

9/20/2012

Jeffery Trevino (C-14J)
Associate Regional Counsel
US EPA, Region 5
77 West Jackson Boulevard
Chicago, IL 60604

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REGIONAL HEARING CLERK
U.S. ENVIRONMENTAL
PROTECTION AGENCY

RE: L-8J

Mr. Jeffery Trevino,

This letter is in response to the certified Mail receipt No. 7009 1680 000 7672 1080 Attention of L-8J.

I'm requesting an informal settlement conference to discuss the facts and arrive at a settlement. I have 3 attachments to reference for this informal settlement conference:

Attachment A – Outline of Proposed Civil Penalties & Explained Adjusted Penalties for consideration

Attachment B – Environmental Consulting Group, Inc Re: Multi-unit Residential Properties, 219,221,233 N 4th St and 221 S. 3rd St., Saint Charles, IL 60174

Attachment C - Environmental Consulting Group, Inc Re: Multi-unit Residential Property – Units A and B, 120 N. 4th St., Saint Charles, IL 60174

These are the respondent's answers to the allegations:

- a. Counts listed in L-8J
- b. Penalties Amounts
- c. Dispute the penalty fee's
 - a. Outlined in Attachment A
 - i. 35 counts (Environmental Consulting Group findings Attachment B – 1.0 Executive Summary: No lead-based paint was found on any of the painted building components tested during the inspection. Explanation: EPA Section 1018 – Disclosure Rule Enforcement Response and Penalty Policy, Chapter 7 Adjustment Factors A. Potential for Harm Due to Risk of Exposure (1). No known Risk of exposure adjustment factor 95% deduction of penalties.)
 - ii. 5 counts (Environmental Consulting Group findings Attachment C – 5.0 Conclusions: Lead-based paint was found – All painted components found to contain lead-based paint were observed to be in good, intact condition at the time of the inspection. ECG does not believe the components found to contain lead-based paint present a hazard to the occupants of the two inspected units at this time. Explanation Section 1018 – Disclosure Rule Enforcement Response and Penalty Policy, Chapter 7 Adjusted Factors A. Potential for Harm Due to Risk of Exposure (2) Reduced Risk of exposure 50% deduction of penalties & C. Attitude 30% deduction of penalties to equal a 80% deduction of penalties.)
 - b. Total Proposed civil penalty \$72,350
 - c. Explained Adjusted penalties \$558 to be paid in lead based paint removal projects.
- d. Yes, request a hearing if penalties not reduced in the informal settlement conference.

I can be reached at 630-244-4141, to review this informal settlement conference at your convenience.

Sincerely,


Clinton Anderson

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 5

In the Matter of:)	Docket No.
)	
Clinton T. Anderson, Owner)	
CTA Properties)	
St. Charles, IL)	Proceeding to Assess a Civil Penalty
)	Under Section 16(a) of the Toxic Substances
)	Control Act, 15 U.S.C. 2615(2)
Respondent,)	
_____)	

Response to Complaint

- 1.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 2.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 3.) Admit
- 4.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 5.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 6.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 7.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 8.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 9.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 10.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 11.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 12.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 13.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 14.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 15.) admit
- 16.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 17.) admit

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PROTECTION AGENCY**

- 18.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 19.) admit
- 20.) admit
- 21.) admit
- 22.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 23.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 24.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 25.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 26.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 27.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 28.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 29.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 30.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 31.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 32.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 33.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 34.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 35.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 36.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 37.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 38.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 39.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 40.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 41.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 42.) Respondent lacks sufficient information to admit or deny, & therefore denies

- 68.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 69.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 70.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 71.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 72.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 73.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 74.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 75.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 76.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 77.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 78.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 79.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 80.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 81.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 82.) Respondent lacks sufficient information to admit or deny, & therefore denies
- 83.) deny

Regional Hearing Clerk 9E-19J)
US EPA, Region 5
77 West Jackson Boulevard
Chicago, IL 60604

Respondent requests an informal settlement hearing

Jeffery Trevino (C-14J)
Associate Regional Counsel
US EPA, Region 5
77 West Jackson Boulevard
Chicago, IL 60604

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PROTECTION AGENCY

Jeffrey Trevino (C-14)
Associate Regional
Counsel US EPA,
Region 5 West
Jackson Boulevard
Chicago, IL 60604
Informal Request

