

Federal law (24 CFR part 35 and 40 CFR par 745) requires sellers and lessors of residential units constructed prior to 1978, except housing for the elderly or persons with disabilities (unless any child who is less than six year of age resides or is expected to reside in such housing) or any zero-bedroom dwelling to disclose and provide a copy of this report to new purchasers or lessees before they become obligated under a lease or sales contract. Property owners and sellers are also required to distribute an educational pamphlet approved by the United States environmental protection agency and include standard warning language in leases or sales contracts to ensure that parents have the information they need to protect children from lead-based paint hazards.

Visual Assessment, Lead-Based Paint Inspection and Stabilization Plan

3009 Bowman Avenue

Austin, TX 78703

Date of Inspection: March 7, 2019

<p><u>Prepared and Submitted by:</u></p> <p>A&W Environmental Services, LLP 3912 Tumbril Lane Plano, TX 75023 Telephone (214) 460-1513</p>	<p><u>Reviewed by:</u></p> <p>David Alavi </p>
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March 7, 2019

Re: Lead-Based Paint Inspection Report for
Single Family Property Located at:

**3009 Bowman Avenue
Austin, TX 78703**

Dear Client:

Please find enclosed the lead inspection report for the single-family home located at **3009 Bowman Avenue, Austin, TX 78703**. The XRF survey was performed within the current acceptable industry guidelines, Housing and Urban Development (HUD) Guidelines Chapter 7 (revised 1997) and Texas regulations.

During a visual assessment of the property A&W Environmental Services, LLP (License number: 2110404, Expiration date: February 17, 2020), observed that deteriorated paint was present at the property. In association with those findings, we performed a Lead-Based Paint (LBP) Inspection and have determined that all surfaces containing lead-based paint are intact and hence no stabilization plan is required.

A&W Environmental Services, LLP used a Niton XLP300A X-Ray fluorescence (XRF) serial# 12249 with a Cd-109 sourced on August 2014 to sample paint for lead based paint at the property.

Licensed Texas Lead Risk Assessor, Mohammad Alavi (License number: 2070687 - Expiration date: December 12, 2020) performed the inspection.

If you have any questions or concerns regarding this report, please feel free to contact us at (214) 460-1513.

Sincerely,
Mo Alavi
Project Manager

II Scope of Inspection

A. Building Background

The property located at **3009 Bowman Avenue, Austin, TX 78703** is a single-family home (one unit).

B. Preface

A&W Environmental Services, LLP was authorized by *the client* to perform lead-based paint testing of the above referenced single-family home to determine the possible presence, condition, location and amount of lead paint. The testing was conducted on March 7, 2019.

C. Training

All inspectors utilized by A&W Environmental Services, LLP have EPA/State licensure and are licensed Lead Risk Assessors, or Inspectors who have passed the "HUD Visual Assessment Course". All technicians utilized by A&W Environmental Services, LLP have also been trained in the use, calibration and maintenance of the X-Ray Fluorescence (XRF) equipment they currently use, along with necessary principles of Radiation Safety.

D. Equipment

A Niton XLP300A X-Ray fluorescence (XRF) lead paint analyzer, serial # 12249, was used on this job.

E. Inspection Company

The inspection was performed by an inspector employed by A&W Environmental services, LLP, 3912 Tumbri Lane, Plano, TX 75023, telephone Number (214) 460-1513.

F. Methods

The calibration of the NITON XLP 300 X-Ray fluorescence (XRF) is done in accordance with the Performance Characteristic Sheet (PCS) for this instrument. These XRF instruments are calibrated using a calibration standard block of known lead content. Three calibration readings are taken before and after each property is tested to insure manufacturer's standards are met. If the inspection is longer than 4 hours, a set of 3 calibration readings must be taken before the 4 hours expires, and then an additional three calibration readings taken at the end of the inspection. If for any reason the instruments are not maintaining a consistent calibration reading within the manufacturer's standards for performance on the calibration block supplied by the manufacturer, manufacturer's recommendations are used to bring the instrument into calibration. If the instrument cannot be brought back into calibration, it is taken off the site and sent back to the manufacturer for repair and/or re-calibration.

G. Findings

3009 Bowman Avenue
Austin, TX 78703

Summary and Distribution Table

Number of Positives	12
Total number of Readings	146
Percent Positive	8.22%

Interior Components

XRF Reading	Room Number	Side	Component	Substrate	Color	Condition	Lead Conc. (mg/cm ²)
56	SHOP 3	A	DOOR	WOOD	WHITE	INTACT	1
57	SHOP 3	A	DOOR JAMB	WOOD	WHITE	INTACT	1.9
58	SHOP 3	A	DOOR FRAME	WOOD	WHITE	INTACT	1
65	BATH 4	C	WINDOW SASH	WOOD	WHITE	INTACT	1.1
66	BATH 4	C	WINDOW CASING	WOOD	WHITE	INTACT	2.1
67	BATH 4	C	WINDOW SILL	WOOD	WHITE	INTACT	1
90	BEDROOM 6 (LOLA)		CEILING	DRYWALL	WHITE	INTACT	14.5
98	BEDROOM 6 (LOLA)	B	WINDOW CASING	WOOD	WHITE	INTACT	2.8
99	BEDROOM 6 (LOLA)	B	WINDOW SILL	WOOD	WHITE	INTACT	2.7
101	BEDROOM 6 (LOLA)	A	DOOR JAMB	WOOD	WHITE	INTACT	1
102	BEDROOM 6 (LOLA)	A	DOOR FRAME	WOOD	WHITE	INTACT	3.4
136	KITCHEN 9	A	BASEBOARD	WOOD	WHITE	INTACT	1.3

Inaccessible Areas

INTERIOR/EXTERIOR INACCESSIBLE AREAS TABLE		
Location	Component	Reason not tested or not accessible/Notes
None		

H. Conclusions

The components listed in Section 3.4 were found “positive” for lead, as defined by the EPA and HUD as containing lead in concentrations equal to or greater than 1.0 mg/cm². All surfaces containing lead-based paint are intact and hence do not require a stabilization plan.

According to Chapter 7 HUD guidelines (Second Edition, July 2012), if one testing combination (i.e. window, door) is positive for lead in an interior or exterior room equivalent, then all other similar testing combinations in those areas are also assumed to be positive for lead. Likewise, the same is true for negative readings. All inaccessible areas are assumed to be positive, even though they were not tested. Any inaccessible areas encountered during the LBP evaluation are noted in Section 3.2.

Given that the lead evaluation results indicated the presence of lead-based paint, the prospective owner may wish to obtain, at the prospective owner’s expense, additional services of a lead-based paint risk assessor, certified for the State in which the property is located, to help understand the positive results. This person would review the report provided by the M & M and might re-evaluate any area(s) in question and/or additional areas and might make additional recommendations about lead hazard control actions.

If there were a small number of results with positive lead-based paint, the prospective owner may wish to obtain additional services from a lead-based paint risk assessor to help explain how to address the limited number of positive findings in developing the paint stabilization plan that would result in the reduction of hazards.

