

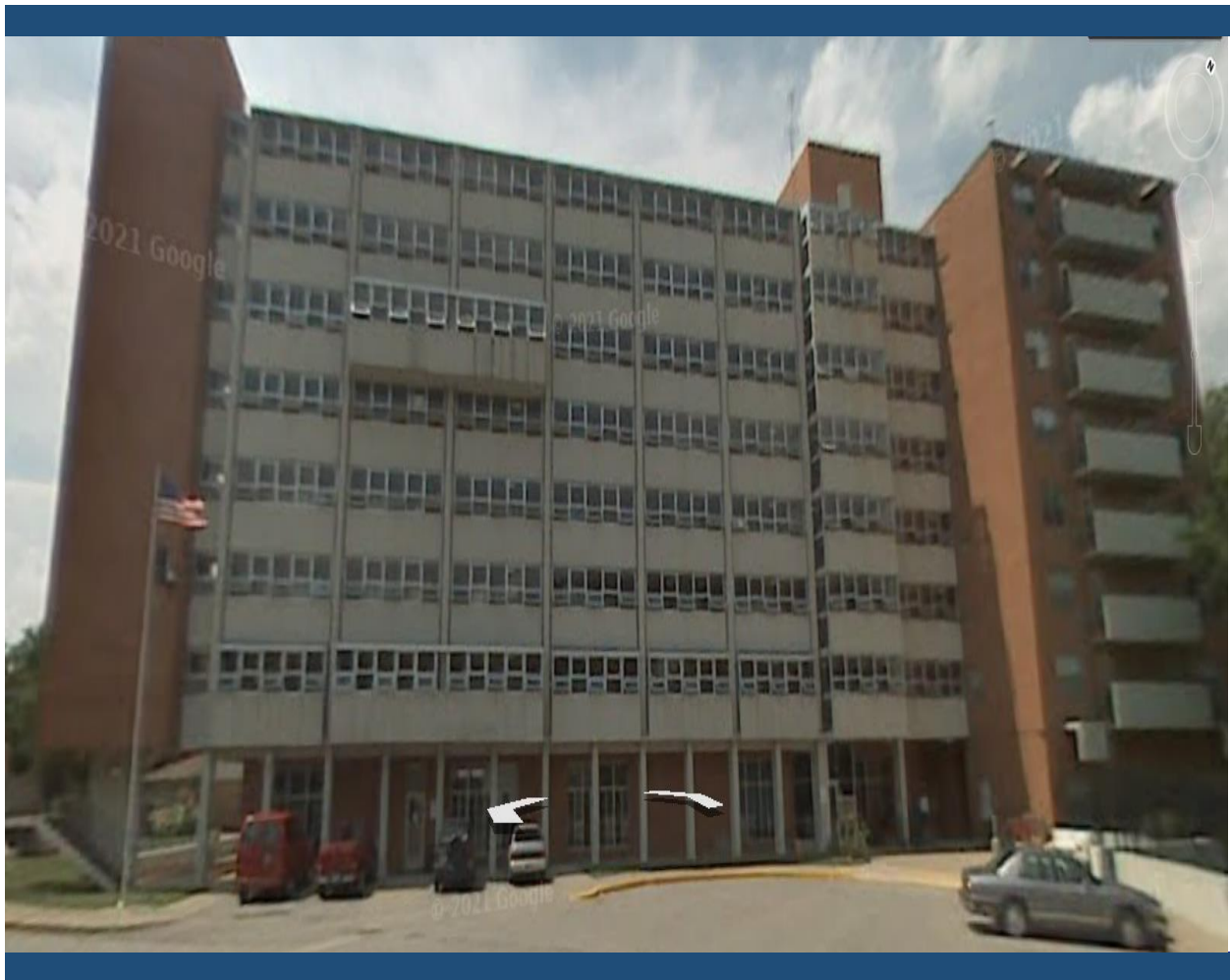
# Lead Based Paint Inspection Report

Property Address:  
**Parkview Tower**  
**125 Fischer Drive**  
**New Albany, Indiana**

Submitted to:  
**New Albany Housing Authority**  
**300 Erni Avenue**  
**New Albany, Indiana 47150**

Project Number: **300294-01**

Dated: **September 1, 2022**



Prepared By:

427 Main Street  
Evansville, Indiana 47708  
(812) 424-7768





September 1, 2022

New Albany Housing Authority  
ATTN: Mr. Evan Thie  
300 Erni Avenue  
New Albany, Indiana 47150

RE: The Lead Based Paint Inspection of the Parkview Tower property located at  
125 Fischer Drive in New Albany, Indiana

Dear Mr. Thie:

On July 13 and 14, 2022, Mr. Brian Moskalick (Risk Assessor IND001631, exp 11/5/24) on behalf of EnviroForensics' conducted a lead based paint inspection at the abovementioned property. Based on the date of construction and HUD guidelines, 24 units were randomly selected for testing.