Settlement to explain &
adjust fees

		Proposed Civil Penalty		Adjusted		Proposed Civil Penalty		Adjusted		
		Failure to include or attach; either within the contract or as an attachment, a Lead Warning Statement in 40 CFR 745.1139b(1), 15 USC 2689, & 42 USC 4852d(b)(5)		Explain: Section 1018 Chap 7 Adj Factors A. (2) Reduced Risk of Exposure & C Attitude 80% deduction Lead hazard free ref Attach C	Explain: section 1018 chap 7 No known Risk of Exposure Adj 95% no lead see Environmental Consulting Group 6/8/12 ref Attach B 1.0 Exec Summary		Failure to include or attach: known lead-based paint and/or lead-based paint hazards or lack of knowledge of such presence. 40 CFR 745.1139b(1), 15 USC 2689, & 42 USC 4852d(b)(5)		Explain: Section 1018 Chap 7 Adj Factors A. (2) Reduced Risk of Exposure & C Attitude 80% deduction Lead hazard free ref Attach C	Explain: section 1018 chap 7 No known Risk of Exposure Adj 95% no lead see Environmental Consulting Group 6/8/12 ref Attach B 1.0 Exec Summary
			80%	95%				80%	95%	
221 S 3rd st	A	1	\$ 1,550	\$ 78			9	\$ 770	\$ 39	No Lead Paint
219 N 4th St	Upper	2	\$ 775	\$ 39			10	\$ 385	\$ 19	No Lead Paint
221 N 4th st	Upper	3	\$ 1,550	\$ 78			11	\$ 770	\$ 39	No Lead Paint
219 N 4th St	Lower	4	\$ 3,225	\$ 161			12	\$ 2,580	\$ 129	No Lead Paint
219 N 4th St	Rear	5	\$ 775	\$ 39			13	\$ 385	\$ 19	No Lead Paint
120 N 4th St	B	6	\$ 3,545	\$ 709			14	\$ 5,670	\$ 1,134	All contained in good condition, no hazards
221 N 4th st	Lower	7	\$ 11,340	\$ 567			15	\$ 8,500	\$ 425	No Lead Paint
219 N 4th St	Lower	8	\$ 5,670	\$ 284			16	\$ 4,250	\$ 213	No Lead Paint
		1	\$ 28,430	\$ 709	\$ 1,244			\$ 23,310	\$ 1,134	\$ 882

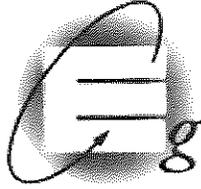
		Proposed Civil Penalty		Adjusted		Proposed Civil Penalty		Adjusted		
		Failure to include or attach any records or reports of lead based paint and/or lead based hazards or statement that no such records are available		Explain: Section 1018 Chap 7 Adj Factors A. (2) Reduced Risk of Exposure & C Attitude 80% deduction Lead hazard free ref Attach C	Explain: section 1018 chap 7 No known Risk of Exposure Adj 95% no lead see Environmental Consulting Group 6/8/12 ref Attach B 1.0 Exec Summary		Failure to include or attach Lead Hazard Pamphlet		Explain: Section 1018 Chap 7 Adj Factors A. (2) Reduced Risk of Exposure & C Attitude 80% deduction Lead hazard free ref Attach C	Explain: section 1018 chap 7 No known Risk of Exposure Adj 95% no lead see Environmental Consulting Group 6/8/12 ref Attach B 1.0 Exec Summary
			80%	95%				80%	95%	
221 S 3rd st	A	17	\$ 260	\$ 13			25	\$ 520	\$ 26	No Lead Paint
219 N 4th St	Upper	18	\$ 130	\$ 7			26	\$ 260	\$ 13	No Lead Paint
221 N 4th st	Upper	19	\$ 260	\$ 13			27	\$ 520	\$ 26	No Lead Paint
219 N 4th St	Lower	20	\$ 840	\$ 42			28	\$ 1,610	\$ 81	No Lead Paint
219 N 4th St	Rear	21	\$ 130	\$ 7			29	\$ 260	\$ 13	No Lead Paint
120 N 4th St	B	22	\$ 1,850	\$ 370			30	\$ 3,540	\$ 708	All contained in good condition, no hazards
221 N 4th st	Lower	23	\$ 2,840	\$ 142			31	\$ 5,670	\$ 284	No Lead Paint
219 N 4th St	Lower	24	\$ 1,420	\$ 71			32	\$ 2,835	\$ 142	No Lead Paint
		1	\$ 7,730	\$ 370	\$ 294			\$ 15,215	\$ 708	\$ 584

		Proposed Civil Penalty		Adjusted	
		Failure to include or attach, signatures of lessor or lesse certifying accuracy of their statements		Explain: Section 1018 Chap 7 Adj Factors A. (2) Reduced Risk of Exposure & C Attitude 80% deduction Lead hazard free ref Attach C	Explain: section 1018 chap 7 No known Risk of Exposure Adj 95% no lead see Environmental Consulting Group 6/8/12 ref Attach B 1.0 Exec Summary
			80%	95%	
221 S 3rd st	A	33	\$ 130	\$ 7	No Lead Paint
219 N 4th St	Upper	34	\$ 65	\$ 3	No Lead Paint
221 N 4th st	Upper	35	\$ 130	\$ 7	No Lead Paint
219 N 4th St	Lower	36	\$ 320	\$ 16	No Lead Paint
219 N 4th St	Rear	37	\$ 65	\$ 3	No Lead Paint
120 N 4th St	B	38	\$ 710	\$ 142	All contained in good condition, no hazards
221 N 4th st	Lower	39	\$ 1,420	\$ 71	No Lead Paint
219 N 4th St	Lower	40	\$ 710	\$ 36	No Lead Paint
		1	\$ 3,550	\$ 142	\$ 142

Total Proposed: \$ 72,350
Explain Adjusted: \$ 4,917

Window replacement \$ (2,774) Already Paid for Updating of apartment
Environ, Lead Survey \$ (1,585) Already paid for lead survey's

Proposed adjusted penalty \$ 558 to be paid in lead based projects



Attach B

E n v i r o n m e n t a l C o n s u l t i n g G r o u p , I n c .

