

603 South Polk Street, Tacoma, WA 98444 | 253-620-5400

#### AMENDMENT TO THE SOLICITATION

Project: CDBG-23-01 Amendment ID #: CDBG 01-2 Date: Tuesday, April 4, 2023

#### CLARIFICATION OF SCOPE AND CONTRACTING

Several items in the Scope of Work for the Project #CDBG-23-01, for Exterior Painting Services on Multiple Apartment Complexes, are to be clarified below:

- The colors that are to be chosen for the apartment complexes are to be earth tones, of substantially similar tone to the colors currently on the buildings. White will not be selected for either trim or the body of the building.
- The exterior surface of small fences that surround certain units' patios are included in the scope of work. The interior surface of those fences will not be included, to avoid scheduling conflicts with residents.
- The primer coat must be bid as a full coat of primer, not a spot-prime.
- All surfaces are to be painted as a part of this solicitation, not just surfaces that are previously painted. PCHA will determine color patterns that minimize taping and preparation on breezeway undersides, stair railings, etc.
- This project is fully funded through the City of Lakewood's CDBG Grant. PCHA will administrate the contract. However, the selected contractor will be required to submit the contract documents for both organizations to ensure compliance with all policies of both organizations.
- Village Square contains 38 apartment units, a laundry facility, and a maintenance shed. Oakleaf contains 26 Apartment Units and a laundry facility. Interiors of these units are not included in the scope of work, but exterior doors are included.

#### LEAD TESTING RESULTS

Included on Attachment A to CGBG-23-01 Amendment 2 is the Lead Testing Results for both Village Square and Oakleaf. Village Square was tested for Lead Paint in 2004. Oakleaf was tested for lead in 2007.

Oakleaf Apartments was found to have lead paint on certain rafters, soffits, beams, and stair handrails. Village Square tested completely negative for lead. Please see the report for full details.

PCHA's preferred method of mitigation is encapsulation of the lead paint with an anti-peeling primer and two layers of waterborne paint.

All other clauses, specifications, and dates in the CDBG-23-01 solicitation or that are amended in other Amendments should be considered to stand. No extension will be granted to the due date as a result of this amendment.

Signature of CO

<u>4/4/23 5:05</u>M Date & Time

**CO Printed Name** 



## PIERCE COUNTY HOUSING AUTHORITY

603 South Polk Street, Tacoma, WA 98444 | 253-620-5400

## ATTACHMENT A TO CDBG-23-01 AMENDMENT 2

## LEAD PAINT IDENTIFICATION SURVEY

**PROJECT LOCATION:** 

Village Square Apartments 10810 Lakeview Drive SW Lakewood, Washington

**PREPARED FOR:** 

# PIERCE COUNTY HOUSING AUTHORITY

September 14, 2004

MTH Environmental, LLC Asbestos and Lead Based Paint Consultants 253.566.9377 Fax 253.566.9369 e-mail mikeh@foxinternet.com

> PO Box 110493 Tacoma, WA 98411

## LEAD PAINT IDENTIFICATION SURVEY

**PROJECT LOCATION:** 

Village Square Apartments 10810 Lakeview Drive SW Lakewood, Washington

**PREPARED FOR:** 

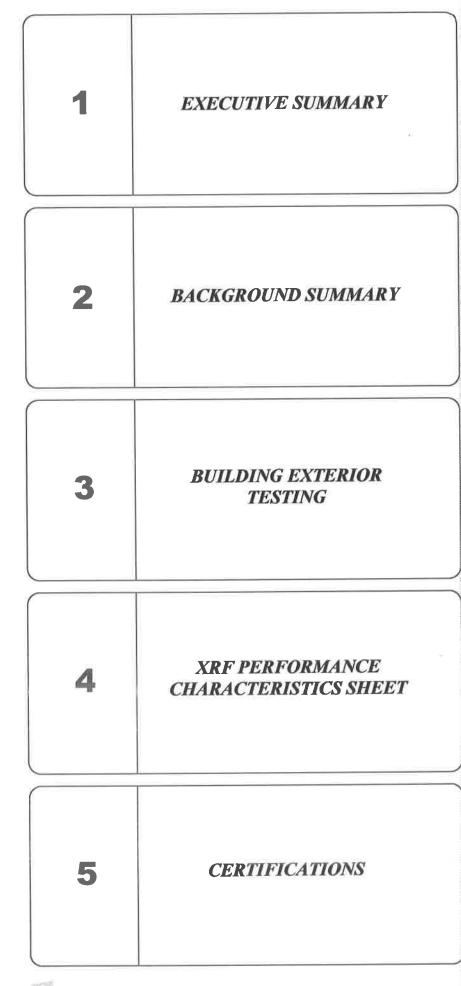
### PIERCE COUNTY HOUSING AUTHORITY

**September 14, 2004** 

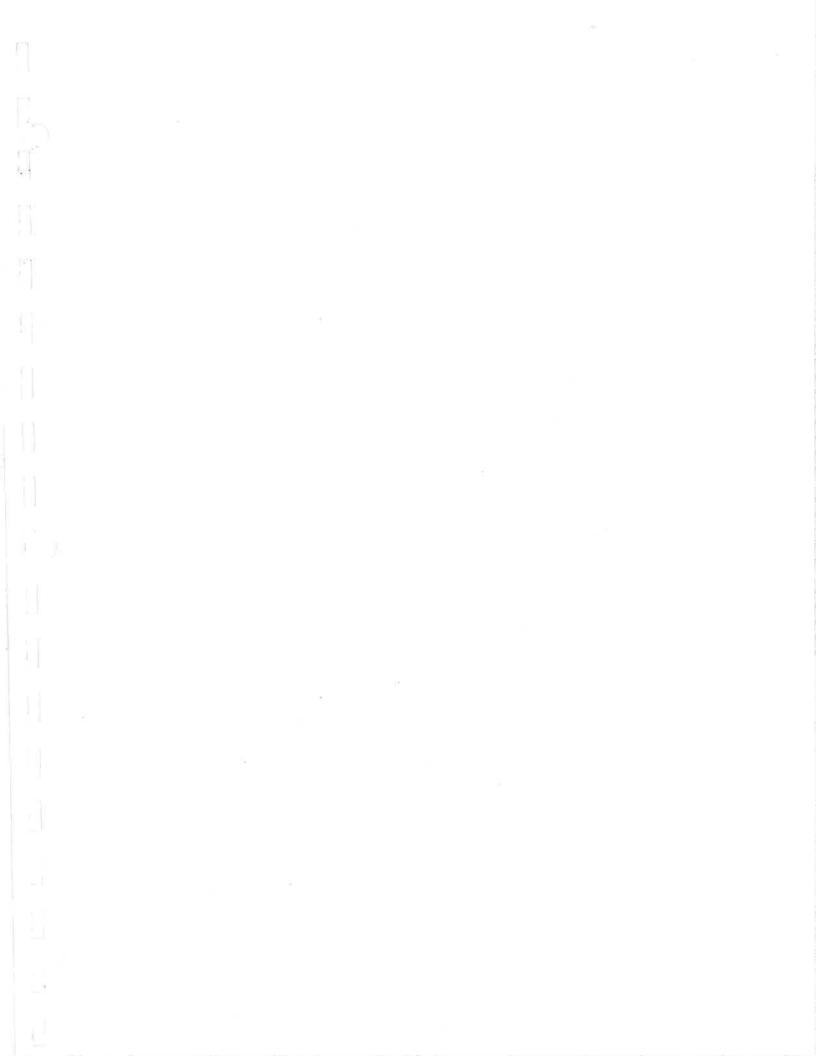
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> PO Box 110493 Tacoma, WA 98411

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PO Box 110493 Tacoma, WA 98411