Evaluation of the painted components on the interior of the units was conducted using a handheld Protec LPA-1B x-ray fluorescence (XRF) analyzer (serial #4154). XRF technology allows for instantaneous sampling results of painted components. Results are measured by milligrams per square centimeter (mg/cm<sup>2</sup>) and those results found to be over 1.0 mg/cm<sup>2</sup> are considered to be lead based paint.

None of the building components were found to contain lead based paint. A complete listing of the components tested by XRF is included with this report. Room locations designated by "A" on the XRF Sample Form indicate the wall closest to the street. Room locations designated "B", "C" and "D" follow clockwise from wall "A". Also included with this report is the Performance Characteristics Sheet for the XRF analyzer.

We would like to thank you for utilizing the services of EnviroForensics, and if you have any questions or comments regarding this report, please contact us at the address or telephone number below.

Sincerely,

Joseph Stephens  
Regional Director

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**ATTACHMENT I**  
**XRF SAMPLE FORMS**

<u>Unit 204</u>	<u>Paint Color</u>	<u>XRF Reading</u>	<u>Substrate</u>	<u>Date</u>	<u>Calibration</u>
Kitchen A Wall	White	0	D	7/11/2022	Pre 1.0
B Wall	White	0	D		Post 1.0
C Wall	White	0	D		
D Wall	White	0	D		
Living Room A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Pantry Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Living Room Door/Frame	White	0	W/M		
Ceiling	White	0	C		
Bath Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Door/Frame	White	0	W/M		
Rear Door/Frame	White	0	W/M		
Baseboards	White	0	W		

<u>Unit 206</u>	<u>Paint Color</u>	<u>XRF Reading</u>	<u>Substrate</u>	<u>Date</u>	<u>Calibration</u>
Kitchen A Wall	White	0	D	7/11/2022	Pre 1.0
B Wall	White	0	D		Post 1.0
C Wall	White	0	D		
D Wall	White	0	D		
Living Room A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Pantry Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Living Room Door/Frame	White	0	W/M		
Ceiling	White	0	C		
Bath Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Door/Frame	White	0	W/M		
Baseboards	White	0	W		

<u>Unit 212</u>	<u>Paint Color</u>	<u>XRF Reading</u>	<u>Substrate</u>	<u>Date</u>	<u>Calibration</u>
Kitchen A Wall	White	0	D	7/11/2022	Pre 1.0
B Wall	White	0	D		Post 1.0
C Wall	White	0	D		
D Wall	White	0	D		
Living Room A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom 1 A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Pantry Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Closet 1 Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Living Room Door/Frame	White	0	W/M		
Ceiling	White	0	C		
Bath Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom 1 Door/Frame	White	0	W/M		
Baseboards	White	0	W		
Bedroom 2 A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom 2 Door/Frame	White	0	W/M		
Bedroom Closet 2 Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		

<u>Unit 302</u>	<u>Paint Color</u>	<u>XRF Reading</u>	<u>Substrate</u>	<u>Date</u>	<u>Calibration</u>
Kitchen A Wall	White	0	D	7/11/2022	Pre 1.0
B Wall	White	0	D		Post 1.0
C Wall	White	0	D		
D Wall	White	0	D		
Living Room A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Pantry Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Living Room Door/Frame	White	0	W/M		
Ceiling	White	0	C		
Bath Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Door/Frame	White	0	W/M		
Baseboards	White	0	W		

<u>Unit 304</u>	<u>Paint Color</u>	<u>XRF Reading</u>	<u>Substrate</u>	<u>Date</u>	<u>Calibration</u>
Kitchen A Wall	White	0	D	7/11/2022	Pre 1.0
B Wall	White	0	D		Post 1.0
C Wall	White	0	D		
D Wall	White	0	D		
Living Room A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Pantry Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Living Room Door/Frame	White	0	W/M		
Ceiling	White	0	C		
Bath Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Door/Frame	White	0	W/M		
Baseboards	White	0	W		