June 8, 2012

Mr. Clinton Anderson
Colonial Café and Ice Cream
333 N. Randall Road
St. Charles, Illinois 60174

Re: **Lead-Based Paint Inspection Report**
Multi-Unit Residential Properties
219, 221, 223 N. 4th St. and 221 S. 3rd St.
St. Charles, Illinois

Dear Mr. Anderson:

In response to your request, Environmental Consulting Group, Inc. (ECG) has completed testing of suspect lead-based paint in the multi-unit residential building located at 219, 221, and 223 North 4th Street and 221 South 3rd street, in St. Charles, Illinois. This report provides an executive summary, an outline of the scope-of-work, and analytical results.

1.0 Executive Summary

On June 1, 2012, ECG used an X-Ray Fluorescence (XRF) analyzer to test various surfaces in the subject buildings for the presence of lead-based paint. **No lead-based paint was found on any of the painted building components tested during the inspection.**

2.0 Scope-of-Work

The scope-of-work for this project included testing painted surfaces throughout the units within the subject buildings. The following units were inspected during the inspection:

- 219 Lower
- 219 Rear
- 223 Upper
- 221 Lower
- 221 Upper
- 219 Upper
- 221 S. 3rd St. – Unit A

The inspection was conducted by ECG representative Mr. Luke Nienhaus, a State of Illinois-licensed lead inspector. The inspection protocol followed the guidelines published by the Department of Housing and Urban Development (HUD). ECG inspector credentials are located in Appendix A.

3.0 Analytical Testing

A Niton XRF analyzer, model XLp300, was utilized to test component surfaces for the presence of lead-based paint. The XRF utilizes a radioactive Cadmium source to determine the presence of lead in a surface. The Cadmium source releases a controlled gamma ray beam on to a surface, and, by measuring the diffraction gradient of the reflected emissions, the XRF detector can determine whether or not lead is present in the surface material (e.g. paint). To ensure an accurate reading, the XRF was calibrated at the beginning of the inspection.

Required information regarding the XRF analyzer is located in Appendix C.

4.0 Inspection Results

According to the Environmental Protection Agency (EPA), the definition of lead-based paint is a paint that contains greater than one milligram of lead per square centimeter ($>1.0 \text{ mg/cm}^2$). **No lead-based paint was found on any of the painted building components tested during the inspection.**

A complete list of all tested painted components can be found in Appendix B.

5.0 Conclusions

A total of 54 XRF Analyzer readings were collected from painted surfaces within the subject buildings **No lead-based paint was found on any of the painted building components tested during the inspection.**

6.0 Qualifications

ECG believes this study was developed in general accordance with the technical standards of practice for a lead-based paint survey at the time the study was conducted. The standard of care exercised for this study was in accordance with generally accepted practices and a reasonable effort was made to ensure that the information presented in this report is materially complete and accurate.

The conclusions presented in this report are professional opinions based solely upon visual observations of the site, analytical data, and other research as described in this report. They are intended for the sole use of our client.

If you have any questions or comments, please contact our office.

Sincerely,

ENVIRONMENTAL CONSULTING GROUP, INC.



Luke Nienhaus
Project Manager

Appendices

- Appendix A – ECG Certifications
- Appendix B – XRF Data
- Appendix C – XRF Documentation

Appendix A

ECG Certifications



**LEAD RISK
ASSESSOR LICENSE**

LEAD ID	ISSUED	EXPIRES
012854	2/9/2012	1/31/2013



Luke C. Nienhaus
3717 N. Kenmore Ave., Apt. #3
Chicago, IL 60613

ILLINOIS LEAD PROGRAM
Environmental Health



Occupational Training & Supply, Inc.

7233 Adams Street ♦ Willowbrook, IL 60527 ♦ (630) 655-3900

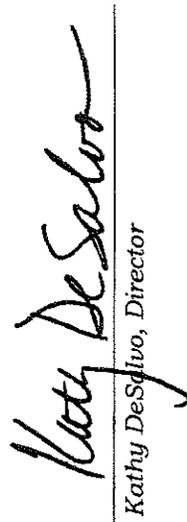
Luke Niehaus

has successfully completed the 8 hour Lead Risk Assessor Refresher course and has passed the competency exam with a minimum score of 70%. This course is accredited by the Illinois Department of Public Health in accordance with the Illinois Lead Poisoning Prevention Code.

Lead Risk Assessor Refresher

Course Date: 10/6/2010
Expiration Date: 10/6/2013

Exam Date: 10/6/2010
Certificate: LRAR1010062436


Kathy DeSalvo, Director

2010

Appendix B

XRF Data

Lead-Based Paint Testing Report
 XRF Data
 Multi-Unit Residential Building
 219/221 N. 4th St., 221 S. 3rd St.
 St. Charles, IL 60174