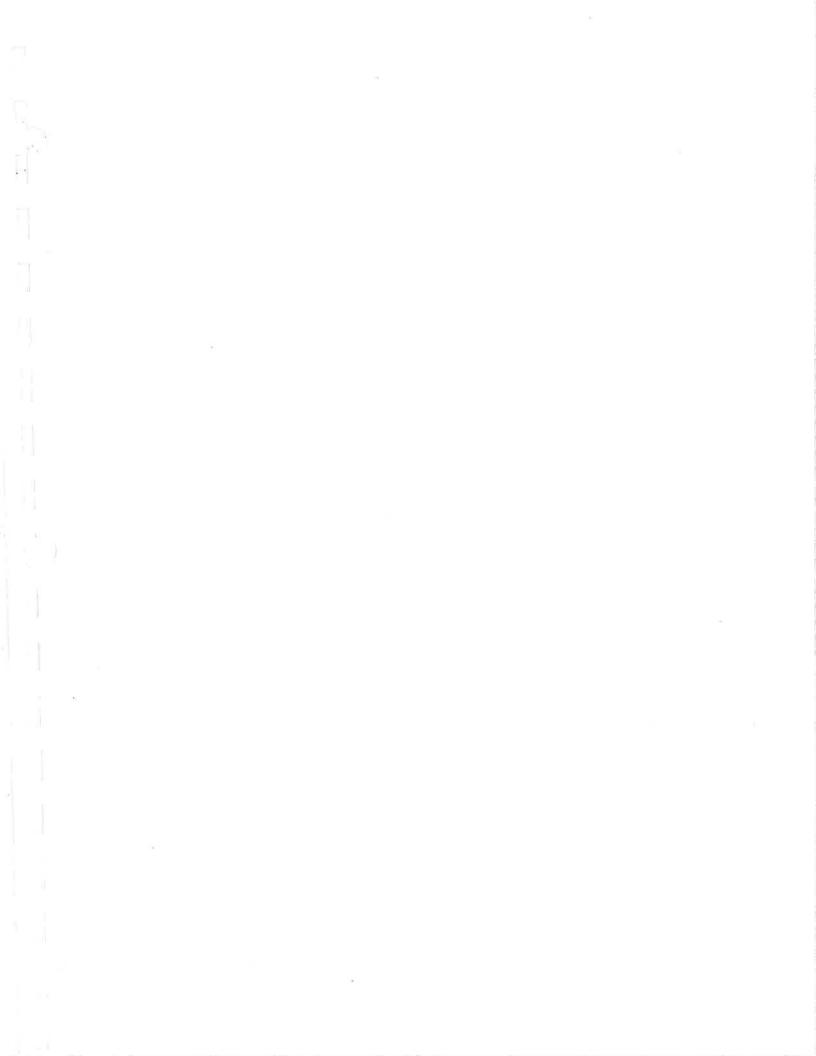
#### EXECUTIVE SUMMARY

MTH Environmental, LLC, at the request of the Pierce County Housing Authority, performed a lead paint inspection at the Village Square Apartments, 10810 Lakeview Drive SW, Lakewood, Washington on September 10, 2004.

The purpose of the inspection was to determine the presence of lead paint on exterior components only. No interior testing was performed.

The testing was conducted by a WA certified Risk Assessor with the use of the MAP4 XRF Spectrum Analyzer. This instrument is equipped with a Cobalt 57 radioactive source and has a built-in "automatic substrate correction" feature that enables testing of the component without manual corrections for substrate density. The testing was performed using the "unlimited"-test mode of the instrument. With this mode, there is an "inconclusive" range of 0.2 mg/cm2 above and below the HUD Guideline level for lead paint of 1.0 mg/cm2 in the K-Shell (K-Gen) mode.

XRF test results indicate no presence of lead paint on any of the exterior components that were tested during the inspection.



Pierce County Housing Authority Tacoma, WA

#### **BACKGROUND SUMMARY**

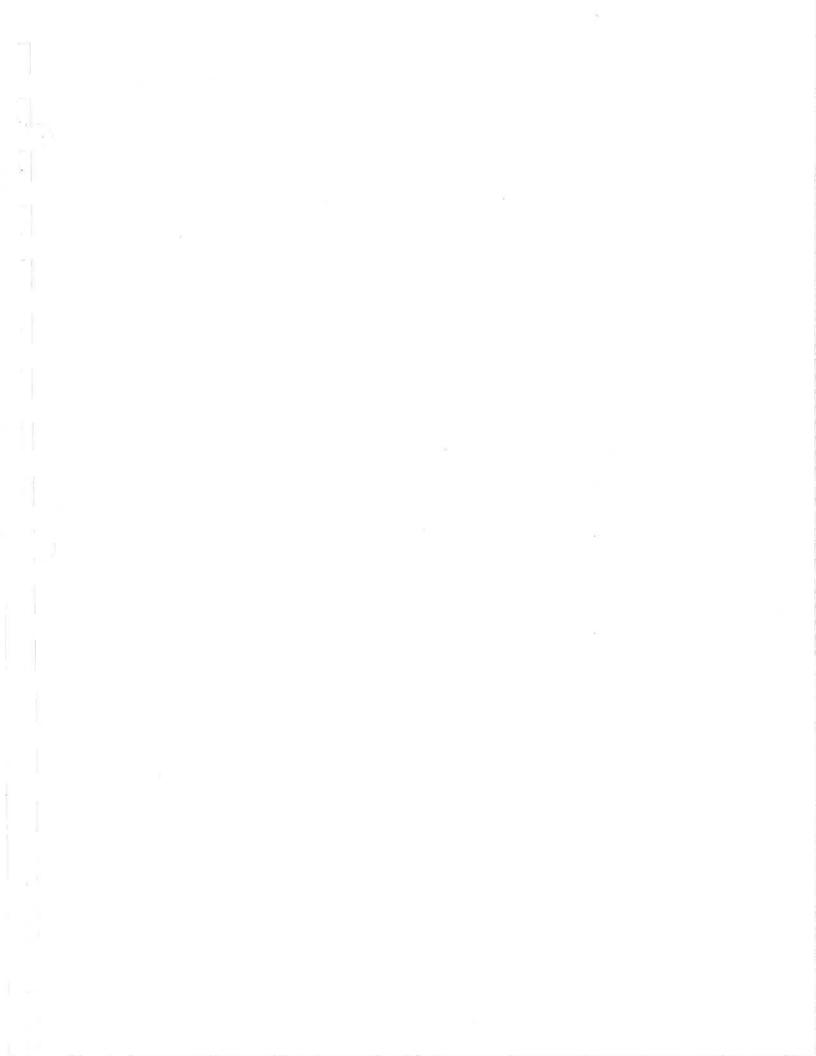
The Village Square Apartments is a seven building complex with 38 apartments. The complex was constructed in 1976 and is owned and operated by the Pierce County Housing Authority.

The buildings are one-story with the exception of the largest building in the complex (Building 10810). This building is a two-story structure. The buildings have wood siding material and a composition roofing material. The windows are aluminum construction. There is a detached manager's office and laundry room.

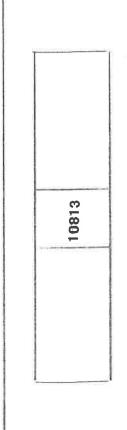
The exterior walls are a combination of both a "simulated" shingle material and plywood material located under the windows and on some of the exterior elevations by the chimneys.

The south building (Building 10813) has a breezeway between the apartments and this area was also inspected.

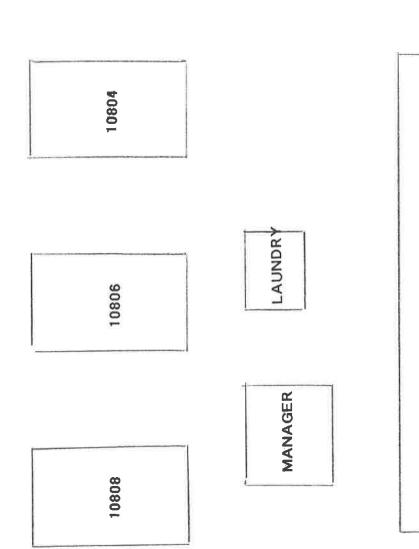
All test locations were selected on a random basis by the inspector.