This evaluation was completed in accordance with Lead Safe Housing Rule 24 CFR Part 35 subpart F as amended (2004). The sampling results are presented in Appendix A and notes are presented in Appendix B. The outline of dwelling is drafted in Appendix C. Appendix D contains photographs of the property. Appendix E contains the personal certifications of the inspector. Appendix F contains the PCS sheets for the XRF instrument and Appendix G contains a glossary of terms. HUD, for whom this report is prepared, has the option to evaluate the quality of this LBP inspection and visual assessment per Chapter 7 of the HUD guidelines (Second Edition, July 2012). These evaluation methods can include direct observation, immediate provision of results, repeated testing, and time-and-motion analysis.

Those components which were found to contain LBP, and which were in intact condition should be monitored by the owner of the dwelling. In addition, some painted surfaces may contain levels of lead below 1.0 mg/cm²; these components could create lead dust or lead-contaminated soil hazards if the paint is turned into dust by abrasion, scraping, sanding or friction. If conditions of intact paint surfaces become destabilized, these conditions will need to be addressed in the future. If any construction or modernization work is done on the premises, this report should be given to the contractors, as well as to any future tenants.

In compliance with HUD's Final Rule, potential hazards resulting from LBP must be subjected to corrective action to stabilize all deteriorated LBP in housing built before 1978, unless the property is exempt. Paint stabilization repairs any defect in the substrate and/or in building components that are causing the paint deterioration, removes all loose paint and other material from the surface to be treated utilizing lead-safe work practices, and, in most cases, applies a new protective coating or paint. Any stabilization/construction activities which affect the existing paint films (including sanding and demolition) must be initiated by workers who have received proper training in the handling of lead-contaminated materials.

Upon completion of paint stabilization activities, HUD requires a clearance examination to determine that the paint stabilization efforts were performed adequately. A clearance examination will include a visual assessment of all surfaces that were determined to be defective during the initial evaluation, and collection of dust and soil composite samples. It should be determined that the deteriorated paint surfaces have been eliminated and that no settled dust hazards or paint chips exist in the interior or exterior. The clearance report must be signed by a Certified/Licensed Lead Inspector or Risk Assessor.

The HUD housing management company will determine whether lead hazard reduction will be performed at the property.

DISCLOSURE RESPONSIBILITY

A copy of this report must be provided to new lessees (tenants) and purchasers of this property under Federal Law (24 CFR part 35 and 40 CFR part 745) before they become obligated under a lease or sales contract. The complete report must also be provided to new purchasers and it must be made available to new tenants. Landlords (lessors) and sellers are also required to distribute an educational pamphlet and include standard warning language in their leases or sales contracts to ensure that children and pregnant women are protected from LBP hazards.

The Occupational Safety and Health Administration (OSHA) Lead in Construction Standard states that “negative” readings (i.e. those below the HUD/EPA definition of what constitutes LBP [1.0 mg/cm²]) **do not** relieve contractors from performing exposure assessments (personal air monitoring) on their employees per the OSHA Lead Standard and should not be interpreted as lead free. Although a reading may indicate “negative”, airborne lead concentrations still may exceed the OSHA Action Level or the OSHA Permissible Exposure Limit (PEL) depending on the work activity.

DISCLAIMER

This is our report of a visual survey, and X-Ray Fluorescence (XRF) analysis of the readily accessible areas of this building and tested component. The presence or absence of LBP or LBP hazards applies only to the tested or assessed surfaces on the date of the field visit and it should be understood that conditions may change due to deterioration or maintenance. The results and material conditions noted within this report were accurate at the time of the evaluation and in no way reflect the conditions at the property after the date of the evaluation. No other environmental concerns or conditions were addressed during this evaluation.

Paint Stabilization Recommendations and Cost Estimate

3009 Bowman Avenue, Austin, TX 78703

A&W Environmental Services, LLP recommends no remedial action at this time.

IV DISCLOSURE RESPONSIBILITY AND DISCLAIMER

Disclosure Responsibility

A copy of this report must be provided to new lessees (tenants) and purchasers of this property under Federal Law (24 CFR part 35 and 40 CFR part 745) before they become obligated under a lease or sales contract. The complete report must also be provided to new purchasers and it must be made available to new tenants. Landlords (lessors) and sellers are also required to distribute an educational pamphlet and include standard warning language in their leases or sales contracts to ensure that parents have the information they need to protect their children from lead-based paint hazards.

Disclaimer

This is our report of a visual survey, and X-Ray Fluorescence (XRF) analysis of the readily accessible areas of this building and tested component. The presence or absence of lead-based paint or lead-based paint hazards applies only to the tested or assessed surfaces on the date of the field visit and it should be understood that conditions noted within this report were accurate at the time of the inspection and in no way, reflect the conditions at the property after the date of the inspection.

V: XRF Results

Reading Number	Room Location	Address	Room Number	Side	Structure	Substrate	Color	Condition	Sq. Ft.	PbC	Result
1		3009 BOWMAN, AUSTIN, TX		CALIBRATE						1	Positive
2		3009 BOWMAN, AUSTIN, TX		CALIBRATE						1.1	Positive
3		3009 BOWMAN, AUSTIN, TX		CALIBRATE						1	Positive
4	INTERIOR	3009 BOWMAN, AUSTIN, TX	LIVING 1		CEILING	DRYWALL	WHITE	INTACT		0	Negative
5	INTERIOR	3009 BOWMAN, AUSTIN, TX	LIVING 1	A	WALL	DRYWALL	WHITE	INTACT		0	Negative
6	INTERIOR	3009 BOWMAN, AUSTIN, TX	LIVING 1	B	WALL	DRYWALL	WHITE	INTACT		0	Negative
7	INTERIOR	3009 BOWMAN, AUSTIN, TX	LIVING 1	C	WALL	DRYWALL	WHITE	INTACT		0.05	Negative
8	INTERIOR	3009 BOWMAN, AUSTIN, TX	LIVING 1	D	WALL	DRYWALL	WHITE	INTACT		0	Negative
9	INTERIOR	3009 BOWMAN, AUSTIN, TX	LIVING 1	D	FIRE PLACE	DRYWALL	WHITE	INTACT		0.17	Negative
10	INTERIOR	3009 BOWMAN, AUSTIN, TX	LIVING 1	D	DOOR JAMB	WOOD	WHITE	INTACT		0.13	Negative
11	INTERIOR	3009 BOWMAN, AUSTIN, TX	LIVING 1	D	DOOR FRAME	WOOD	WHITE	INTACT		0.01	Negative
12	INTERIOR	3009 BOWMAN, AUSTIN, TX	LIVING 1	C	CHAIR RAIL	WOOD	WHITE	INTACT		0	Negative
13	INTERIOR	3009 BOWMAN, AUSTIN, TX	LIVING 1	C	BASEBOARD	WOOD	WHITE	INTACT		0.4	Negative
14	INTERIOR	3009 BOWMAN, AUSTIN, TX	LIVING 1	C	WINDOW SASH	WOOD	WHITE	DETERIORATED		0.4	Negative
15	INTERIOR	3009 BOWMAN, AUSTIN, TX	LIVING 1	C	WINDOW CASING	WOOD	WHITE	DETERIORATED		0.28	Negative
16	INTERIOR	3009 BOWMAN, AUSTIN, TX	LIVING 1	C	WINDOW SILL	WOOD	WHITE	DETERIORATED		0.5	Negative
17	INTERIOR	3009 BOWMAN, AUSTIN, TX	LIVING 1	D	DOOR JAMB	WOOD	WHITE	INTACT		0	Negative
18	INTERIOR	3009 BOWMAN, AUSTIN, TX	LIVING 1	D	DOOR FRAME	WOOD	WHITE	INTACT		0.09	Negative
19	INTERIOR	3009 BOWMAN, AUSTIN, TX	LIVING 1	B	DOOR	WOOD	WHITE	INTACT		0.05	Negative
20	INTERIOR	3009 BOWMAN, AUSTIN, TX	LIVING 1	B	DOOR JAMB	WOOD	WHITE	INTACT		0.2	Negative
21	INTERIOR	3009 BOWMAN, AUSTIN, TX	LIVING 1	B	DOOR FRAME	WOOD	WHITE	INTACT		0.3	Negative
22	INTERIOR	3009 BOWMAN, AUSTIN, TX	BEDROOM 2		CEILING	DRYWALL	WHITE	INTACT		0	Negative
23	INTERIOR	3009 BOWMAN, AUSTIN, TX	BEDROOM 2	A	WALL	DRYWALL	WHITE	INTACT		0	Negative
24	INTERIOR	3009 BOWMAN, AUSTIN, TX	BEDROOM 2	B	WALL	DRYWALL	WHITE	INTACT		0	Negative
25	INTERIOR	3009 BOWMAN, AUSTIN, TX	BEDROOM 2	C	WALL	DRYWALL	WHITE	INTACT		0	Negative
26	INTERIOR	3009 BOWMAN, AUSTIN, TX	BEDROOM 2	D	WALL	DRYWALL	WHITE	INTACT		0.06	Negative
27	INTERIOR	3009 BOWMAN, AUSTIN, TX	BEDROOM 2	A	CROWN MOLDING	WOOD	WHITE	INTACT		0	Negative
28	INTERIOR	3009 BOWMAN, AUSTIN, TX	BEDROOM 2	A	BASEBOARD	WOOD	WHITE	INTACT		0.3	Negative
29	INTERIOR	3009 BOWMAN, AUSTIN, TX	BEDROOM 2	A	WINDOW SASH	WOOD	WHITE	INTACT		0.17	Negative