READING NO	TIME	DURATION	UNITS	ADDRESS/UNIT	QUADRANT	FLOOR	ROOM	COMPONENT	SUBSTRATE	SIDE	CONDITION	COLOR	RESULTS	LEAD CONCENTRATION (Mg/Cm ²)
1	6/1/2012 14:01	42.09	cps										Positive	2.91
2	6/1/2012 14:04	6.41	mg / cm ²										Positive	1
3	6/1/2012 14:04	3.69	mg / cm ²										Positive	1
4	6/1/2012 14:04	6.44	mg / cm ²										Positive	1
5	6/1/2012 14:36	2.3	mg / cm ²	219 4th	lower	FIRST	LIVING ROOM	WALL	DRYWALL	D	INTACT	WHITE	Negative	0
6	6/1/2012 14:36	1.38	mg / cm ²	219 4th	lower	FIRST	LIVING ROOM	WINDOW sill	WOOD	A	INTACT	WHITE	Negative	0.03
7	6/1/2012 14:37	1.36	mg / cm ²	219 4th	lower	FIRST	LIVING ROOM	WINDOW frame	WOOD	A	INTACT	WHITE	Negative	0.01
8	6/1/2012 14:38	1.37	mg / cm ²	219 4th	lower	FIRST	BEDROOM1	WINDOW frame	WOOD	A	INTACT	WHITE	Negative	0
9	6/1/2012 14:38	1.37	mg / cm ²	219 4th	lower	FIRST	BEDROOM1	WINDOW sill	WOOD	A	INTACT	WHITE	Negative	0
10	6/1/2012 14:38	2.77	mg / cm ²	219 4th	lower	FIRST	BEDROOM1	WALL	DRYWALL	A	INTACT	WHITE	Negative	0
11	6/1/2012 14:39	1.37	mg / cm ²	219 4th	lower	FIRST	BEDROOM1	BASEBOARD	WOOD	A	INTACT	WHITE	Negative	0
12	6/1/2012 14:39	3.19	mg / cm ²	219 4th	lower	FIRST	KITCHEN	WALL	DRYWALL	A	INTACT	WHITE	Negative	0
13	6/1/2012 14:39	1.84	mg / cm ²	219 4th	lower	FIRST	BEDROOM2	WALL	DRYWALL	A	INTACT	WHITE	Negative	0
14	6/1/2012 14:41	1.38	mg / cm ²	219 4th	lower	FIRST	BEDROOM2	BASEBOARD	WOOD	B	INTACT	WHITE	Negative	0
15	6/1/2012 14:41	1.37	mg / cm ²	219 4th	lower	FIRST	BEDROOM2	WINDOW sill	WOOD	B	INTACT	WHITE	Negative	0
16	6/1/2012 14:41	1.39	mg / cm ²	219 4th	rear	FIRST	KITCHEN	WINDOW frame	WOOD	B	INTACT	WHITE	Negative	0
17	6/1/2012 14:45	1.37	mg / cm ²	219 4th	rear	FIRST	KITCHEN	WALL	DRYWALL	B	INTACT	WHITE	Negative	0
18	6/1/2012 14:45	1.83	mg / cm ²	219 4th	rear	FIRST	BEDROOM	WALL	DRYWALL	B	INTACT	WHITE	Negative	0
19	6/1/2012 14:46	1.84	mg / cm ²	219 4th	rear	FIRST	KITCHEN	WALL	DRYWALL	B	INTACT	WHITE	Negative	0.01
20	6/1/2012 14:47	2.28	mg / cm ²	219 4th	rear	FIRST	BATHROOM	WALL	DRYWALL	B	INTACT	WHITE	Negative	0
21	6/1/2012 14:47	3.22	mg / cm ²	219 4th	rear	FIRST	BEDROOM	WALL	DRYWALL	A	INTACT	WHITE	Negative	0
22	6/1/2012 14:49	2.76	mg / cm ²	223 4th	upper	SECOND	KITCHEN	WALL	DRYWALL	A	INTACT	BEIGE	Negative	0
23	6/1/2012 14:49	1.37	mg / cm ²	223 4th	upper	SECOND	LIVING ROOM	WALL	DRYWALL	A	INTACT	BEIGE	Negative	0
24	6/1/2012 14:50	1.39	mg / cm ²	223 4th	upper	SECOND	LIVING ROOM	WINDOW frame	WOOD	B	INTACT	WHITE	Negative	0.01
25	6/1/2012 14:50	1.39	mg / cm ²	223 4th	upper	SECOND	LIVING ROOM	WINDOW sill	WOOD	B	INTACT	WHITE	Negative	0.06
26	6/1/2012 14:50	1.37	mg / cm ²	223 4th	upper	SECOND	BEDROOM	WALL	DRYWALL	A	INTACT	GREEN	Negative	0
27	6/1/2012 14:51	2.29	mg / cm ²	223 4th	upper	SECOND	BEDROOM	WALL	DRYWALL	B	INTACT	WHITE	Negative	0
28	6/1/2012 14:51	2.76	mg / cm ²	223 4th	upper	SECOND	BEDROOM	WALL	DRYWALL	A	INTACT	WHITE	Negative	0
29	6/1/2012 14:53	1.38	mg / cm ²	223 4th	upper	SECOND	BEDROOM	BASEBOARD	WOOD	A	INTACT	WHITE	Negative	0.15
30	6/1/2012 14:54	3.21	mg / cm ²	223 4th	upper	SECOND	BATHROOM	WALL	DRYWALL	A	INTACT	BEIGE	Negative	0
31	6/1/2012 14:54	3.21	mg / cm ²	221 4th	lower	FIRST	LIVING ROOM	WALL	DRYWALL	A	INTACT	BEIGE	Negative	0.03
32	6/1/2012 14:56	1.36	mg / cm ²	221 4th	lower	FIRST	LIVING ROOM	WINDOW sill	WOOD	A	INTACT	WHITE	Negative	0.01
33	6/1/2012 14:57	1.37	mg / cm ²	221 4th	lower	FIRST	LIVING ROOM	WINDOW frame	WOOD	A	INTACT	WHITE	Negative	0.02
34	6/1/2012 14:57	1.37	mg / cm ²	221 4th	lower	FIRST	LIVING ROOM	WINDOW frame	WOOD	A	PEELING	WHITE	Negative	0.02
35	6/1/2012 14:57	1.37	mg / cm ²	221 4th	lower	FIRST	LIVING ROOM	WINDOW	WOOD	A	PEELING	WHITE	Negative	0.02
36	6/1/2012 14:58	1.39	mg / cm ²	221 4th	lower	FIRST	BEDROOM1	WINDOW	WOOD	A	PEELING	WHITE	Negative	0.02
37	6/1/2012 14:58	2.3	mg / cm ²	221 4th	lower	FIRST	BEDROOM1	WALL	DRYWALL	D	INTACT	WHITE	Negative	0