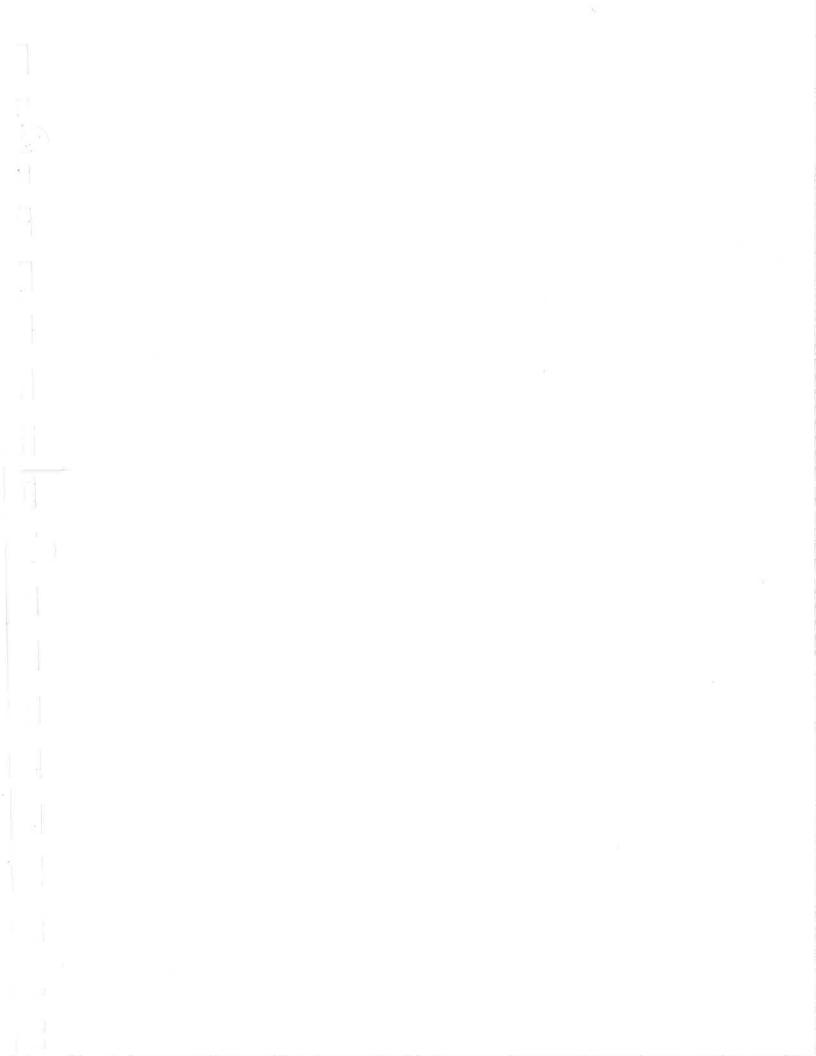




10810



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**BUILDING 10804** 

Pierce County Housing Authority Tacoma, WA

#### ALL TESTS BY COMPONENT & COLOR (EACH UNIT)

#### VILLAGE SQUARE APARTMENTS BUILDING 10804

UNIT	DESCRIPTION	K-GEN (mg/cm2)	L-GEN (mg/cm2)	COMMENTS
All components	are painted beige unless othe	rwise indicated.		
East Elevation	Wall	-0.10	-0.28	Negative
	Wall	-0.59	-0.23	Negative
	Wall	0.39	-0.40	Negative
	Wall trim-rust	-0.32	0.20	Negative
	Soffit	-0.08	0.13	Negative
	Fascia-rust	0.09	0.07	Negative
	Door	0.07	-0.04	Negative
	Door jamb-rust	-0.17	-0.72	Negative
	Door molding-rust	-0.24	-0.06	Negative
	Wall	-0.28	0.21	Negative
South Elevation	Wall	-0.35	-0.44	Negative
	Wall	-0.54	-0.45	Negative
	Fence-beige	-0.24	-0.19	Negative
	Wall	-0.18	-0.70	Negative
	Bargeboard-rust	-0.68	-0.55	Negative
West Elevation	Wall	-0.15	-0.43	Negative
	Wall trim-rust	-0.27	-0.13	Negative
	Wall	0.14	-0.25	negative
	Wall	-0.40	0.04	Negative
	Door	-0.30	-0.07	Negative
	Door jamb-rust	-0.22	-0.41	Negative
	Door molding-rust	-0.04	0.03	Negative
	Wall	-0.16	-0.27	Negative
	Rafter	-0.12	-0.19	Negative
	Soffit	-0.08	-0.29	Negative
	Fascia-rust	-0.28	0.15	Negative
North Elevation	Wall	-0.76	-0.69	Negative
	Bargeboard-rust	-0.13	0.29	Negative
	Wall	0.15	-0.39	Negative
	Wall	-0.06	-0.09	Negative

Tacoma WA 98411

Customer: Pierce County Housing Authority PO Box 45410

Project Name: Village Square Apartments 10810 Lakeview Avenue SW 1 akewood WA 98499

XRF and Lab Results

Site Name: Exterior Building 10804

	ιË	Tacoma. WA 98445				Lakewood, WA 98499	8499					
A notice 1	- 1 Jour		Tab 1 000 mg /cm2	:m2				To	Total Assays Reported	rted		33
Action L4	Site	Action Level 1.000 mg /unit	#	Wall	Component	Substrate	Paint Condition	K-Shell mg/cm2	L-Shell mg/cm2	Map #	Lab	Result
ECFF1	0001	C	*	*	*	*	*	0.000 X	X 000.0	0		
PCPP1			*	*	*	*	*	0.905 K	0.919 L	490		Incl
14425			=	-	Wall	Wood	Good	-0.096 K	-0.279 L	490		Neg
14426		1	-	-	Wall	Wood	Good	-0.593 K	-0.234 L	490		Neg
14427			1	-	Wall	Wood	Good	0.389 K	-0.400 L	490		Neg
14428		Exterior	1	1	Rafter	Wood	Good	-0.324 K	0.196 L	490		Neg
14429	0001	Exterior	1	1	Soffit	Wood	Good	-0.082 K	0.134 L	490		Neg
14430	0001	Exterior	-	1	Fascia	Wood	Good	0.093 K	0.069 L	490		Neg
14431	0001	Exterior	-	1	Door	Wood	Good	0.073 K	-0.042 L	490		Neg
14432			-	-	Door Jamb	Wood	Good	-0.175 K	-0.721 L	490		Neg
14433			-	1	Door Molding	Wood	Good	-0.237 K	-0.064 L	490		Neg
14434			-	-	Wall	Wood	Good	-0.276 K	0.212 L	490		Neg
14435		Exterior	-	2	Wall	Wood	Good	-0.351 K	-0.437 L	490		Neg
14436	6 0001	L Exterior	-	2	Wall	Wood	Good	-0.542 K	-0.450 L	490		Neg
14437	0001	Exterior	-	2	2 Fence	Wood	Good	-0.243 K	-0.187 L	490		Neg
14438	8 0001	t Exterior	1	2	Wall	Wood	Good	-0.176 K	-0.703 L	490		Neg
14439	9 0001	1 Exterior	-	2	Bargeboard	Wood	Good	-0.676 K	-0.547 L	490		Neg
14440	0001	1 Exterior	-	3	Wall	Wood	Good	-0.151 K	-0.434 L	490		Neg
14441	1 0001	1 Exterior	-	3	Wall trim	Wood	Good	-0.265 K	-0.130 L	490		Neg
14442	2 0001		-	3	Wall	Wood	Good	0.141 K	-0.254 L	490		Neg
Page	-	of 2 Limit Set: 0	Codin	Coding Set: 0	No Averaging Selected	Selected						

Tacoma WA 98411

Customer: Pierce County Housing Authority PO Box 45410 Tacoma, WA 98445

Project Name: Village Square Apartments 10810 Lakeview Avenue SW Lakewood,WA 98499

