Shoe	M	[+]
BH	197	Elevator Brake Shoe	M	[+]



Table 1 Summary of Results - Former Apartment Building, 13800 Terrace Road, East Cleveland, Ohio

Group	ID #	MATERIAL DESCRIPTION	Material Type	RESULT
BI	192	Roofing Materials	M/NF1	0
BI	193	Roofing Materials	M/NF1	0
BJ	194	Roof Flashing	M/NF1	0
BJ	195	Roof Flashing	M/NF1	0
BK	200	2'x4' Ceiling Panel; Pockmark, Pinhole	M	0
BK	201	2'x4' Ceiling Panel; Pockmark, Pinhole	M	0
BL	Assumed	Water Proofing; Garage	M/NF1	[+]

Group = Homogeneous Group identification

Material Type: S = Surfacing

T = Thermal System Insulation

M = Miscellaneous

NF1 = Non-Friable Category I

NF2 = Non-Friable Category II

Result: 0 = non-ACM

[+] = ACM

B = verified by layering & point-counting

[+][FT] = Floor Tile ACM; Mastic non-ACM

[+][M] = Floor Tile non-ACM; Mastic ACM

(Group as a whole considered ACM for removal purposes)

0,B = trace asbestos; non-ACM by EPA but OSHA may apply

0,B[M] = trace asbestos in mastic layer, none in floor tile or ceiling tile