Shutter Calibration

*Please note that positive readings marked "calibration" result from procedures to ensure instrument accuracy. They should not be interpreted as a result indicating the presence of lead-based paint.

Lead-Based Paint Testing Report
 XRF Data
 Multi-Unit Residential Building
 219/221 N. 4th St., 221 S. 3rd St.
 St. Charles, IL 60174

READING NO	TIME	DURATION	UNITS	ADDRESS/UNIT	QUADRANT	FLOOR	ROOM	COMPONENT	SUBSTRATE	SIDE	CONDITION	COLOR	RESULTS	LEAD CONCENTRATION (Mg/cm ²)
32	6/1/2012 14:59	3.21	mg / cm ²	221 4th	lower	FIRST	KITCHEN	WALL	DRYWALL	A	INTACT	WHITE	Negative	0
33	6/1/2012 15:00	2.74	mg / cm ²	221 4th	lower	FIRST	BEDROOM2	WALL	DRYWALL	A	INTACT	WHITE	Negative	0
34	6/1/2012 15:00	1.37	mg / cm ²	221 4th	lower	FIRST	BEDROOM2	WINDOW	DRYWALL	D	INTACT	WHITE	Negative	0
35	6/1/2012 15:02	1.37	mg / cm ²	221 4th	upper	SECOND	KITCHEN	WALL	DRYWALL	D	INTACT	WHITE	Negative	0
36	6/1/2012 15:03	2.76	mg / cm ²	221 4th	upper	SECOND	BEDROOM1	WALL	DRYWALL	A	INTACT	WHITE	Negative	0
37	6/1/2012 15:03	1.38	mg / cm ²	221 4th	upper	SECOND	BEDROOM1	WINDOW sill	WOOD	A	PEELING	BEIGE	Negative	0.11
38	6/1/2012 15:04	1.38	mg / cm ²	221 4th	upper	SECOND	BEDROOM1	WINDOW frame	WOOD	A	PEELING	BEIGE	Negative	0.03
39	6/1/2012 15:05	1.38	mg / cm ²	221 4th	upper	SECOND	BEDROOM2	WINDOW frame	WOOD	A	INTACT	BEIGE	Negative	0.05
40	6/1/2012 15:05	1.37	mg / cm ²	221 4th	upper	SECOND	BEDROOM2	WINDOW sill	WOOD	A	INTACT	BEIGE	Negative	0.16
41	6/1/2012 15:07	6.89	mg / cm ²	221 4th	upper	SECOND	BEDROOM2	WALL	DRYWALL	A	INTACT	WHITE	Negative	0.11
42	6/1/2012 15:07	3.21	mg / cm ²	221 4th	upper	SECOND	BATHROOM	WALL	DRYWALL	C	INTACT	WHITE	Negative	0
43	6/1/2012 15:10	2.28	mg / cm ²	219 4th	upper	SECOND	BEDROOM	WALL	DRYWALL	A	INTACT	WHITE	Negative	0
44	6/1/2012 15:10	0.45	mg / cm ²	219 4th	upper	SECOND	BEDROOM	WINDOW	WOOD	A	INTACT	WHITE	Negative	0
45	6/1/2012 15:10	1.37	mg / cm ²	219 4th	upper	SECOND	BEDROOM	WINDOW	WOOD	A	INTACT	WHITE	Negative	0
46	6/1/2012 15:11	1.37	mg / cm ²	219 4th	upper	SECOND	BATHROOM	WALL	DRYWALL	A	INTACT	WHITE	Negative	0
47	6/1/2012 15:11	0.92	mg / cm ²	219 4th	upper	SECOND	BATHROOM	BASEBOARD	WOOD	A	INTACT	WHITE	Negative	0
48	6/1/2012 15:11	1.38	mg / cm ²	219 4th	upper	SECOND	BATHROOM	BASEBOARD	WOOD	A	INTACT	WHITE	Negative	0
49	6/1/2012 15:12	3.21	mg / cm ²	219 4th	upper	SECOND	BATHROOM	BASEBOARD	WOOD	A	INTACT	WHITE	Negative	0
50	6/1/2012 15:12	1.37	mg / cm ²	219 4th	upper	SECOND	LIVING ROOM	WALL	DRYWALL	A	INTACT	WHITE	Negative	0
51	6/1/2012 15:13	1.37	mg / cm ²	219 4th	upper	SECOND	LIVING ROOM	WINDOW	WOOD	A	INTACT	WHITE	Negative	0
52	6/1/2012 15:13	1.83	mg / cm ²	219 4th	upper	SECOND	LIVING ROOM	BASEBOARD	WOOD	D	INTACT	WHITE	Negative	0
53	6/1/2012 15:13	1.38	mg / cm ²	219 4th	upper	SECOND	KITCHEN	WALL	DRYWALL	A	INTACT	WHITE	Negative	0
54	6/1/2012 15:15	3.2	mg / cm ²	221 3rd	upper	SECOND	KITCHEN	WINDOW	WOOD	B	INTACT	WHITE	Negative	0
55	6/1/2012 15:18	4.12	mg / cm ²			FIRST	BEDROOM	WALL	DRYWALL	A	INTACT	BEIGE	Negative	0
56	6/1/2012 15:19	5.5	mg / cm ²										Positive	1
57	6/1/2012 15:19	5.97	mg / cm ²										Positive	1