XRF and Lab Results

Site Name: Exterior Building 10804

Action L	evel 1 0(	Action Level 1 000 mg /cm2 1 ab 1 (	Lab 1 000 mg /cm2	cm2				To	Total Assays Reported	rted		33
#	Site	ested	#	Wall	Component	Substrate	Paint Condition	K-Shell mg/cm2	L-Shell mg/cm2	Map #	Lab	Result
14443	0001	Exterior	-	e	Wall	Wood	Good	-0.398 K	0.044 L	490		Neg
14444	0001	Exterior	1	3	Door	Metal	Good	-0.304 K	-0.069 L	490		Neg
14445	0001	Exterior	1	3	3 Door Jamb	Wood	Good	-0.220 K	-0.412 L	490		Neg
14446	0001	Exterior	1	3	3 Door Molding	Wood	Good	-0.040 K	0.029 L	490		Neg
14447	0001	Exterior	1	3	3 Wall	Wood	Good	-0.161 K	-0.274 L	490		Neg
14448	0001	Exterior	1	3	Rafter	Wood	Good	-0.116 K	-0.191 L	490		Neg
14449	0001	Exterior	1	3	3 Soffit	Wood	Good	-0.078 K	-0.291 L	490		Neg
14450	0001	Exterior	Ŧ	3	Fascia	Wood	Good	-0.282 K	0.148 L	490		Neg
14451		0001 Exterior	1	4	4 Wall	Wood	Good	-0.755 K	-0.695 L	490		Neg
14452	0001	Exterior	1	4	Bargeboard	Wood	Good	-0.129 K	0.290 L	490		Neg
14453	0001	Exterior	1	4	4 Soffit	Wood	Good	-0.122 K	-0.315 L	490		Neg
14454	0001	Exterior	1	4	4 Wall	Wood	Good	0.153 K	-0.394 L	490		Neg
14455	5 0001	Exterior	1	4	4 Wall	Wood	Good	-0.058 K	-0.087 L	490		Neg

2 of 2 Limit Set: 0 Coding Set: 0 No Averaging Selected

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PO Box 110493 HTTM

Summary Analysis

Tacoma WA 98411-

Pierce County Housing Authority Customer:

Tacoma, WA 98445 PO Box 45410

Building 10804

Site Name: Exterior

Project Name: Village Square Apartments 10810 Lakeview Avenue SW

Lakewood, WA 98499

(% 0 (% 0 (% 0 (% 0 (% 0 (% 0 (% 0 (% 0 (% 0 (% 0 % ) () ) ( 0 0 ) 0 ) 0 ) 0 0 0 0 • Lab Pos • 0 0 0 0 0 0 0 • 0 0 Tested Lab (% 0 (% 0 (% 0 (% 0 (% 0 (% 0 (% 0 (% 0 (% 0 (% 0 % ) 0 )0 ) ( 0 ) ( ) 0 ) ( 0 0 ) 0 0 Num Incl 100 %) 100 %) 100 %2 ( 100 %) 1 ( 100 %) 2 ( 100 %) 14 ( 100 %) 1 ( 100 %) 2 ( 100 %) 2 ( 100 %) % 3 ( 2 ( 2 31 Num Neg (% 0 (% (% 0 % (% (% (%) (% (% 0 8 % • 0 • • • • 0 ) () ) 0 ) () ) () ) 0 ) ( 0 0 0 0 0 Num Pos 14 3 2 2 0 31 2 -0 Lab 1.000 mg /cm2 Number Tested Component Name Action Level 1.000 mg /cm2 **Total Reported Door Molding** Bargeboard Door Jamb Wall trim Fascia Rafter Fence Soffit Wall Door 3 N 4 52 33 54 22 62 3 Comp

No Averaging Selected Coding Set: 0 1 Limit Set: 0 of -

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Daily Calibration

Tacoma WA 98411-

Project	Site	Date	Time	K-Shell mg/cm2	K-Avg. mg/cm2	L-Shell mg/cm2	L-Avg. mg/cm2	Scanner I #	Instr #	Oper
Starting Calibration	ion	09/10/04	11:04A	0.858	0.914	0.818	0.783	M41490	490	1817
Starting Calibration	ion	09/10/04	11:05A	0.836		0.756		M41490	490	1817
Starting Calibration	ion	09/10/04	11:06A	0.966		0.787		M41490	490	1817
Starting Calibration	ion	09/10/04	11:06A	0.862		0.779		M41490	490	1817
Starting Calibration	ion	09/10/04	11:06A	0.911		0.763		M41490	490	1817
Starting Calibration	ion	09/10/04	11:07A	1.045		0.787		M41490	490	1817
4325	0001	09/10/04	01:37P	0.790	0.790	0.851	0.851	M41490	490	1817
4325	6000	09/10/04	02:48P	0.596	0.596	0.809	0.809	M41490	490	1817
Starting Calibration	ion	09/10/04	07:16A	0.842	0.914	0.774	0.783	M41490	490	1817
Starting Calibration	ion	09/10/04	07:17A	0.913		0.769		M41490	490	1817
Starting Calibration	tion	09/10/04	07:17A	0.965		0.829		M41490	490	1817
Starting Calibration	tion	09/10/04	07:18A	0.885		0.758		M41490	490	1817
Starting Calibration	tion	09/10/04	07:18A	0.971		0.790		M41490	490	1817
4326	0001	09/10/04	09:09A	0.905	0.905	0.919	0.919	M41490	490	1817
4326	0007	09/10/04	10:05A	0.657	0.657	0.749	0.749	M41490	490	1817

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**BUILDING 10806** 

Pierce County Housing Authority Tacoma, WA

#### ALL TESTS BY COMPONENT & COLOR (EACH UNIT)

#### VILLAGE SQUARE APARTMENTS BUILDING 10806

UNIT	DESCRIPTION	K-GEN (mg/cm2)	L-GEN (mg/cm2)	COMMENTS
All components	are painted beige unless othe	rwise indicated.		
East Elevation	Wall	-0.06	-0.37	Negative
Last Lietazon	Wall	-0.00	-0.25	Negative
	Wall trim-rust	-0.26	-0.33	Negative
	Door	0.02	0.27	Negative
	Door jamb-rust	-0.68	-0.54	Negative
	Door molding-rust	-0.41	-0.72	Negative
	Soffit	0.10	-0.46	Negative
	Rafter	-0.57	-0.46	Negative
	Fascia-rust	-0.37	0.22	Negative
	Wall	-0.16	-0.51	Negative
	Wall	-0.31	-0.23	Negative
South Elevation	Wall	-0.07	-0.53	Negative
bouti Elovidion	Wall	-0.12	-0.42	Negative
	Fence-beige	-0.20	0.13	Negative
	Bargeboard-rust	-0.26	-0.20	Negative
	Soffit	-0.30	-0.05	Negative
	Wall	0.23	-0.17	Negative
West Elevation	Wall	-0.05	-0.21	Negative
	Wall trim-rust	-0.62	-0.61	Negative
	Wall	0.19	-0.22	Negative
	Door-rust	-0.01	0.22	Negative
	Door jamb-rust	-0.17	-0.29	Negative
	Door molding-rust	-0.31	-0.55	Negative
	Soffit	-0.44	-0.71	Negative
	Rafter	-0.09	-0.32	Negative
	Wall	-0.36	-0.69	Negative
	Wall	0.08	-0.20	Negative
	Wall	-0.78	-0.47	Negative
North Elevation	Wall	-0.07	-0.42	Negative
	Wall	-0.06	0.31	Negative
	Wall	0.32	-0.17	Negative
	Bargeboard-rust	0.06	-0.59	Negative

Tacoma WA 98411

Pierce County Housing Authority PO Box 45410 Tacoma,WA 98445 Customer:

Project Name: Village Square Apartments 10810 Lakeview Avenue SW Lakewood, WA 98499