Reading Number	Room Location	Address	Room Number	Side	Structure	Substrate	Color	Condition	Sq. Ft.	PbC	Result
30	INTERIOR	3009 BOWMAN, AUSTIN, TX	BEDROOM 2	A	WINDOW CASING	WOOD	WHITE	INTACT		0.28	Negative
31	INTERIOR	3009 BOWMAN, AUSTIN, TX	BEDROOM 2	A	WINDOW SILL	WOOD	WHITE	INTACT		0.01	Negative
32	INTERIOR	3009 BOWMAN, AUSTIN, TX	BEDROOM 2	A	CLOSET DOOR	WOOD	WHITE	INTACT		0.2	Negative
33	INTERIOR	3009 BOWMAN, AUSTIN, TX	BEDROOM 2	A	CLOSET DR JAMB	WOOD	WHITE	INTACT		0.01	Negative
34	INTERIOR	3009 BOWMAN, AUSTIN, TX	BEDROOM 2	A	CLOSET DR FRAME	WOOD	WHITE	INTACT		0.17	Negative
35	INTERIOR	3009 BOWMAN, AUSTIN, TX	BEDROOM 2	D	DOOR JAMB	WOOD	WHITE	INTACT		0.18	Negative
36	INTERIOR	3009 BOWMAN, AUSTIN, TX	BEDROOM 2	D	DOOR FRAME	WOOD	WHITE	INTACT		0.3	Negative
37	INTERIOR	3009 BOWMAN, AUSTIN, TX	BEDROOM 2	D	DOOR	WOOD	WHITE	INTACT		0.12	Negative
38	INTERIOR	3009 BOWMAN, AUSTIN, TX	BEDROOM 2	D	DOOR JAMB	WOOD	WHITE	INTACT		0.5	Negative
39	INTERIOR	3009 BOWMAN, AUSTIN, TX	BEDROOM 2	D	DOOR FRAME	WOOD	WHITE	INTACT		0.25	Negative
40	INTERIOR	3009 BOWMAN, AUSTIN, TX	SHOP 3		CEILING	DRYWALL	LT BLUE	INTACT		0	Negative
41	INTERIOR	3009 BOWMAN, AUSTIN, TX	SHOP 3	A	WALL	WOOD	WHITE	INTACT		0	Negative
42	INTERIOR	3009 BOWMAN, AUSTIN, TX	SHOP 3	B	WALL	WOOD	WHITE	INTACT		0.03	Negative
43	INTERIOR	3009 BOWMAN, AUSTIN, TX	SHOP 3	C	WALL	WOOD	WHITE	INTACT		0	Negative
44	INTERIOR	3009 BOWMAN, AUSTIN, TX	SHOP 3	D	WALL	WOOD	WHITE	INTACT		0.04	Negative
45	INTERIOR	3009 BOWMAN, AUSTIN, TX	SHOP 3	B	BASEBOARD	WOOD	WHITE	INTACT		0.12	Negative
46	INTERIOR	3009 BOWMAN, AUSTIN, TX	SHOP 3	B	WINDOW SASH	WOOD	WHITE	INTACT		0	Negative
47	INTERIOR	3009 BOWMAN, AUSTIN, TX	SHOP 3	B	WINDOW CASING	WOOD	WHITE	INTACT		0	Negative
48	INTERIOR	3009 BOWMAN, AUSTIN, TX	SHOP 3	B	WINDOW SILL	WOOD	WHITE	INTACT		0.01	Negative
49	INTERIOR	3009 BOWMAN, AUSTIN, TX	SHOP 3	B	CROWN MOLDING	WOOD	WHITE	INTACT		0	Negative
50	INTERIOR	3009 BOWMAN, AUSTIN, TX	SHOP 3	B	CLOSET DR JAMB	WOOD	WHITE	INTACT		0.04	Negative
51	INTERIOR	3009 BOWMAN, AUSTIN, TX	SHOP 3	B	CLOSET DR FRAME	WOOD	WHITE	INTACT		0.02	Negative
52	INTERIOR	3009 BOWMAN, AUSTIN, TX	SHOP 3	D	DOOR	WOOD	WHITE	INTACT		0	Negative
53	INTERIOR	3009 BOWMAN, AUSTIN, TX	SHOP 3	D	DOOR JAMB	WOOD	WHITE	INTACT		0	Negative
54	INTERIOR	3009 BOWMAN, AUSTIN, TX	SHOP 3	D	DOOR FRAME	WOOD	WHITE	INTACT		0.07	Negative
55	INTERIOR	3009 BOWMAN, AUSTIN, TX	SHOP 3	D	THRESHOLD	WOOD	WHITE	INTACT		0.5	Negative
56	INTERIOR	3009 BOWMAN, AUSTIN, TX	SHOP 3	A	DOOR	WOOD	WHITE	INTACT		1	Positive
57	INTERIOR	3009 BOWMAN, AUSTIN, TX	SHOP 3	A	DOOR JAMB	WOOD	WHITE	INTACT		1.9	Positive
58	INTERIOR	3009 BOWMAN, AUSTIN, TX	SHOP 3	A	DOOR FRAME	WOOD	WHITE	INTACT		1	Positive
59	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 4		CEILING	DRYWALL	WHITE	INTACT		0	Negative
60	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 4	A	WALL	DRYWALL	WHITE	INTACT		0	Negative
61	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 4	B	WALL	DRYWALL	WHITE	INTACT		0.13	Negative
62	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 4	C	WALL	DRYWALL	WHITE	INTACT		0	Negative