<u>Unit 306</u>	<u>Paint Color</u>	<u>XRF Reading</u>	<u>Substrate</u>	<u>Date</u>	<u>Calibration</u>
Kitchen A Wall	White	0	D	7/11/2022	Pre 1.0
B Wall	White	0	D		Post 1.0
C Wall	White	0	D		
D Wall	White	0	D		
Living Room A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Pantry Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Living Room Door/Frame	White	0	W/M		
Ceiling	White	0	C		
Bath Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Door/Frame	White	0	W/M		
Baseboards	White	0	W		

<u>Unit 308</u>	<u>Paint Color</u>	<u>XRF Reading</u>	<u>Substrate</u>	<u>Date</u>	<u>Calibration</u>
Kitchen A Wall	White	0	D	7/11/2022	Pre 1.0
B Wall	White	0	D		Post 1.0
C Wall	White	0	D		
D Wall	White	0	D		
Living Room A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Pantry Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Living Room Door/Frame	White	0	W/M		
Ceiling	White	0	C		
Bath Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Door/Frame	White	0	W/M		
Baseboards	White	0	W		

<u>Unit 402</u>	<u>Paint Color</u>	<u>XRF Reading</u>	<u>Substrate</u>	<u>Date</u>	<u>Calibration</u>
Kitchen A Wall	White	0	D	7/11/2022	Pre 1.0
B Wall	White	0	D		Post 1.0
C Wall	White	0	D		
D Wall	White	0	D		
Living Room A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Pantry Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Living Room Door/Frame	White	0	W/M		
Ceiling	White	0	C		
Bath Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Door/Frame	White	0	W/M		
Baseboards	White	0	W		

<u>Unit 404</u>	<u>Paint Color</u>	<u>XRF Reading</u>	<u>Substrate</u>	<u>Date</u>	<u>Calibration</u>
Kitchen A Wall	White	0	D	7/11/2022	Pre 1.0
B Wall	White	0	D		Post 1.0
C Wall	White	0	D		
D Wall	White	0	D		
Living Room A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Pantry Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Living Room Door/Frame	White	0	W/M		
Ceiling	White	0	C		
Bath Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Door/Frame	White	0	W/M		
Baseboards	White	0	W		

<u>Unit 406</u>	<u>Paint Color</u>	<u>XRF Reading</u>	<u>Substrate</u>	<u>Date</u>	<u>Calibration</u>
Kitchen A Wall	White	0	D	7/11/2022	Pre 1.0
B Wall	White	0	D		Post 1.0
C Wall	White	0	D		
D Wall	White	0	D		
Living Room A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Pantry Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Living Room Door/Frame	White	0	W/M		
Ceiling	White	0	C		
Bath Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Door/Frame	White	0	W/M		
Baseboards	White	0	W		

<u>Unit 502</u>	<u>Paint Color</u>	<u>XRF Reading</u>	<u>Substrate</u>	<u>Date</u>	<u>Calibration</u>
Kitchen A Wall	White	0	D	7/11/2022	Pre 1.0
B Wall	White	0	D		Post 1.0
C Wall	White	0	D		
D Wall	White	0	D		
Living Room A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Pantry Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Living Room Door/Frame	White	0	W/M		
Ceiling	White	0	C		
Bath Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Door/Frame	White	0	W/M		
Baseboards	White	0	W		

<u>Unit 504</u>	<u>Paint Color</u>	<u>XRF Reading</u>	<u>Substrate</u>	<u>Date</u>	<u>Calibration</u>
Kitchen A Wall	White	0	D	7/11/2022	Pre 1.0
B Wall	White	0	D		Post 1.0
C Wall	White	0	D		
D Wall	White	0	D		
Living Room A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Pantry Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Living Room Door/Frame	White	0	W/M		
Ceiling	White	0	C		
Bath Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Door/Frame	White	0	W/M		
Baseboards	White	0	W		

<u>Unit 506</u>	<u>Paint Color</u>	<u>XRF Reading</u>	<u>Substrate</u>	<u>Date</u>	<u>Calibration</u>
Kitchen A Wall	White	0	D	7/12/2022	Pre 1.0
B Wall	White	0	D		Post 1.0
C Wall	White	0	D		
D Wall	White	0	D		
Living Room A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Pantry Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Living Room Door/Frame	White	0	W/M		
Ceiling	White	0	C		
Bath Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Door/Frame	White	0	W/M		
Baseboards	White	0	W		