**XRF** and Lab Results

Site Name: Exterior Building 10806

Action L	- - - - - - -	Action I evel 1 000 mg (cm? I ab 1 (	Lah 1.000 mg /cm2	sm2				To	Total Assays Reported	rted		33
#	Site	ested	#	Wall	Component	Substrate	Paint Condition	K-Shell mg/cm2	L-Shell mg/cm2	Map #	Lab	Result
14457	0002	Calibration	*	*	*	*	*	0.000 X	0.000 X	0		
14458	0002	Exterior	-	=	Wall	Wood	Good	-0.057 K	-0.367 L	0		Neg
14459	0002	Exterior	1	1	Wall	Wood	Good	-0.003 K	-0.247 L	0		Neg
14460	0002	Exterior	1	1	Wall trim	Wood	Good	-0.258 K	-0.328 L	0		Neg
14461	0002	Exterior	1	1	Door	Metal	Good	0.018 K	0.273 L	0		Neg
14462	0002	Exterior	1	1	Door Jamb	Wood	Good	-0.678 K	-0.541 L	0		Neg
14463	0002	Exterior	1	1	Door Molding	Wood	Good	-0.407 K	-0.720 L	0		Neg
14464	0002	Exterior	1	1	Soffit	Wood	Good	0.098 K	-0.459 L	0		Neg
14465	0002	Exterior	1	1	Rafter	Wood	Good	-0.570 K	-0.462 L	0		Neg
14466	0002	Exterior	1	1	Fascia	Wood	Good	-0.367 K	0.218 L	0		Neg
14467	0002	Exterior	1	1	Wall	Wood	Good	-0.161 K	-0.506 L	0		Neg
14468	0002	Exterior	1	1	Wall	Wood	Good	-0.309 K	-0.226 L	0		Neg
14469	0002	Exterior	1	2	Wall	Wood	Good	-0.073 K	-0.526 L	0		Neg
14470	0002	Exterior	1	2	Wall	Wood	Good	-0.118 K	-0.423 L	0		Neg
14471	0002	Exterior	1	2	Fence	Wood	Good	-0.195 K	0.130 L	0		Neg
14472	0002	Exterior	1	2	Bargeboard	Wood	Good	-0.255 K	-0.195 L	0		Neg
14473	0002	Exterior	1	2	Soffit	Wood	Good	-0.304 K	-0.049 L	0		Neg
14474	0002	Exterior	1	3	Wall	Wood	Good	0.229 K	-0.171 L	0		Neg
14475	5 0002	Exterior	1	3	Wall	Wood	Good	-0.051 K	-0.211 L	0		Neg
14476	6 0002	Exterior	1	3	Wall trim	Wood	Good	-0.622 K	-0.606 L	0		Neg
Page	1	of 2 Limit Set: 0	Coding Set: 0	Set: 0	No Averaging Selected	elected						

Tacoma WA 98411

Customer: Pierce County Housing Authority PO Box 45410 Tacoma, WA 98445

XRF and Lab Results

Project Name: Village Square Apartments 10810 Lakeview Avenue SW Lakewood, WA 98499

Site Name: Exterior Building 10806

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			1 000	C				To	Total Assays Reported	rted		۲, [
Ģ	1.00	Action Level 1.000 mg/cm2 Lab 1.	Lab 1.000 mg /cmz				Deint	V Chall	I_Shell	Man		
Site		Room Tested	#	Wall	Component	Substrate	Condition	mg/cm2	mg/cm2	#	Lab	Result
18	18	T stanior	-	6	Wall	Wood	Good	0.188 K	-0.220 L	0		Neg
5 3	2000		-	3	Door	Metal	Good	-0.012 K	0.216 L	0		Neg
5 3	2000			3	Door Jamb	Wood	Good	-0.167 K	-0.295 L	0		Neg
	2000		-	3	3 Door Molding	Wood	Good	-0.307 K	-0.546 L	0		Neg
2 C	00	_	-	3	Soffit	Wood	Good	-0.437 K	-0.708 L	0		Neg
°   °	000	Exterior	-	3	3 Rafter	Wood	Good	-0.093 K	-0.319 L	•		Neg
°   5	000		-	3	3 Wall	Wood	Good	-0.357 K	-0.695 L	0		Neg
1	2000		1		3 Wall	Wood	Good	0.078 K	-0.197 L	0		Neg
	0002		-	3	Wall	Wood	Good	-0.783 K	-0.466 L	0		Neg
S -	0002		-	4	4 Wall	Wood	Good	-0.075 K	-0.417 L	0		Neg
	0002	1	-	4	4 Wall	Wood	Good	-0.059 K	0.312 L	0		Neg
	0002			4	4 Wall	Wood	Good	0.320 K	-0.173 L	0		Neg
	0002			4	4 Bargeboard	Wood	Good	0.064 K	-0.587 L	0		Neg
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2 of 2 Limit Set: 0 Coding Set: 0 No Averaging Selected

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Tacoma WA 98411-

Customer: Pierce County Housing Authority PO Box 45410 Tacoma,WA 98445

Project Name: Village Square Apartments 10810 Lakeview Avenue SW Lakewood, WA 98499

Summary Analysis

Site Name: Exterior Building 10806

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	Lab Tested	0	-		0	0	0	0	0	0	0	0	0
	Num Incl (%)	(% 0 ) 0	1 0 0 V	(a/ A ) A	(% 0 ) 0	(% 0 ) 0	(% 0 ) 0	(% 0 ) 0	(% 0 ) 0	0 ( 0 %)	(% 0 ) 0	0 ( 0 %)	0
	Num Neg ( %)	2 ( 100 %)		2 ( 100 %)	2 ( 100 %)	15 ( 100 %)	3 ( 100 %)	2 ( 100 %)	2 ( 100 %)	1 ( 100 %)	1 ( 100 %)	2 ( 100 %)	32
	Num Pos ( %)			(% 0 ) 0	(% 0 ) 0	(% 0 ) 0	(% 0 ) 0	(% 0 ) 0	(% 0 ) 0	(% 0 ) 0	(% 0 ) 0	(% 0 ) 0	0
Lab 1.000 mg /cm2	Number Tested	c	4	5	2	15	m	2	2	1	1	2	32
Action Level 1,000 mg /cm2 Lab 1.0	Component Name		Door	Door Jamb	Door Molding	Wall	Soffit	Wall trim	Rafter	Fence	_	Bargeboard	Total Reported
Action Lev	Comp		-	2	6			1	3 7		62	63	

No Averaging Selected	
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Coding Set: 0	
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Tacoma WA 98411-MTH PO Box 110493

Daily Calibration

Droient	Site	Date	Time	K-Shell	K-Avg. ma/cm2	L-Shell ma/cm2	L-Avg. mg/cm2	Scanner Ins #	Instr #	Oper
Chadian Calibrati		09/10/04	11:04A	0.858	0.914	0.818	0.783	M41490	490	1817
Starting Calibration		09/10/04	11:05A	0.836		0.756		M41490	490	1817
Starting Calibration		09/10/04	11:06A	0.966		0.787		M41490	490	1817
Starting Calibration	uo uo	09/10/04	11:06A	0.862		0.779		M41490	490	1817
Starting Calibration	Б	09/10/04	11:06A	0.911		0.763		M41490	490	1817
Starting Calibration	uo	09/10/04	11:07A	1.045		0.787		M41490	490	1817
4325	0001	09/10/04	01:37P	0.790	062.0	0.851	0.851	M41490	490	1817
4325	6000	09/10/04	02:48P	0.596	0.596	0.809	0.809	M41490	490	1817
Starting Calibration	uo	09/10/04	07:16A	0.842	0.914	0.774	0.783	M41490	490	1817
Starting Calibration	lon	09/10/04	07:17A	0.913		0.769		M41490	490	1817
Starting Calibration	lon	09/10/04	07:17A	0.965		0.829		M41490	490	1817
Starting Calibration	ion	09/10/04	07:18A	0.885		0.758		M41490	490	1817
Starting Calibration	ion	09/10/04	07:18A	0.971		0.790		M41490	490	1817
4326	0001	09/10/04	A90:90	0.905	0.905	0.919	0.919	M41490	490	1817
4326	0007	09/10/04	10:05A	0.657	0.657	0.749	0.749	M41490	490	1817