Shutter Calibration

*Please note that positive readings marked "calibration" result from procedures to ensure instrument accuracy. They should not be interpreted as a result indicating the presence of lead-based paint.

Appendix C

XRF Documentation

Performance Characteristic Sheet

EFFECTIVE DATE: September 24, 2004

EDITION NO.: 1

MANUFACTURER AND MODEL:

Make: Niton LLC

Tested Model: XLP 300

Source: ^{109}Cd

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 2579, 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

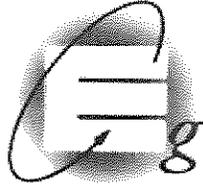
CLASSIFICATION RESULTS:

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*.



Attachment C

E n v i r o n m e n t a l C o n s u l t i n g G r o u p , I n c .

June 8, 2012

Mr. Clinton Anderson
Colonial Café and Ice Cream
333 N. Randall Road
St. Charles, Illinois 60174

Re: **Lead-Based Paint Inspection Report**
Multi-Unit Residential Property – Units A and B
120 N. 4th St.
St. Charles, Illinois

Dear Mr. Anderson:

In response to your request, Environmental Consulting Group, Inc. (ECG) has completed testing of suspect lead-based paint in the multi-unit residential building located at 120 North 4th Street, in St. Charles, Illinois. This report provides an executive summary, an outline of the scope-of-work, and analytical results.

1.0 Executive Summary

On June 1, 2012, ECG used an X-Ray Fluorescence (XRF) analyzer to test various surfaces in the subject building for the presence of lead-based paint. All painted components found to contain lead-based paint were observed to be in good, intact condition at the time of the inspection. **Lead-based paint was found on the following building components:**

- **Walls**
- **Window Sills**

2.0 Scope-of-Work

The scope-of-work for this project included testing painted surfaces throughout the two units within the subject building.

The inspection was conducted by ECG representative Mr. Luke Nienhaus, a State of Illinois-licensed lead inspector. The inspection protocol followed the guidelines published by the Department of Housing and Urban Development (HUD). ECG inspector credentials are located in Appendix A.

3.0 Analytical Testing

A Niton XRF analyzer, model XLp300, was utilized to test component surfaces for the presence of lead-based paint. The XRF utilizes a radioactive Cadmium source to determine the presence of lead in a surface. The Cadmium source releases a controlled gamma ray beam on to a surface, and, by measuring the diffraction gradient of the reflected emissions, the XRF detector can determine whether or not lead is present in the surface material (e.g. paint). To ensure an accurate reading, the XRF was calibrated at the beginning of the inspection.

Required information regarding the XRF analyzer is located in Appendix C.

4.0 Inspection Results

According to the Environmental Protection Agency (EPA), the definition of lead-based paint is a paint that contains greater than one milligram of lead per square centimeter ($>1.0 \text{ mg/cm}^2$). The table below includes all the readings that were found to contain lead-based paint:

Lead-Based Paint Readings

Reading Number	Paint Color	Component – Unit	Lead Content (mg/cm²)
9	Beige	Bathroom Wall – A	2.2
10	Beige	Bathroom Wall – A	1.6
14	Beige	Bathroom Wall – A	1.1
19	Beige	Bedroom 1 Window Sill – B	3.1
20	Beige	Bedroom 1 Window Sill – B	2.7
25	Beige	Bedroom 2 Window Sill – B	4.4
29	Beige	Kitchen Wall – B	4.7

Reading Number	Paint Color	Component – Unit	Lead Content (mg/cm ²)
30	Beige	Kitchen Wall – B	6.8
32	Beige	Kitchen Wall – B	5.5
33	Beige	Kitchen Window Sill – B	2.8
35	Beige	Kitchen Window – B	3.0

A complete list of all tested painted components can be found in Appendix B.