<u>Unit 508</u>	<u>Paint Color</u>	<u>XRF Reading</u>	<u>Substrate</u>	<u>Date</u>	<u>Calibration</u>
Kitchen A Wall	White	0	D	7/12/2022	Pre 1.0
B Wall	White	0	D		Post 1.0
C Wall	White	0	D		
D Wall	White	0	D		
Living Room A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Pantry Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Living Room Door/Frame	White	0	W/M		
Ceiling	White	0	C		
Bath Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Door/Frame	White	0	W/M		
Baseboards	White	0	W		

<u>Unit 602</u>	<u>Paint Color</u>	<u>XRF Reading</u>	<u>Substrate</u>	<u>Date</u>	<u>Calibration</u>
Kitchen A Wall	White	0	D	7/12/2022	Pre 1.0
B Wall	White	0	D		Post 1.0
C Wall	White	0	D		
D Wall	White	0	D		
Living Room A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Pantry Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Living Room Door/Frame	White	0	W/M		
Ceiling	White	0	C		
Bath Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Door/Frame	White	0	W/M		
Baseboards	White	0	W		

<u>Unit 606</u>	<u>Paint Color</u>	<u>XRF Reading</u>	<u>Substrate</u>	<u>Date</u>	<u>Calibration</u>
Kitchen A Wall	White	0	D	7/12/2022	Pre 1.0
B Wall	White	0	D		Post 1.0
C Wall	White	0	D		
D Wall	White	0	D		
Living Room A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Pantry Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Living Room Door/Frame	White	0	W/M		
Ceiling	White	0	C		
Bath Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Door/Frame	White	0	W/M		
Baseboards	White	0	W		
rear Door/Frame	White	0	W/M		

<u>Unit 606</u>	<u>Paint Color</u>	<u>XRF Reading</u>	<u>Substrate</u>	<u>Date</u>	<u>Calibration</u>
Kitchen A Wall	White	0	D	7/12/2022	Pre 1.0
B Wall	White	0	D		Post 1.0
C Wall	White	0	D		
D Wall	White	0	D		
Living Room A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Pantry Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Living Room Door/Frame	White	0	W/M		
Ceiling	White	0	C		
Bath Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Door/Frame	White	0	W/M		
Baseboards	White	0	W		

<u>Unit 608</u>	<u>Paint Color</u>	<u>XRF Reading</u>	<u>Substrate</u>	<u>Date</u>	<u>Calibration</u>
Kitchen A Wall	White	0	D	7/12/2022	Pre 1.0
B Wall	White	0	D		Post 1.0
C Wall	White	0	D		
D Wall	White	0	D		
Living Room A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Pantry Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Living Room Door/Frame	White	0	W/M		
Ceiling	White	0	C		
Bath Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Door/Frame	White	0	W/M		
Baseboards	White	0	W		

<u>Unit 704</u>	<u>Paint Color</u>	<u>XRF Reading</u>	<u>Substrate</u>	<u>Date</u>	<u>Calibration</u>
Kitchen A Wall	White	0	D	7/12/2022	Pre 1.0
B Wall	White	0	D		Post 1.0
C Wall	White	0	D		
D Wall	White	0	D		
Living Room A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Pantry Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Living Room Door/Frame	White	0	W/M		
Ceiling	White	0	C		
Bath Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Door/Frame	White	0	W/M		
Baseboards	White	0	W		

<u>Unit 706</u>	<u>Paint Color</u>	<u>XRF Reading</u>	<u>Substrate</u>	<u>Date</u>	<u>Calibration</u>
Kitchen A Wall	White	0	D	7/12/2022	Pre 1.0
B Wall	White	0	D		Post 1.0
C Wall	White	0	D		
D Wall	White	0	D		
Living Room A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Pantry Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Living Room Door/Frame	White	0	W/M		
Ceiling	White	0	C		
Bath Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Door/Frame	White	0	W/M		
Baseboards	White	0	W		

<u>Unit 708</u>	<u>Paint Color</u>	<u>XRF Reading</u>	<u>Substrate</u>	<u>Date</u>	<u>Calibration</u>
Kitchen A Wall	White	0	D	7/12/2022	Pre 1.0
B Wall	White	0	D		Post 1.0
C Wall	White	0	D		
D Wall	White	0	D		
Living Room A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Pantry Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Living Room Door/Frame	White	0	W/M		
Ceiling	White	0	C		
Bath Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Door/Frame	White	0	W/M		
Baseboards	White	0	W		
Rear Door/Frame	White	0	W/M		