Page

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**BUILDING 10808** 

#### ALL TESTS BY COMPONENT & COLOR (EACH UNIT)

#### VILLAGE SQUARE APARTMENTS BUILDING 10808

UNIT	DESCRIPTION	K-GEN (mg/cm2)	L-GEN (mg/cm2)	COMMENTS
All components	are painted beige unless othe	rwise indicated.		
East Elevation	Wall	0.20	-0.75	Negative
Last Liovation	Wall trim-rust	-0.53	0.06	Negative
	Wall	-0.25	-0.02	Negative
	Door-rust	0.37	0.06	Negative
	Door jamb-rust	-0.48	-0.73	Negative
	Door molding-rust	-0.53	-0.07	Negative
	Rafter	-0.17	0.27	Negative
	Soffit	-0.29	-0.25	Negative
	Fascia-rust	-0.10	0.06	Negative
	Wall	0.32	-0.25	Negative
	Wall	-0.17	-0.48	Negative
	<b>XX7 11</b>	-0.03	-0.23	Negative
South Elevation		-0.37	-0.35	Negative
	Wall	-0.42	-0.03	Negative
	Fence-beige	-0.42	-0.33	Negative
	Soffit	-0.24	0.05	Negative
	Bargeboard-rust	-0.24	-0.02	Negative
	Wall	-0.18	-0.51	Negative
	Wall		-0.69	Negative
	Wall trim-rust	-0.13	-0.07	Negative
West Elevation	Wall	-0.21	-0.15	Negative
	Wall	-0.36	-0.51	Negative
	Door-rust	0.14	0.11	Negative
	Door jamb-rust	-0.25	-0.37	Negative
	Door molding-rust	-0.39	0.03	Negative
	Soffit	-0.38	-0.57	Negative
	Rafter	-0.16	-0.11	Negative
	Fascia-rust	-0.22	-0.02	Negative
	Wall	0.26	-0.49	Negative
	Wall	0.12	-0.07	Negative
	Wall	0.23	-0.31	Negative
North Elevation	Wall	-0.32	-0.76	Negative
TAOTOR FICATION	Wall trim-rust	0.14	0.29	Negative
	Wall	-0.40	0.20	Negative
	Fence-beige	0.01	-0.66	Negative

Pierce County Housing Authority Tacoma, WA

#### Page 2 Lead Paint Testing Village Square Apartments Building 10808

UNIT	DESCRIPTION	K-GEN (mg/cm2)	L-GEN (mg/cm2)	COMMENTS
North Elevation	Wall	0.23	-0.10	Negative
	Bargeboard-rust	-0.30	-0.66	Negative

Tacoma WA 98411

Pierce County Housing Authority PO Box 45410 Tacoma, WA 98445 Customer:

Project Name: Village Square Apartments 10810 Lakeview Avenue SW Lakewood, WA 98499

**XRF** and Lab Results

Site Name: Exterior Building 10808

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38	Result		Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg	
	Lab		-	-	-																	
ted	Map #	0	0	0	0	•	0	0	0	•	0	0	0	0	0	0	0	0	0	0	0	
Total Assays Reported	L-Shell mg/cm2	0.000 X	-0.753 L	0.057 L	-0.017 L	0.059 L	-0.729 L	-0.071 L	0.274 L	-0.254 L	0.057 L	-0.247 L	-0.373 L	-0.482 L	-0.225 L	-0.346 L	-0.034 L	-0.333 L	0.054 L	-0.024 L	-0.506 L	
To	K-Shell mg/cm2	0.000 X	0.200 K	-0.530 K	-0.249 K	0.373 K	-0.478 K	-0.525 K	-0.167 K	-0.289 K	-0.105 K	0.320 K	-0.546 K	-0.170 K	-0.030 K	-0.374 K	-0.421 K	-0.010 K	-0.244 K	-0.411 K	-0.179 K	
	Paint Condition	*	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	(
	Substrate	*	Wood	Wood	Wood	Metal	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	
	Component		Wall	Wall trim	Wall	Door	Door Jamb	Door Molding	Rafter	Soffit	Fascia	Wall	Wall	Wall	Wall	Wall	Fence	Soffit	Bargeboard	Wall	Wall	
Ç	Wall	*	T	1	1	T	T	T	1	1	1	1	1	-	3	3	2	3	5	7	3	
00	H Wa	*	-	-	-	-	1	-	-	1	1	-	-	1	1	1	1	1	1	-	-	
C++0K	Action Level 1.000 mg /cm.2 Lato 1.0 # Site Room Tested	Calibration	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	
13	Site	0003	0003	0003	0003	0003	0003	0003	0003	0003	0003	0003	0003	0003	0003	0003	0003	0003	0003	0003	0003	
•	Action Let	14491	14492	14493	14494	14495	14496	14497	14498	14499	14500	14501	14502	14503	14504	14505	14506	14507	14508	14509	14510	

No Averaging Selected

Coding Set: 0

2 Limit Set: 0

of

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Page

PO Box 110493 MTH

Tacoma WA 98411

Pierce County Housing Authority Tacoma, WA 98445 PO Box 45410 Customer:

Building 10808

10810 Lakeview Avenue SW

Lakewood, WA 98499

Project Name: Village Square Apartments

Site Name: Exterior

**XRF** and Lab Results

Result Neg Neg Neg Neg Neg Neg Neg 38 Neg Neg Neg Neg Neg Neg Neg Neg Neg Lab 0 0 0 • 0 0 0 • • • • 0 0 0 0 0 # # **Fotal Assays Reported** 0.197 L -0.662 L -0.760 L 0.293 L 0.108 L 0.028 L -0.021 L -0.492 L -0.075 L -0.313 L -0.367 L -0.569 L -0.114 L -0.691 L -0.147 L -0.507 L mg/cm2 L-Shell 0.014 K 0.145 K -0.249 K 0.261 K 0.118 K 0.227 K -0.315 K 0.137 K -0.398 K -0.217 K -0.379 K -0.162 K -0.394 K -0.213 K -0.356 K -0.128 K mg/cm2 K-Shell Condition Paint Good Substrate Wood Metal Wood Wood Wood 3 Door Molding Component 3 Door Jamb 4 Wall trim Wall trim 3 Rafter 3 Fascia 4 Fence 4 Wall 3 Wall 4 Wall 3 Soffit 3 Wall 3 Wall 3 Wall 3 Door 3 Wall 2 Wall Lab 1.000 mg /cm2 ---1 -----— ------# Room Tested Action Level 1.000 mg /cm2 Exterior 0003 Exterior 0003 Exterior 0003 Exterior 0003 Exterior Exterior 0003 0003 Site 14526 14524 14525 14522 14523 14518 14519 14520 14521 14517 14515 14516 14512 14513 14514 14511 #

No Averaging Selected Coding Set: 0

Neg Neg

۲ 0

-0.105 L

0.228 K

Good Good

Wood

4 Wall

0003 Exterior 0003 Exterior

14527 14528

Wood

4 Bargeboard

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-0.659 L

-0.299 K

2 Limit Set: 0

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Page

PO Box 110493 MTH

Summary Analysis

Tacoma WA 98411-

Pierce County Housing Authority Tacoma, WA 98445 PO Box 45410 Customer:

Building 10808

Site Name: Exterior

Project Name: Village Square Apartments 10810 Lakeview Avenue SW

Lakewood, WA 98499

Action Level 1.000 mg /cm2

(% 0 8 (% 0 (% 0 (% 0 (% 0 (% 0 (% 0 (% 0 (% 0 % 0 ) () ) () ) 0 0 0 0 0 0 ) ( 0 • Lab Pos 0 • 0 • 0 0 • 0 0 0 • Tested Lab (% 0 (% 0 (% 0 (% 0 (% 0 (% 0 (%) (%) (%) (%) % ) 0 0 ) ( ) () ) () 0 0 ) ( ) 0 0 0 Num Incl 100 %) 100 %) 100 %) 2 ( 100 %) 100 %) 3 ( 100 %) 2 ( 100 %) 3 ( 100 %) 2 ( 100 %) 100 %) % 5 2 ( 5 7 5 17 ( 37 Num Neg (%) (% 0 (% 0 (%) (% 0 (%) (%) 0 % (% 0 (%) % 0 0 0 • • 0 0 0 ) ( ) ( 0 ) 0 0 0 )0 • Num Pos 0 37 0 0 • 11 3 3 2 2 2 Number Tested Lab 1.000 mg /cm2 Component Name **Total Reported Door Molding** Bargeboard Door Jamb Wall trim Fascia Rafter Fence Soffit Wall Door 63 3 5 62 3 33 4 2 3 Comp

Coding Set: 0 1 Limit Set: 0 of

Page

No Averaging Selected

Daily Calibration

Tacoma WA 98411-

Project	Site	Date	Time	K-Shell mg/cm2	K-Avg. mg/cm2	L-Shell mg/cm2	L-Avg. mg/cm2	Scanner #	Instr #	Oper
Starting Calibration	ion	09/10/04	11:04A	0.858	0.914	0.818	0.783	M41490	490	1817
Starting Calibration	ion	09/10/04	11:05A	0.836		0.756		M41490	490	1817
Starting Calibration	ion	09/10/04	11:06A	0.966		0.787		M41490	490	1817
Starting Calibration	ion	09/10/04	11:06A	0.862		0.779		M41490	490	1817
Starting Calibration	ion	09/10/04	11:06A	0.911		0.763		M41490	490	1817
Starting Calibration	tion	09/10/04	11:07A	1.045		0.787		M41490	490	1817
4325	0001	09/10/04	01:37P	06.790	0.790	0.851	0.851	M41490	490	1817
4325	6000	09/10/04	02:48P	0.596	0.596	0.809	0.809	M41490	490	1817
Starting Calibration	tion	09/10/04	07:16A	0.842	0.914	0.774	0.783	M41490	490	1817
Starting Calibration	tion	09/10/04	07:17A	0.913		0.769		M41490	490	1817
Starting Calibration	tion	09/10/04	07:17A	0.965		0.829		M41490	490	1817
Starting Calibration	tion	09/10/04	07:18A	0.885		0.758		M41490	490	1817
Starting Calibration	tion	09/10/04	07:18A	0.971		0.790		M41490	490	1817
4326	0001	09/10/04	A60:00	0.905	0.905	0.919	0.919	M41490	490	1817
4326	0007	09/10/04	10:05A	0.657	0.657	0.749	0.749	M41490	490	1817

Page

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**BUILDING 10810** 

#### ALL TESTS BY COMPONENT & COLOR (EACH UNIT)

#### VILLAGE SQUARE APARTMENTS BUILDING 10810

UNIT	DESCRIPTION	K-GEN (mg/cm2)	L-GEN (mg/cm2)	COMMENTS
All components	are painted beige unless othe	rwise indicated.		
North Elevation	Wall	-0.58	-0.28	Negative
	Wall trim-rust	-0.23	-0.25	Negative
	Wall	0.02	-0.52	Negative
	Door-rust	0.07	0.08	Negative
	Door jamb-rust	-0.12	0.17	Negative
	Door molding-rust	-0.21	-0.09	Negative
	Wood post	-0.23	-0.51	Negative
	Wood beam	-0.29	-0.07	Negative
	Soffit	0.10	-0.61	Negative
	Rafter	-0.07	-0.61	Negative
	Handrail-rust	-0.24	-0.09	Negative
	Baluster	0.03	-0.68	Negative
	Stair stringer	0.14	-0.35	Negative
	Wall	-0.18	-0.39	Negative
	Wall trim-rust	0.20	-0.59	Negative
	Wall	-0.29	-0.47	Negative
	Soffit	0.11	-0.29	Negative
	Wood beam	-0.13	-0.27	Negative
	Wood post	-0.19	0.11	Negative
	Wall	-0.17	0.24	Negative
	Wall	-0.50	0.24	Negative
	Handrail-rust	0.14	0.07	Negative
	Baluster	0.21	-0.42	Negative
	Wall	0.16	-0.24	Negative
	Wall	-0.25	-0.22	Negative
East Elevation	Wall	-0.47	-0.14	Negative
	Wall	-0.56	0.00	Negative
	Wall	-0.51	-0.51	Negative
South Elevation	Wall	-0.16	-0.14	Negative
	Wall	-0.11	-0.10	Negative
	Wall	-0.27	-0.14	Negative
	Wall	-0.25	-0.71	Negative
	Wall	-0.22	-0.43	Negative
	Wall	-0.10	-0.40	Negative
	Wall	0.08	-0.53	Negative

Pierce County Housing Authority Tacoma, WA

#### Page 2 Lead Paint Testing Village Square Apartments Building 10810

UNIT	DESCRIPTION	K-GEN (mg/cm2)	L-GEN (mg/cm2)	COMMENTS
South Elevation	Wall	-0.11	-0.25	Negative
Journ Elevation	Wall	0.03	-0.02	Negative
	Wall	-0.25	-0.09	Negative
	Wall	-0.29	-0.54	Negative
West Elevation	Wall	-0.37	-0.36	Negative
Webt Die Materia	Wall	-0.20	-0.51	Negative
	Wall	0.16	-0.54	Negative

Tacoma WA 98411

Customer: Pierce County Housing Authority PO Box 45410

Project Name: Village Square Apartments 10810 Lakeview Avenue SW Lakewood, WA 98499

XRF and Lab Results

Site Name: Exterior

Building 10810

	Ta	Tacoma, WA 98445				Lakewood, WA 20722		I				58
			T ab 1 000 mg /cm2	Cur				1.01	Total Assays keporteu	Iten		
Action La	evel 1.00	Action Level 1.000 mg/cm/2 Lato 1.0	#	Wall	Component	Substrate	Paint Condition	K-Shell mg/cm2	L-Shell mg/cm2	Map #	Lab	Result
#	2	Colthondon	*	*		*	*	0.000 X	0.000 X	0		
14384		Calibration	-	-	Wall	Wood	Good	-0.581 K	-0.278 L	0		Neg
14585	0000	Exterior		_		Wood	Good	-0.227 K	-0.251 L	0		Neg
14586	9000	Exterior	-			<b>D</b> 00 <b>M</b>		DAIK V	-0 521 L	e		Neg
14587	9000	Exterior	1	1	Wall	Wood	Good	VI OTO'O	TOTO			Ner
14588	0000	Exterior	1	1	Door	Metal	Good	0.071 K	T 6/0'0			Incg
14589	0000	Exterior	1	1	Door Jamb	Wood	Good	-0.121 K	-0.157 L	•		Neg
14590	-		-	F	Door Molding	Wood	Good	-0.215 K	-0.093 L	•		Neg
14591			-	-		Wood	Good	-0.232 K	-0.505 L	•		Neg
14592			-	-	Wood beam	Wood	Good	-0.291 K	-0.069 L	•		Neg
14593			-	1	Soffit	Wood	Good	0.104 K	-0.611 L	•		Neg
14594			-	-	Rafter	Wood	Good	-0.069 K	-0.611 L	0		Neg
14595			1	-	Stair Handrail	Wood	Good	-0.366 K	-0.286 L	0		Neg
902F1		1.00		-	Wall	Wood	Good	-0.361 K	-0.144 L	0		Neg
14507					Wall	Wood	Good	-0.447 K	-0.439 L	0		Neg
14598		_				Wood	Good	-0.231 K	-0.729 L	0		Neg
14599			-	1	Stair Handrail	Wood	Good	-0.240 K	-0.087 L	0		Neg
14600				-	Baluster	Wood	Good	0.025 K	-0.678 L	0		Neg
14601			-	1	Stair Stringer	Wood	Good	0.144 K	-0.352 L	0		Neg
14602				-	Wall	Wood	Good	-0.176 K	-0.381 L	•		Neg
14603					Wall trim	Wood	Good	0.197 K	-0.595 L	0		Neg
				_		-						
-	-	of 3 1 imit Set. ()	Codin	Coding Set: 0	No Averaging Selected	Selected						
Page	-			5								