5.0 Conclusions

A total of 33 XRF Analyzer readings were collected from painted surfaces within the subject building. **Lead-based paint was found on the following building components:**

- **Walls**
- **Window Sills**

All painted components found to contain lead-based paint were observed to be in good, intact condition at the time of the inspection.

6.0 Qualifications

ECG believes this study was developed in general accordance with the technical standards of practice for a lead-based paint survey at the time the study was conducted. The standard of care exercised for this study was in accordance with generally accepted practices and a reasonable effort was made to ensure that the information presented in this report is materially complete and accurate.

The conclusions presented in this report are professional opinions based solely upon visual observations of the site, analytical data, and other research as described in this report. They are intended for the sole use of our client.

Mr. Clinton Anderson
June 8, 2012
Page 4

If you have any questions or comments, please contact our office.

Sincerely,

ENVIRONMENTAL CONSULTING GROUP, INC.



Luke Nienhaus
Project Manager

Appendices

Appendix A – ECG Certifications

Appendix B – XRF Data

Appendix C – XRF Documentation

Appendix A

ECG Certifications



**LEAD RISK
ASSESSOR LICENSE**

LEAD ID	ISSUED	EXPIRES
012854	2/9/2012	1/31/2013

Luke C. Nienhaus
3717 N. Kenmore Ave., Apt. #3
Chicago, IL 60613



ILLINOIS LEAD PROGRAM
Environmental Health



Occupational Training & Supply, Inc.

7233 Adams Street • Willowbrook, IL 60527 • (630) 655-3900

Luke Niehaus

has successfully completed the 8 hour Lead Risk Assessor Refresher course and has passed the competency exam with a minimum score of 70%. This course is accredited by the Illinois Department of Public Health in accordance with the Illinois Lead Poisoning Prevention Code.

Lead Risk Assessor Refresher

Course Date: 10/6/2010
Expiration Date: 10/6/2013

Exam Date: 10/6/2010
Certificate: LRAR1010062436

Kathy DeSalvo
Kathy DeSalvo, Director

2010

Appendix B

XRF Data

Lead-Based Paint Testing Report
 XRF Data
 Multi-Unit Residential Building
 120 N. 4th St.
 St. Charles, IL 60174

READING NO	TIME	DURATION	UNITS	ADDRESS/UNIT	FLOOR	ROOM	COMPONENT	SUBSTRATE	SIDE	CONDITION	COLOR	RESULTS	LEAD CONCENTRATION (Mg/Cm ²)
1	6/1/2012 14:01	42.09	cps										2.91
2	6/1/2012 14:04	20	mg / cm ^2									Positive	1
3	6/1/2012 14:04	20	mg / cm ^2									Positive	1
4	6/1/2012 14:04	20	mg / cm ^2									Positive	1
5	6/1/2012 14:06	2.3	mg / cm ^2	120 4th A	FIRST	KITCHEN	WALL	DRYWALL	A	INTACT	WHITE	Negative	0.01
6	6/1/2012 14:07	1.83	mg / cm ^2	120 4th A	FIRST	LIVING ROOM	WALL	DRYWALL	C	INTACT	WHITE	Negative	0
7	6/1/2012 14:09	3.23	mg / cm ^2	120 4th A	FIRST	DINING	WALL	DRYWALL	A	INTACT	WHITE	Negative	0
8	6/1/2012 14:10	2.76	mg / cm ^2	120 4th A	FIRST	BEDROOM	WALL	DRYWALL	A	INTACT	BEIGE	Negative	0
9	6/1/2012 14:11	7.79	mg / cm ^2	120 4th A	FIRST	BATHROOM	WALL	DRYWALL	B	INTACT	BEIGE	Positive	2.2
10	6/1/2012 14:11	12.86	mg / cm ^2	120 4th A	FIRST	BATHROOM	WALL	DRYWALL	B	INTACT	BEIGE	Positive	1.6
11	6/1/2012 14:12	1.38	mg / cm ^2	120 4th A	FIRST	BATHROOM	WINDOW SILL	WOOD	B	INTACT	BEIGE	Negative	0.08
12	6/1/2012 14:12	1.83	mg / cm ^2	120 4th A	FIRST	BATHROOM	WINDOW FRAME	WOOD	B	INTACT	BEIGE	Negative	0.05
13	6/1/2012 14:13	1.84	mg / cm ^2	120 4th A	FIRST	BATHROOM	WALL	DRYWALL	A	INTACT	BEIGE	Negative	0
14	6/1/2012 14:14	1.7	mg / cm ^2	120 4th A	FIRST	BATHROOM	WALL	DRYWALL	A	INTACT	BEIGE	Positive	1.1
15	6/1/2012 14:14	1.37	mg / cm ^2	120 4th A	FIRST	BATHROOM	WALL	DRYWALL	A	INTACT	BEIGE	Negative	0
16	6/1/2012 14:15	1.38	mg / cm ^2	120 4th A	FIRST	BEDROOM1	WALL	DRYWALL	C	INTACT	BEIGE	Negative	0
17	6/1/2012 14:18	2.3	mg / cm ^2	120 4th B	SECOND	HALL common	WALL	DRYWALL	A	INTACT	BEIGE	Negative	0
18	6/1/2012 14:19	2.28	mg / cm ^2	120 4th B	SECOND	BEDROOM1	WALL	DRYWALL	A	INTACT	BEIGE	Negative	0.1
19	6/1/2012 14:20	1.37	mg / cm ^2	120 4th B	SECOND	BEDROOM1	WINDOW sill	WOOD	A	INTACT	BEIGE	Positive	3.1
20	6/1/2012 14:20	1.38	mg / cm ^2	120 4th B	SECOND	BEDROOM1	WINDOW sill	WOOD	A	INTACT	BEIGE	Positive	2.7
21	6/1/2012 14:20	1.38	mg / cm ^2	120 4th B	SECOND	BEDROOM1	WINDOW frame	WOOD	A	INTACT	BEIGE	Negative	0.12
22	6/1/2012 14:21	1.37	mg / cm ^2	120 4th B	SECOND	BEDROOM1	WINDOW frame	WOOD	A	INTACT	BEIGE	Negative	0.27
23	6/1/2012 14:21	1.39	mg / cm ^2	120 4th B	SECOND	BEDROOM1	BASEBOARD	WOOD	A	CRACKED	BEIGE	Negative	0.16
24	6/1/2012 14:22	1.38	mg / cm ^2	120 4th B	SECOND	BEDROOM2	BASEBOARD	WOOD	A	CRACKED	BEIGE	Negative	0.07
25	6/1/2012 14:22	0.92	mg / cm ^2	120 4th B	SECOND	BEDROOM2	WINDOW sill	WOOD	B	INTACT	BEIGE	Positive	4.4
26	6/1/2012 14:23	1.83	mg / cm ^2	120 4th B	SECOND	BEDROOM2	WINDOW frame	WOOD	B	INTACT	BEIGE	Negative	0.13
27	6/1/2012 14:25	3.21	mg / cm ^2	120 4th B	SECOND	BEDROOM2	WALL	DRYWALL	B	INTACT	BEIGE	Negative	0.01
28	6/1/2012 14:25	1.38	mg / cm ^2	120 4th B	SECOND	BEDROOM2	RADIATOR	METAL	A	PEELING	BEIGE	Negative	0.05
29	6/1/2012 14:27	1.38	mg / cm ^2	120 4th B	SECOND	KITCHEN	WALL	DRYWALL	A	INTACT	BEIGE	Positive	4.7
30	6/1/2012 14:28	1.37	mg / cm ^2	120 4th B	SECOND	KITCHEN	WALL	DRYWALL	A	INTACT	BEIGE	Positive	6.8
31	6/1/2012 14:28	3.24	mg / cm ^2	120 4th B	SECOND	KITCHEN	WALL	DRYWALL	B	INTACT	BEIGE	Negative	0.7