<u>Unit 802</u>	<u>Paint Color</u>	<u>XRF Reading</u>	<u>Substrate</u>	<u>Date</u>	<u>Calibration</u>
Kitchen A Wall	White	0	D	7/12/2022	Pre 1.0
B Wall	White	0	D		Post 1.0
C Wall	White	0	D		
D Wall	White	0	D		
Living Room A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Pantry Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Living Room Door/Frame	White	0	W/M		
Ceiling	White	0	C		
Bath Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Door/Frame	White	0	W/M		
Baseboards	White	0	W		

<u>Unit 804</u>	<u>Paint Color</u>	<u>XRF Reading</u>	<u>Substrate</u>	<u>Date</u>	<u>Calibration</u>
Kitchen A Wall	White	0	D	7/12/2022	Pre 1.0
B Wall	White	0	D		Post 1.0
C Wall	White	0	D		
D Wall	White	0	D		
Living Room A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Pantry Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Living Room Door/Frame	White	0	W/M		
Ceiling	White	0	C		
Bath Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Door/Frame	White	0	W/M		
Baseboards	White	0	W		

<u>Unit 806</u>	<u>Paint Color</u>	<u>XRF Reading</u>	<u>Substrate</u>	<u>Date</u>	<u>Calibration</u>
Kitchen A Wall	White	0	D	7/12/2022	Pre 1.0
B Wall	White	0	D		Post 1.0
C Wall	White	0	D		
D Wall	White	0	D		
Living Room A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Pantry Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Closet Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Living Room Door/Frame	White	0	W/M		
Ceiling	White	0	C		
Bath Door/Frame	White	0	W/M		
A Wall	White	0	D		
B Wall	White	0	D		
C Wall	White	0	D		
D Wall	White	0	D		
Bedroom Door/Frame	White	0	W/M		
Baseboards	White	0	W		

# ATTACHMENT II

## PERFORMANCE CHARACTERISTIC SHEET

# Performance Characteristic Sheet

EFFECTIVE DATE: October 24, 2000

EDITION NO.: 4

## MANUFACTURER AND MODEL:

Make: Radiation Monitoring Devices

Model: LPA-1

Source: <sup>57</sup>Co

Note: This sheet supersedes all previous sheets for the XRF instrument of the make, model, and source shown above for instruments sold or serviced after June 26, 1995. For other instruments, see prior editions.

## FIELD OPERATION GUIDANCE

### OPERATING PARAMETERS

Quick mode or nominal 30-second standard mode readings.

### XRF CALIBRATION CHECK LIMITS

0.7 to 1.3 mg/cm <sup>2</sup> (inclusive)
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### SUBSTRATE CORRECTION:

For XRF results below 4.0 mg/cm<sup>2</sup>, substrate correction is recommended for:

Metal using 30-second standard mode readings.

None using quick mode readings.

Substrate correction is not needed for:

Brick, Concrete, Drywall, Plaster, and Wood using 30-second standard mode readings

Brick, Concrete, Drywall, Metal, Plaster, and Wood using quick mode readings

### THRESHOLDS:

30-SECOND STANDARD MODE READING DESCRIPTION	SUBSTRATE	THRESHOLD (mg/cm <sup>2</sup> )
Results corrected for substrate bias on metal substrate only	Brick	1.0
	Concrete	1.0
	Drywall	1.0
	Metal	0.9
	Plaster	1.0
	Wood	1.0

QUICK MODE READING DESCRIPTION	SUBSTRATE	THRESHOLD (mg/cm <sup>2</sup> )
Readings 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 on approximately 150 test locations in July 1995. The instrument that performed testing in September had a new source installed in June 1995 with 12 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.

### XRF CALIBRATION CHECK:

The calibration of the XRF instrument should be checked using the paint film nearest 1.0 mg/cm<sup>2</sup> in the NIST Standard Reference Material (SRM) used (e.g., for NIST SRM 2579, use the 1.02 mg/cm<sup>2</sup> 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 VALUE COMPUTATION

Chapter 7 of the HUD Guidelines provides guidance on correcting XRF results for substrate bias. Supplemental guidance for using the paint film nearest 1.0 mg/cm<sup>2</sup> for substrate correction is provided:

XRF results are corrected for substrate bias by subtracting from each XRF result a correction value determined separately in each house for single-family housing or in each development for multifamily housing, for each substrate. The correction value is an average of XRF readings taken over the NIST SRM paint film nearest to 1.0 mg/cm<sup>2</sup> at test locations that have been scraped bare of their paint covering. Compute the correction values as follows:

Using the same XRF instrument, take three readings on a bare substrate area covered with the NIST SRM paint film nearest 1 mg/cm<sup>2</sup>. Repeat this procedure by taking three more readings on a second bare substrate area of the same substrate covered with the NIST SRM.