Reading Number	Room Location	Address	Room Number	Side	Structure	Substrate	Color	Condition	Sq. Ft.	PbC	Result
63	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 4	D	WALL	DRYWALL	WHITE	INTACT		0	Negative
64	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 4	C	BASEBOARD	WOOD	WHITE	INTACT		0	Negative
65	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 4	C	WINDOW SASH	WOOD	WHITE	INTACT		1.1	Positive
66	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 4	C	WINDOW CASING	WOOD	WHITE	INTACT		2.1	Positive
67	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 4	C	WINDOW SILL	WOOD	WHITE	INTACT		1	Positive
68	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 4	C	CROWN MOLDING	WOOD	WHITE	INTACT		0.04	Negative
69	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 4	D	CABINET	WOOD	WHITE	INTACT		0	Negative
70	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 4	D	CABINET	WOOD	WHITE	INTACT		0	Negative
71	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 4	B	DOOR	WOOD	WHITE	INTACT		0.19	Negative
72	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 4	B	DOOR JAMB	WOOD	WHITE	INTACT		0.17	Negative
73	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 4	B	DOOR FRAME	WOOD	WHITE	INTACT		0.1	Negative
74	INTERIOR	3009 BOWMAN, AUSTIN, TX	FAMILY 5		CEILING	DRYWALL	OFF-WHITE	INTACT		0	Negative
75	INTERIOR	3009 BOWMAN, AUSTIN, TX	FAMILY 5	A	WALL	DRYWALL	WHITE	INTACT		0	Negative
76	INTERIOR	3009 BOWMAN, AUSTIN, TX	FAMILY 5	B	WALL	DRYWALL	WHITE	INTACT		0	Negative
77	INTERIOR	3009 BOWMAN, AUSTIN, TX	FAMILY 5	C	WALL	DRYWALL	WHITE	INTACT		0	Negative
78	INTERIOR	3009 BOWMAN, AUSTIN, TX	FAMILY 5	D	WALL	WOOD	WHITE	INTACT		0.01	Negative
79	INTERIOR	3009 BOWMAN, AUSTIN, TX	FAMILY 5	A	BASEBOARD	WOOD	WHITE	INTACT		0.4	Negative
80	INTERIOR	3009 BOWMAN, AUSTIN, TX	FAMILY 5	A	WINDOW SASH	WOOD	WHITE	INTACT		0.1	Negative
81	INTERIOR	3009 BOWMAN, AUSTIN, TX	FAMILY 5	A	WINDOW CASING	WOOD	WHITE	DETERIORATED		0.22	Negative
82	INTERIOR	3009 BOWMAN, AUSTIN, TX	FAMILY 5	A	WINDOW SILL	WOOD	WHITE	INTACT		0.23	Negative
83	INTERIOR	3009 BOWMAN, AUSTIN, TX	FAMILY 5	A	CROWN MOLDING	WOOD	WHITE	INTACT		0.12	Negative
84	INTERIOR	3009 BOWMAN, AUSTIN, TX	FAMILY 5	D	DOOR JAMB	WOOD	WHITE	INTACT		0	Negative
85	INTERIOR	3009 BOWMAN, AUSTIN, TX	FAMILY 5	D	DOOR FRAME	WOOD	WHITE	INTACT		0	Negative
86	INTERIOR	3009 BOWMAN, AUSTIN, TX	FAMILY 5	C	FIRE PLACE	WOOD	WHITE	INTACT		0	Negative
87	INTERIOR	3009 BOWMAN, AUSTIN, TX	FAMILY 5	C	DOOR	WOOD	WHITE	INTACT		0	Negative
88	INTERIOR	3009 BOWMAN, AUSTIN, TX	FAMILY 5	C	DOOR JAMB	WOOD	WHITE	INTACT		0.07	Negative
89	INTERIOR	3009 BOWMAN, AUSTIN, TX	FAMILY 5	C	DOOR FRAME	WOOD	WHITE	INTACT		0	Negative
90	INTERIOR	3009 BOWMAN, AUSTIN, TX	BEDROOM 6 (LOLA)		CEILING	DRYWALL	WHITE	INTACT		14.5	Positive
91	INTERIOR	3009 BOWMAN, AUSTIN, TX	BEDROOM 6 (LOLA)	A	WALL	DRYWALL	WHITE	INTACT		0	Negative
92	INTERIOR	3009 BOWMAN, AUSTIN, TX	BEDROOM 6 (LOLA)	B	WALL	DRYWALL	WHITE	INTACT		0.03	Negative
93	INTERIOR	3009 BOWMAN, AUSTIN, TX	BEDROOM 6 (LOLA)	C	WALL	DRYWALL	WHITE	INTACT		0	Negative
94	INTERIOR	3009 BOWMAN, AUSTIN, TX	BEDROOM 6 (LOLA)	D	WALL	DRYWALL	WHITE	INTACT		0	Negative
95	INTERIOR	3009 BOWMAN, AUSTIN, TX	BEDROOM 6 (LOLA)	B	CHAIR RAIL	WOOD	WHITE	INTACT		0	Negative

Reading Number	Room Location	Address	Room Number	Side	Structure	Substrate	Color	Condition	Sq. Ft.	PbC	Result
96	INTERIOR	3009 BOWMAN, AUSTIN, TX	BEDROOM 6 (LOLA)	B	CROWN MOLDING	WOOD	WHITE	INTACT		0	Negative
97	INTERIOR	3009 BOWMAN, AUSTIN, TX	BEDROOM 6 (LOLA)	B	WINDOW SASH	WOOD	WHITE	INTACT		0.19	Negative
98	INTERIOR	3009 BOWMAN, AUSTIN, TX	BEDROOM 6 (LOLA)	B	WINDOW CASING	WOOD	WHITE	INTACT		2.8	Positive
99	INTERIOR	3009 BOWMAN, AUSTIN, TX	BEDROOM 6 (LOLA)	B	WINDOW SILL	WOOD	WHITE	INTACT		2.7	Positive
100	INTERIOR	3009 BOWMAN, AUSTIN, TX	BEDROOM 6 (LOLA)	A	DOOR	WOOD	WHITE	INTACT		0	Negative
101	INTERIOR	3009 BOWMAN, AUSTIN, TX	BEDROOM 6 (LOLA)	A	DOOR JAMB	WOOD	WHITE	INTACT		1	Positive
102	INTERIOR	3009 BOWMAN, AUSTIN, TX	BEDROOM 6 (LOLA)	A	DOOR FRAME	WOOD	WHITE	INTACT		3.4	Positive
103	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 7		CEILING	DRYWALL	WHITE	INTACT		0	Negative
104	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 7	A	WALL	DRYWALL	WHITE	INTACT		0	Negative
105	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 7	B	WALL	DRYWALL	WHITE	INTACT		0	Negative
106	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 7	C	WALL	DRYWALL	WHITE	INTACT		0	Negative
107	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 7	D	WALL	DRYWALL	WHITE	INTACT		0	Negative
108	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 7	B	CABINET	WOOD	WHITE	INTACT		0.09	Negative
109	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 7	D	DOOR	WOOD	WHITE	INTACT		0	Negative
110	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 7	D	DOOR JAMB	WOOD	WHITE	INTACT		0	Negative
111	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 7	D	DOOR FRAME	WOOD	WHITE	INTACT		0	Negative
112	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 7	C	BASEBOARD	WOOD	WHITE	INTACT		0	Negative
113	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 7	C	DOOR	WOOD	WHITE	INTACT		0.01	Negative
114	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 7	C	DOOR JAMB	WOOD	WHITE	INTACT		0.05	Negative
115	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 7	C	DOOR FRAME	WOOD	WHITE	INTACT		0	Negative
116	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 7	C	DOOR	WOOD	WHITE	INTACT		0	Negative
117	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 7	C	DOOR JAMB	WOOD	WHITE	INTACT		0.03	Negative
118	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 7	C	DOOR FRAME	WOOD	WHITE	INTACT		0	Negative
119	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 8		CEILING	DRYWALL	WHITE	INTACT		0.02	Negative
120	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 8	A	WALL	WOOD	WHITE	INTACT		0	Negative
121	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 8	B	WALL	WOOD	WHITE	INTACT		0.2	Negative
122	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 8	C	WALL	WOOD	WHITE	INTACT		0	Negative
123	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 8	D	WALL	WOOD	WHITE	INTACT		0	Negative
124	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 8	B	DOOR	WOOD	WHITE	INTACT		0	Negative
125	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 8	B	DOOR JAMB	WOOD	WHITE	INTACT		0.01	Negative
126	INTERIOR	3009 BOWMAN, AUSTIN, TX	BATH 8	B	DOOR FRAME	WOOD	WHITE	INTACT		0	Negative
127	INTERIOR	3009 BOWMAN, AUSTIN, TX	KITCHEN 9		CEILING	DRYWALL	WHITE	INTACT		0	Negative
128	INTERIOR	3009 BOWMAN, AUSTIN, TX	KITCHEN 9	A	WALL	DRYWALL	WHITE	INTACT		0.09	Negative