Shutter Calibration

*Please note that positive readings marked "calibration" result from procedures to ensure instrument accuracy. They should not be interpreted as a result indicating the presence of lead-based paint.

Lead-Based Paint Testing Report
 XRF Data
 Multi-Unit Residential Building
 120 N. 4th St.
 St. Charles, IL 60174

READING NO	TIME	DURATION	UNITS	ADDRESS/UNIT	FLOOR	ROOM	COMPONENT	SUBSTRATE	SIDE	CONDITION	COLOR	RESULTS	LEAD CONCENTRATION (Mg/Cm ²)	
32	6/1/2012 14:29	0.92	mg / cm ²	120 4th B	SECOND	KITCHEN	WALL	DRYWALL	C	INTACT	BEIGE	Positive	5.5	
33	6/1/2012 14:29	0.91	mg / cm ²	120 4th B	SECOND	KITCHEN	WINDOW SILL	WOOD	C	PEELING	BEIGE	Positive	2.8	
34	6/1/2012 14:29	1.38	mg / cm ²	120 4th B	SECOND	KITCHEN	WINDOW FRAME	WOOD	C	PEELING	BEIGE	Negative	0.17	
35	6/1/2012 14:30	0.91	mg / cm ²	120 4th B	SECOND	KITCHEN	WINDOW	WOOD	C	PEELING	BEIGE	Positive	3	
36	6/1/2012 14:30	1.38	mg / cm ²	120 4th B	SECOND	KITCHEN	TRIM	WOOD	D	INTACT	BEIGE	Negative	0.08	
37	6/1/2012 14:31	1.37	mg / cm ²	120 4th B	SECOND	BATHROOM	WALL	DRYWALL	C	INTACT	BEIGE	Negative	0.06	
38	6/1/2012 15:18	20	mg / cm ²	Shutter Calibration									Positive	1
39	6/1/2012 15:19	20	mg / cm ²										Positive	1
40	6/1/2012 15:19	20	mg / cm ²										Positive	1
													Positive	1

*Please note that positive readings marked "calibration" result from procedures to ensure instrument accuracy. They should not be interpreted as a result indicating the presence of lead-based paint.

Appendix C

XRF Documentation

Performance Characteristic Sheet

EFFECTIVE DATE: September 24, 2004

EDITION NO.: 1

MANUFACTURER AND MODEL:

Make: *Niton LLC*

Tested Model: *XLp 300*

Source: ¹⁰⁹Cd

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 2579, 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*.