Compute the correction value for each substrate type where XRF readings indicate substrate correction is needed by computing the average of all six readings as shown below.

For each substrate type (the 1.02 mg/cm<sup>2</sup> NIST SRM is shown in this example; use the actual lead loading of the NIST SRM used for substrate correction):

$$\text{Correction value} = (1\text{st} + 2\text{nd} + 3\text{rd} + 4\text{th} + 5\text{th} + 6\text{th Reading}) / 6 - 1.02 \text{ mg/cm}^2$$

Repeat this procedure for each substrate requiring substrate correction in the house or housing development.

### 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 either 15-second readings or 60-second readings.

Conduct XRF re-testing 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.

#### **BIAS AND PRECISION:**

Do not use these bias and precision data to correct for substrate bias. These bias and precision data were computed without substrate correction from samples with reported laboratory results less than 4.0 mg/cm<sup>2</sup> lead. The data which were used to determine the bias and precision estimates given in the table below have the following properties. During the July 1995 testing, there were 15 test locations with a laboratory-reported result equal to or greater than 4.0 mg/cm<sup>2</sup> lead. Of these, one 30-second standard mode reading was less than 1.0 mg/cm<sup>2</sup> and none of the quick mode readings were less than 1.0 mg/cm<sup>2</sup>. The instrument that tested in July is representative of instruments sold or serviced after June 26, 1995. These data are for illustrative purposes only. Actual bias must be determined on the site. Results provided above already account for bias and precision. Bias and precision ranges are provided to show the variability found between machines of the same model.

30-SECOND STANDARD MODE READING MEASURED AT	SUBSTRATE	BIAS (mg/cm <sup>2</sup> )	PRECISION* (mg/cm <sup>2</sup> )
0.0 mg/cm <sup>2</sup>	Brick	0.0	0.1
	Concrete	0.0	0.1
	Drywall	0.1	0.1
	Metal	0.3	0.1
	Plaster	0.1	0.1
	Wood	0.0	0.1
0.5 mg/cm <sup>2</sup>	Brick	0.0	0.2
	Concrete	0.0	0.2
	Drywall	0.0	0.2
	Metal	0.2	0.2
	Plaster	0.0	0.2
	Wood	0.0	0.2
1.0 mg/cm <sup>2</sup>	Brick	0.0	0.3
	Concrete	0.0	0.3
	Drywall	0.0	0.3
	Metal	0.2	0.3
	Plaster	0.0	0.3
	Wood	0.0	0.3
2.0 mg/cm <sup>2</sup>	Brick	-0.1	0.4
	Concrete	-0.1	0.4
	Drywall	-0.1	0.4
	Metal	0.1	0.4
	Plaster	-0.1	0.4
	Wood	-0.1	0.4

\* Precision at 1 standard deviation.

**CLASSIFICATION RESULTS:**

XRF results are classified as positive if they are greater than the upper boundary of the inconclusive range, and negative if they are less than the lower boundary of the inconclusive range, or inconclusive if in between. The inconclusive range includes both its upper and lower bounds. Earlier editions of this *XRF Performance Characteristics Sheet* did not include both bounds of the inconclusive range as "inconclusive." While this edition of the Performance Characteristics Sheet uses a different system, the specific XRF readings that are considered positive, negative, or inconclusive for a given XRF model and substrate remain unchanged, so previous inspection results are not affected.

**DOCUMENTATION:**

An EPA 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. A HUD document titled *A Nonparametric Method for Estimating the 5th and 95th Percentile Curves of Variable-Time XRF Readings Based on Monotone Regression* provides supplemental information on the methodology for variable-time XRF instruments. A copy of this document can be obtained from the HUD lead web site, [www.hud.gov/lea](http://www.hud.gov/lea).

This edition of the XRF Performance Characteristic Sheet was developed by QuanTech, Inc., under a contract from the U.S. Department of Housing and Urban Development (HUD). 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*