Reading Number	Room Location	Address	Room Number	Side	Structure	Substrate	Color	Condition	Sq. Ft.	PbC	Result
129	INTERIOR	3009 BOWMAN, AUSTIN, TX	KITCHEN 9	B	WALL	DRYWALL	WHITE	INTACT		0	Negative
130	INTERIOR	3009 BOWMAN, AUSTIN, TX	KITCHEN 9	C	WALL	DRYWALL	WHITE	INTACT		0	Negative
131	INTERIOR	3009 BOWMAN, AUSTIN, TX	KITCHEN 9	D	WALL	DRYWALL	WHITE	INTACT		0	Negative
132	INTERIOR	3009 BOWMAN, AUSTIN, TX	KITCHEN 9	A	CROWN MOLDING	WOOD	WHITE	INTACT		0.01	Negative
133	INTERIOR	3009 BOWMAN, AUSTIN, TX	KITCHEN 9	A	WINDOW SASH	WOOD	WHITE	INTACT		0.05	Negative
134	INTERIOR	3009 BOWMAN, AUSTIN, TX	KITCHEN 9	A	WINDOW CASING	WOOD	WHITE	INTACT		0	Negative
135	INTERIOR	3009 BOWMAN, AUSTIN, TX	KITCHEN 9	A	WINDOW SILL	WOOD	WHITE	INTACT		0	Negative
136	INTERIOR	3009 BOWMAN, AUSTIN, TX	KITCHEN 9	A	BASEBOARD	WOOD	WHITE	INTACT		1.3	Positive
137	INTERIOR	3009 BOWMAN, AUSTIN, TX	KITCHEN 9	A	WINDOW CASING	WOOD	WHITE	INTACT		0	Negative
138	INTERIOR	3009 BOWMAN, AUSTIN, TX	KITCHEN 9	A	WINDOW SILL	WOOD	WHITE	INTACT		0	Negative
139	INTERIOR	3009 BOWMAN, AUSTIN, TX	KITCHEN 9	A	CABINET	WOOD	WHITE	INTACT		0	Negative
140	INTERIOR	3009 BOWMAN, AUSTIN, TX	KITCHEN 9	A	CABINET	WOOD	WHITE	INTACT		0	Negative
141	INTERIOR	3009 BOWMAN, AUSTIN, TX	KITCHEN 9	B	DOOR JAMB	WOOD	WHITE	INTACT		0	Negative
142	INTERIOR	3009 BOWMAN, AUSTIN, TX	KITCHEN 9	B	DOOR FRAME	WOOD	WHITE	INTACT		0	Negative
143	INTERIOR	3009 BOWMAN, AUSTIN, TX	KITCHEN 9	D	DOOR JAMB	WOOD	WHITE	INTACT		0	Negative
144	INTERIOR	3009 BOWMAN, AUSTIN, TX	KITCHEN 9	D	DOOR FRAME	WOOD	WHITE	INTACT		0.09	Negative
145	INTERIOR	3009 BOWMAN, AUSTIN, TX	KITCHEN 9	A	DOOR	WOOD	WHITE	INTACT		0.01	Negative
146	INTERIOR	3009 BOWMAN, AUSTIN, TX	KITCHEN 9	A	DOOR JAMB	WOOD	WHITE	INTACT		0	Negative
147	INTERIOR	3009 BOWMAN, AUSTIN, TX	KITCHEN 9	A	DOOR FRAME	WOOD	WHITE	INTACT		0.02	Negative
148	INTERIOR	3009 BOWMAN, AUSTIN, TX	KITCHEN 9		ATTIC ACCESS	WOOD	WHITE	INTACT		0.01	Negative
149	INTERIOR	3009 BOWMAN, AUSTIN, TX	KITCHEN 9		DOOR HEADER	WOOD	WHITE	INTACT		0.03	Negative
150		3009 BOWMAN, AUSTIN, TX		CALIBRATE						1.1	Positive
151		3009 BOWMAN, AUSTIN, TX		CALIBRATE						1	Positive
152		3009 BOWMAN, AUSTIN, TX		CALIBRATE						1	Positive

Inspection Date: March 7, 2019

**3009 Bowman Avenue
Austin, TX 78703**

**Report Date: March 7, 2019
Abatement level: 1.0
Report No: 1**

Total Readings: (146) Actionable (0)

VI: License/Certification



TEXAS DEPARTMENT OF STATE HEALTH SERVICES

Be it known that

A & W ENVIRONMENTAL SERVICES LLP

is certified to perform as a

Lead Firm

in the State of Texas and is hereby governed by the rights, privileges and responsibilities set forth in Texas Occupations Code, Chapter 1955 and Title 25, Texas Administrative Code, Chapter 295 relating to Texas Environmental Lead Reduction, as long as this license is not suspended or revoked.

A handwritten signature in black ink, appearing to read "John Hellerstedt".

*John Hellerstedt, M.D.
Commissioner of Health*

License Number: 2110404

Control Number: 6965

Expiration Date: 2/17/2020

(Void After Expiration Date)

VOID IF ALTERED NON-TRANSFERABLE

SEE BACK



Texas Department of State Health Services

BE IT KNOWN THAT

MOHAMMAD ALAVI

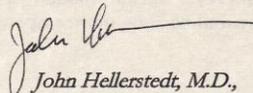
is certified to perform as a

Lead Risk Assessor

in the State of Texas and is hereby governed by the rights, privileges and responsibilities set forth in Texas Occupations Code, Chapter 1955 and Title 25, Texas Administrative Code, Chapter 295 relating to Texas Environmental Lead Reduction, as long as this license is not suspended or revoked.

Certification Number: 2070687

Expiration Date: 12/12/2020


John Hellerstedt, M.D.,
Commissioner of Health

Control Number: 7542

(Void After Expiration Date)

VOID IF ALTERED NON-TRANSFERABLE

SEE BACK

NITON LLC

Certificate of Achievement

Mohammand Alavi

US PH Div of Federal Occupational Health

*has successfully completed the Manufacturer's Training Course
for the NITON Spectrum Analyzer and is now certified
in radiation safety and monitoring, measurement technology,
and machine maintenance of the NITON XRF Spectrum Analyzer.*

(ICRP's - The AHA Awards 1 CEM point, approval #5827)

A2121140571

Certificate Number

12/18/02 Dallas, TX

Date & Site of Course



Victoria Graybeak

Training Coordinator

Richard A. Spitz

Director of Training

PERFORMANCE CHARACTERISTIC SHEETS

Niton XLP 300, 9/24/2004, ed. 1

Performance Characteristic Sheet

EFFECTIVE DATE: September 24, 2004

EDITION NO.: 1

MANUFACTURER AND MODEL:

Make: Niton LLC

Tested Model: XLP 300

Source: ^{137}Cs

Note: This PCS is also applicable to the equivalent model variations indicated below, for the Lead-in-Paint K+L variable reading time mode, in the XLI and XLP series:

XLI 300A, XLI 301A, XLI 302A and XLI 303A.

XLP 300A, XLP 301A, XLP 302A and XLP 303A.

XLI 700A, XLI 701A, XLI 702A and XLI 703A.

XLP 700A, XLP 701A, XLP 702A, and XLP 703A.

Note: The XLI and XLP versions refer to the shape of the handle part of the instrument. The differences in the model numbers reflect other modes available, in addition to Lead-in-Paint modes. The manufacturer states that specifications for these instruments are identical for the source, detector, and detector electronics relative to the Lead-in-Paint mode.

FIELD OPERATION GUIDANCE

OPERATING PARAMETERS:

Lead-in-Paint K+L variable reading time mode.

XRF CALIBRATION CHECK LIMITS:

0.8 to 1.2 mg/cm² (inclusive)

The calibration of the XRF instrument should be checked using the paint film nearest 1.0 mg/cm² in the NIST Standard Reference Material (SRM) used (e.g., for NIST SRM 2679, use the 1.02 mg/cm² film).

If readings are outside the acceptable calibration check range, follow the manufacturer's instructions to bring the instruments into control before XRF testing proceeds.

SUBSTRATE CORRECTION:

For XRF results using Lead-in-Paint K+L variable reading time mode, substrate correction is not needed for:

Brick, Concrete, Drywall, Metal, Plaster, and Wood

INCONCLUSIVE RANGE OR THRESHOLD:

K+L MODE READING DESCRIPTION	SUBSTRATE	THRESHOLD (mg/cm ²)
Results not corrected for substrate bias on any substrate	Brick	1.0
	Concrete	1.0
	Drywall	1.0
	Metal	1.0
	Plaster	1.0
	Wood	1.0

BACKGROUND INFORMATION

EVALUATION DATA SOURCE AND DATE:

This sheet is supplemental information to be used in conjunction with Chapter 7 of the HUD *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* ("HUD Guidelines"). Performance parameters shown on this sheet are calculated from the EPA/HUD evaluation using archived building components. Testing was conducted in August 2004 on 133 testing combinations. The instruments that were used to perform the testing had new sources; one instrument's was installed in November 2003 with 40 mCi initial strength, and the other's was installed June 2004 with 40 mCi initial strength.

OPERATING PARAMETERS:

Performance parameters shown in this sheet are applicable only when properly operating the instrument using the manufacturer's instructions and procedures described in Chapter 7 of the HUD Guidelines.

SUBSTRATE CORRECTION VALUE COMPUTATION:

Substrate correction is not needed for brick, concrete, drywall, metal, plaster or wood when using Lead-in-Paint K+L variable reading time mode, the normal operating mode for these instruments. If substrate correction is desired, refer to Chapter 7 of the HUD Guidelines for guidance on correcting XRF results for substrate bias.

EVALUATING THE QUALITY OF XRF TESTING:

Randomly select ten testing combinations for retesting from each house or from two randomly selected units in multifamily housing. Use the K+L variable time mode readings.

Conduct XRF retesting at the ten testing combinations selected for retesting.

Determine if the XRF testing in the units or house passed or failed the test by applying the steps below.

Compute the Retest Tolerance Limit by the following steps:

Determine XRF results for the original and retest XRF readings. Do not correct the original or retest results for substrate bias. In single-family housing a result is defined as the average of three readings. In multifamily housing, a result is a single reading. Therefore, there will be ten original and ten retest XRF results for each house or for the two selected units.

Calculate the average of the original XRF result and retest XRF result for each testing combination.

Square the average for each testing combination.

Add the ten squared averages together. Call this quantity C.

Multiply the number C by 0.0072. Call this quantity D.

Add the number 0.032 to D. Call this quantity E.

Take the square root of E. Call this quantity F.

Multiply F by 1.645. The result is the Retest Tolerance Limit.

Compute the average of all ten original XRF results.

Compute the average of all ten re-test XRF results.

Find the absolute difference of the two averages.

If the difference is less than the Retest Tolerance Limit, the inspection has passed the retest. If the difference of the overall averages equals or exceeds the Retest Tolerance Limit, this procedure should be repeated with ten new testing combinations. If the difference of the overall averages is equal to or greater than the Retest Tolerance Limit a second time, then the inspection should be considered deficient.

Use of this procedure is estimated to produce a spurious result approximately 1% of the time. That is, results of this procedure will call for further examination when no examination is warranted in approximately 1 out of 100 dwelling units tested.

TESTING TIMES:

For the Lead-in-Paint K+L variable reading time mode, the instrument continues to read until it is moved away from the testing surface, terminated by the user, or the instrument software indicates the reading is complete. The following table provides testing time information for this testing mode. The times have been adjusted for source decay, normalized to the initial source strengths as noted above. Source strength and type of substrate will affect actual testing times. At the time of testing, the instruments had source strengths of 26.6 and 36.6 mCi.

Testing Times Using K+L Reading Mode (Seconds)						
Substrate	All Data			Median for laboratory-measured lead levels (mg/cm ²)		
	25 th Percentile	Median	75 th Percentile	Pb < 0.25	0.25 ≤ Pb < 1.0	1.0 ≤ Pb
Wood Drywall	4	11	19	11	15	11
Metal	4	12	18	9	12	14
Brick Concrete Plaster	8	16	22	15	18	16

CLASSIFICATION RESULTS:

XRF results are classified as positive if they are greater than or equal to the threshold, and negative if they are less than the threshold.

DOCUMENTATION:

A document titled *Methodology for XRF Performance Characteristic Sheets* provides an explanation of the statistical methodology used to construct the data in the sheets, and provides empirical results from using the recommended inconclusive ranges or thresholds for specific XRF instruments. For a copy of this document call the National Lead Information Center Clearinghouse at 1-800-424-LEAD.

This XRF Performance Characteristic Sheet was developed by the Midwest Research Institute (MRI) and QuanTech, Inc., under a contract between MRI and the XRF manufacturer. HUD has determined that the information provided here is acceptable when used as guidance in conjunction with Chapter 7, Lead-Based Paint Inspection, of HUD's *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing*.

Glossary

Abatement: A measure or set of measures designed to permanently eliminate lead-based paint hazards or lead-based paint. Abatement strategies include the removal of lead-based paint, enclosure, encapsulation, replacement of building components coated with lead-based paint, removal of lead contaminated dust, and removal of lead contaminated soil or overlaying of soil with a durable covering such as asphalt (grass and sod are considered interim control measures). All of these strategies require preparation; cleanup; waste disposal; post-abatement clearance testing; recordkeeping; and, if applicable, monitoring. See also **Complete abatement** and **Interim controls**.

Accreditation: A formal recognition certifying that an organization, such as a laboratory, is competent to carry out specific tasks or types of tests.

Accuracy: The degree of agreement between an observed value and an accepted reference value (a “true” value); a data quality indicator. Accuracy includes a combination of random errors (precision) and systematic errors (bias) due to sampling and analysis.

Bare soil: Soil not covered with grass, sod, some other similar vegetation, or paving, including the sand in sandboxes.

Building component: Any element of a building that may be painted or have dust on its surface, e.g., walls, stair treads, floors, railings, doors, windowsills, etc.

Certification: The process of testing and evaluating against certain specifications the competence of a person, organization, or other entity in performing a function or service, usually for a specified period of time.

Certified: The designation for Contractors who have completed training and other requirements to safely allow them to undertake risk assessments, inspections, or abatement work. Risk assessors, inspectors, and Abatement Contractors should be certified by the appropriate local, State, or Federal agency.

Chewable surface: See **Chewed surface**.

Chewed surface: Any painted surface that shows evidence of having been chewed or mouthed by a young child. A chewed surface is usually a protruding, horizontal part of a building, such as an interior windowsill.

Cleaning: The process of using a vacuum and wet cleaning agent to remove leaded dust; the process includes the removal of bulk debris from the work area. OSHA prohibits the use of compressed air to clean lead-contaminated dust from a surface.

Clearance examination: Visual examination and collection of environmental samples by an inspector or risk assessor, or, in some circumstances, a Sampling Technician, and analysis by an accredited laboratory upon completion of an abatement project, interim control intervention, or maintenance job that disturbs lead-based paint (or paint suspected of being lead-based). The clearance examination is performed to ensure that lead exposure levels do not exceed standards

established by the EPA Administrator pursuant to Title IV of the Toxic Substances Control Act, and that any cleaning following such work adequately meets those standards.

Common area: A room or area that is accessible to all residents in a community (e.g., hallways or lobbies); in general, any area not kept locked.

Composite sample: A single sample made up of individual subsamples. Analysis of a composite sample produces the arithmetic mean of all subsamples.

Containment: A process to protect workers and the environment by controlling exposures to the lead contaminated dust and debris created during abatement.

Deteriorated lead-based paint: Any lead-based paint coating on a damaged or deteriorated surface or fixture, or any interior or exterior lead-based paint that is peeling, chipping, blistering, flaking, worn, chalking, alligating, cracking, or otherwise becoming separated from the substrate.

Disposal (of waste): The discharge, deposit, injection, dumping, spilling, leaking, or placement of solid or liquid waste on land or in water so that none of its constituents can pollute the environment by being emitted into the air or discharged into a body of water, including groundwater.

Environmental Intervention Blood-Lead Level (EIBL) child: A child who has a blood lead level at or above 20 µg/dL (micrograms of lead per deciliter of blood) in a single test or at 15-19 µg/dL in two tests taken at least three months apart.

Encapsulation: Any covering or coating that acts as a barrier between lead-based paint and the environment, the durability of which relies on adhesion and the integrity of the existing bonds between multiple layers of paint and between the paint and the substrate. See also **Enclosure**.

Enclosure: The use of rigid, durable construction materials that are mechanically fastened to the substrate to act as a barrier between the Lead-based paint and the environment.

Evaluation: Risk assessment, paint inspection, reevaluation, investigation, clearance examination, or risk assessment screen.

Examination: See **Clearance examination**.

Federal Register (FR): A daily Federal publication that contains proposed and final regulations, rules, and notices.

Impact surface: An interior or exterior surface (such as surfaces on doors) subject to damage by repeated impact or contact.

Inspection (of paint): A surface-by-surface investigation to determine the presence of lead-based paint (in some cases including dust and soil sampling) and a report of the results.

Interim controls: A set of measures designed to temporarily reduce human exposure or possible exposure to lead-based paint hazards. Such measures include specialized cleaning, repairs, maintenance, painting, temporary containment, and management and resident education programs. Monitoring, conducted by Owners, and reevaluations, conducted by professionals, are integral elements of interim control. Interim controls include dust removal; paint film stabilization; treatment of friction and impact surfaces; installation of soil coverings, such as grass or sod; and land use controls. See also **Monitoring, Reevaluation, and Abatement**.

Interior windowsill: The portion of the horizontal window ledge that protrudes into the interior of the room, adjacent to the window sashes when the window is closed; often called the window stool.

Latex: A waterborne emulsion paint made with synthetic binders, such as 100 percent acrylic, vinyl acrylic, terpolymer, or styrene acrylic; a stable emulsion of polymers and pigment in water.

Lead: Lead includes metallic lead and inorganic and organic compounds of lead.

Lead-based paint: Any paint, varnish, shellac, or other coating that contains lead equal to or greater than 1.0 mg/cm² (milligrams of lead per square centimeter of surface) as measured by XRF or laboratory analysis, or 0.5 percent by weight (5,000 µg/g, 5,000 ppm (parts per million), or 5,000 mg/kg) as measured by laboratory analysis. (Local definitions may vary.)

Lead-based paint hazard: A condition in which exposure to lead from lead-contaminated dust, lead contaminated soil, or deteriorated lead-based paint would have an adverse effect on human health (as established by the EPA Administrator under Title IV of the Toxic Substances Control Act). Lead-based paint hazards include, for example, deteriorated lead-based paint, leaded dust levels above applicable standards, and bare leaded soil above applicable standards.

Lead-based paint hazard control: Activities to control and eliminate lead-based paint hazards, including interim controls, abatement, and complete abatement.

Lead-contaminated dust: Surface dust in residences that contain an area concentration of lead in excess of the standard established by the EPA Administrator, pursuant to Title IV of the Toxic Substances Control Act. EPA standards for leaded dust for risk assessments are 40 µg/ft² (micrograms of lead per square foot) on floors and 250 µg/ft² on interior windowsills. The EPA standards for clearance are 40 µg/ft² on floors, 250 µg/ft² on interior windowsills and 400 µg/ft² on window troughs. The recommended standard for lead hazard screens for floors is 25 µg/ft² and for windowsills is 125 µg/ft².

Lead-contaminated soil: Bare soil on residential property that contains lead in excess of the standard established by the EPA Administrator, pursuant to Title IV of the Toxic Substances Control Act. The standard is 400 µg/g in play areas and 1200 µg/g in the rest of the yard.

Leaded dust: See **Lead-contaminated dust**.

Licensed: Holding a valid license or certification issued by EPA or by an EPA-approved State program pursuant to Title IV of the Toxic Substances Control Act. The license is based on certification for lead-based paint hazard control work. See also **Certified**.

Maintenance: Work intended to maintain adequate living conditions in a dwelling, which has the potential to disturb lead-based paint or paint that is suspected of being lead-based.

Mean: The arithmetic average of a series of numerical data values; for example, the algebraic sum of the data values divided by the number of data values.

Microgram (µg): 1/1,000,000 of a gram; used to measure weight.

Monitoring: Surveillance to determine (1) that known or suspected lead-based paint is not deteriorating; (2) that lead-based paint hazard controls, such as paint stabilization, enclosure, or encapsulation have not failed; and (3) that structural problems do not threaten the integrity of hazard controls or of known or suspected.

Owner: A person, firm, corporation, guardian, conservator, receiver, trustee, executor, government agency or entity, or other judicial officer who, alone or with others, owns, holds, or controls the freehold or leasehold title or part of the title to property, with or without actually possessing it. This definition includes a vendee who possesses the title, but does not include a mortgagee or an Owner of a reversionary interest under a ground rent lease.

Paint inspector: An individual who has completed training from an accredited program and been licensed or certified by the appropriate State or local agency to (1) perform inspections to determine and report the presence of lead-based paint on a surface-by-surface basis through onsite testing, (2) report the findings of such an inspection, (3) collect environmental samples for laboratory analysis, (4) perform clearance testing, and optionally (5) document successful compliance with lead-based paint hazard control requirements or standards.

Paint removal: An abatement strategy that entails the removal of lead-based paint from surfaces. For lead hazard control work, this can mean using chemicals, heat guns below 1,100° F, and certain *contained* abrasive methods. Open-flame burning, open-abrasive blasting, sandblasting, extensive dry scraping, and stripping in a poorly ventilated space using a volatile stripper are prohibited paint removal methods. Hydro blasting is not recommended.

Plastic: See **Polyethylene plastic.**

Polyethylene plastic: All references to polyethylene plastic refer to 6 mil plastic sheeting or polyethylene bags (or doubled bags if using 4 mil polyethylene bags), or any other thick plastic material shown to demonstrate at least equivalent dust containment performance. Plastic used to contain waste should be capable of completely containing the waste and, after being properly sealed, should remain leak tight with no visible signs of discharge during movement or relocation.

Polyurethane: An exceptionally hard and wear-resistant coating (created by the reaction of polyols with a multifunctional isocyanate); often used to seal wood floors following lead-based paint hazard control work and cleaning.

Reevaluation: In lead hazard control work, the combination of a visual assessment and collection of environmental samples performed by a certified risk assessor to determine if a

previously implemented lead-based paint hazard control measure is still effective and if the dwelling remains lead-safe.

Removal: See **Paint removal**.

Renovation: Work that involves construction and/or home or building improvement measures such as window replacement, weatherization, remodeling, and repainting.

Replacement: A strategy of abatement that entails the removal of building components coated with lead-based paint (such as windows, doors, and trim) and the installation of new components free of lead-based paint.

Resident: A person who lives in a dwelling.

Risk assessment: An onsite investigation of a residential dwelling to discover any lead-based paint hazards. Risk assessments include an investigation of the age, history, management, and maintenance of the dwelling, and the number of children under age 6 and women of childbearing age who are residents; a visual assessment; limited environmental sampling (i.e., collection of dust wipe samples, soil samples, and deteriorated paint samples); and preparation of a report identifying acceptable abatement and interim control strategies based on specific conditions.

Risk assessor: A certified individual who has completed training with an accredited training program and who has been certified to (1) perform risk assessments, (2) identify acceptable abatement and interim control strategies for reducing identified lead-based paint hazards, (3) perform clearance testing and reevaluations, and (4) document the successful completion of lead-based paint hazard control activities.

Site: The land or body of water where a facility is located, or an activity is conducted. The site includes adjacent land used in connection with the facility or activity.

Soil: See **Bare soil**.

Spectrum analyzer: A type of XRF analyzer that provides the operator with a plot of the energy and intensity, or counts of both K and L x-ray spectra, as well as a calculated lead concentration. See also **XRF analyzer**.

Standard deviation: A measure of the precision of a reading; the spread of the deviation from the mean. The smaller the standard deviation, the more precise the analysis. The standard deviation is calculated by first obtaining the mean, or the arithmetic average, of all of the readings. A formula is then used to calculate how much the individual values vary from the mean—the standard deviation is the square root of the arithmetic average of the squares of the deviation from the mean. Many hand calculators have an automatic standard deviation function. See also **Mean**.

Subsample: A representative portion of a sample. A subsample may be either a field sample or a laboratory sample. A subsample is often combined with other subsamples to produce a composite sample. See also **Composite sample**.

Substrate: A surface on which paint, varnish, or other coating has been applied or may be applied. Examples of substrates include wood, plaster, metal, and drywall.

Substrate effect: The radiation returned to an XRF analyzer by the paint, substrate, or underlying material, in addition to the radiation returned by any lead present. This radiation, when counted as lead x-rays by an XRF analyzer contributes to substrate equivalent lead (bias). The inspector may have to compensate for this effect when using XRF analyzers. See also **XRF analyzer**.

Substrate Equivalent Lead (SEL): The XRF measurement taken on an unpainted surface; used to calculate the corrected lead concentration on a surface by using the following formula: Apparent Lead Concentration–Substrate Equivalent Lead = Corrected Lead Concentration. See also **XRF analyzer**.

Target housing: Any residential unit constructed before 1978, except dwellings that do not contain bedrooms or dwellings that were developed specifically for the elderly or persons with disabilities—unless a child younger than 6 resides or is expected to reside in the dwelling. In the case of jurisdictions that banned the sale or use of lead-based paint before 1978, the Secretary of HUD may designate an earlier date for defining target housing.

Test location: A specific area on a testing combination where XRF instruments will test for lead-based paint.

Trained: Successful completion of a training course in a particular discipline. For lead hazard control work, the training course must be accredited by EPA or by an EPA-approved State program, pursuant to Title IV of the Toxic Substances Control Act.

Treatment: In residential lead-based paint hazard control work, any method designed to control lead-based paint hazards. Treatment includes interim controls, abatement, and removal.

Window trough: For a typical double-hung window, the portion of the exterior windowsill between the interior windowsill (or stool) and the frame of the storm window. If there is no storm window, the window trough is the area that receives both the upper and lower window sashes when they are both lowered. Sometimes inaccurately called the window “well.”

Worker: An individual who has completed training in an accredited program to perform Lead-based paint hazard control in housing.

Worksite: Any interior or exterior area where lead-based paint hazard control work takes place.

XRF analyzer: An instrument that determines lead concentration in milligrams per square centimeter (mg/cm²) using the principle of x-ray fluorescence (XRF). Two types of field portable XRF analyzers are used — direct readers and spectrum analyzers. For this lead-based paint inspection, the term XRF analyzer only refers to portable instruments manufactured to analyze paint that have a HUD Performance Characteristic Sheet and are interpreted in accordance with the Performance Characteristic Sheet; it does not refer here to laboratory grade units or portable instruments designed to analyze soil.