Tacoma WA 98411

Pierce County Housing Authority PO Box 45410 Tacoma, WA 98445 Customer:

Project Name: Village Square Apartments 10810 Lakeview Avenue SW Lakewood, WA 98499

**XRF** and Lab Results

Building 10810 Site Name: Exterior

	Ĩ	70440		¢				To	Total Assays Reported	rted		58
Action L4	evel 1.00	Action Level 1.000 mg /cm2 Lab 1.0	Lab 1.000 mg /cm2	700								
#	Site	Room Tested	#	Wall	Component	Substrate	Paint Condition	K-Shell mg/cm2	L-Shell mg/cm2	Map #	Lab	Result
14604	9000	Exterior		T	Wall	Wood	Good	-0.293 K	-0.467 L	•		Neg
14605	9000	Exterior	-	1	Soffit	Wood	Good	0.109 K	-0.286 L	0		Neg
14606	9000	Exterior	1	-	Wood beam	Wood	Good	-0.126 K	-0.368 L	0		Neg
14607	9000	Exterior	1	-	Wood post	Wood	Good	-0.190 K	0.107 L	0		Neg
14608	9000	Exterior	1	1	Wall	Wood	Good	-0.165 K	0.237 L	0		Neg
14609	9000	Exterior	1	1	Wall	Wood	Good	-0.500 K	0.237 L	0		Neg
14610	9000	Exterior	1	1	Stair Handrail	Wood	Good	0.145 K	0.073 L	0		Neg
14611	0000	Exterior	-	T	Baluster	Wood	Good	-0.112 K	-0.254 L	0		Neg
14612	9000	Exterior	-	T	Wall	Wood	Good	0.085 K	-0.425 L	0		Neg
14613	9000	Exterior	1	1	Wall	Wood	Good	-0.300 K	-0.784 L	0		Neg
14614	9000	Exterior	-	1	Wall	Wood	Good	-0.703 K	-0.289 L	0		Neg
14615	9000	Exterior	1	1	Wall trim	Wood	Good	-0.383 K	-0.477 L	0		Neg
14616	0006	Exterior	1	1	Wall	Wood	Good	-0.197 K	-0.317 L	0		Neg
14617	9000	Exterior	1	1	Soffit	Wood	Good	-0.768 K	-0.238 L	0		Neg
14618	9000	Exterior	1	1	Stair Stringer	Wood	Good	0.206 K	-0.380 L	0		Neg
14619	9000	Exterior	1	1	Stair Handrail	Wood	Good	-0.211 K	-0.385 L	0		Neg
14620	9000	Exterior	1	1	Baluster	Wood	Good	0.215 K	-0.428 L	0		Neg
14621	0000	Exterior	1	1	Wall	Wood	Good	0.159 K	-0.240 L	0		Neg
14622	9000	Exterior	1	1	Wall	Wood	Good	-0.251 K	-0.218 L	0		Neg
14623	0000	Exterior	1	2	Wall	Wood	Good	-0.465 K	-0.142 L	0		Neg
Page	5	of 3 Limit Set: 0	Coding Set: 0	Set: 0	No Averaging Selected	elected						

Tacoma WA 98411

Pierce County Housing Authority PO Box 45410 Tacoma WA 98445 Customer:

Project Name: Village Square Apartments 10810 Lakeview Avenue SW Lakewood, WA 98499

XRF and Lab Results

Site Name: Exterior

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T anite	*		1 ab 1 000 mg /cm3	Cmc				To	Total Assays Reported	orted		58
#	Site	# Site Room Tested	# #	Wall	Component	Substrate	Paint Condition	K-Shell mg/cm2	L-Shell mg/cm2	Map #	Lab	Result
14624	0006	Exterior	-	1	Wall	Wood	Good	-0.558 K	0.003 L	0		Neg
14625	0000	Exterior	1	10	Wall	Wood	Good	-0.510 K	-0.512 L	0		Neg
14626	0000	Exterior	-	6	Wall	Wood	Good	-0.136 K	-0.201 L	0		Neg
14627	9000	1	-	e	Wall trim	Wood	Good	0.246 K	0.038 L	0		Neg
14628	9000	Exterior	-	3	Wall	Wood	Good	-0.164 K	-0.142 L	0		Neg
14629	9000	Exterior	-	8	Wall	Wood	Good	-0.112 K	-0.095 L	0		Neg
14630	9000	Exterior	1	3	Wall	Wood	Good	-0.271 K	-0.140 L	•		Neg
14631	9000	Exterior	1	3	Wall	Wood	Good	-0.254 K	-0.715 L	0		Neg
14632	9000	Exterior	-	3	Wall	Wood	Good	-0.218 K	-0.434 L	0		Neg
14633	9000	Exterior	1	3	Wall	Wood	Good	-0.102 K	-0.396 L	0		Neg
14634	9000	Exterior	1	3	Wall	Wood	Good	0.080 K	-0.529 L	•		Neg
14635	9000	Exterior	1	3	Wall	Wood	Good	-0.112 K	-0.252 L	0		Neg
14636	9000	Exterior	1	3	Wall	Wood	Good	0.031 K	-0.023 L	0		Neg
14637	0006	Exterior	1	3	Wall	Wood	Good	-0.254 K	-0.086 L	0		Neg
14638	9000	Exterior	1	3	Wall	Wood	Good	-0.289 K	-0.535 L	0		Neg
14639	9000	Exterior	1	4	Wall	Wood	Good	-0.372 K	-0.360 L	0		Neg
14640	0006	Exterior		4	Wall	Wood	Good	-0.199 K	-0.510 L	0		Neg
14641	1 0006	Exterior	1	4	Wall	Wood	Good	0.164 K	-0.543 L	0		Neg

No Averaging Selected Coding Set: 0 3 Limit Set: 0 of e

Tacoma WA 98411-

Customer: Pierce County Housing Authority PO Box 45410 Tacoma, WA 98445

Project Name: Village Square Apartments 10810 Lakeview Avenue SW Lakewood, WA 98499

Summary Analysis

Site Name: Exterior Building 10810

		s (%)	0 ( 0 %)	(% 0 ) 0	0 (0 %)	(% 0 ) 0	0 ( 0 %)	(% 0 ) 0	0 (0 %)	(% 0 ) 0	(% 0 ) 0	(% 0 ) 0	0 ( 0 %)	(% 0 ) 0	-
	Lab	Tested Pos	0	0	0	0	0	0	0	0	0	0	0	0	
	Num	Incl (%)	(% 0 ) 0	(% 0 ) 0	(% 0 ) 0	(% 0 ) 0	(% 0 ) 0	(% 0 ) 0	(% 0 ) 0	(% 0 ) 0	(% 0 ) 0	0 ( 0 %)	(% 0 ) 0	0 ( 0 %)	
	Num	Neg (%)	1 ( 100 %)	1 ( 100 %)	1 ( 100 %)	32 ( 100 %)	2 ( 100 %)	4 ( 100 %)	3 ( 100 %)	3 ( 100 %)	2 ( 100 %)	4 ( 100 %)	1 ( 100 %)	3 ( 100 %)	5
	Num	(%)	(% 0 ) 0	(% 0 ) 0	(% 0 ) 0	(% 0 ) 0	(% 0 ) 0	(% 0 ) 0	(% 0 ) 0	(% 0 ) 0	(% 0 ) 0	(% 0 ) 0	(% 0 ) 0	(% 0 ) 0	
Lab 1.000 mg /cm2	Number		1	1	1	32	2	4	3	9	2	4	1	3	
Action Level 1.000 mg /cm2 Lab 1.(		Component Name	Door	Door Jamb	Door Molding	Wall	Stair Stringer	Stair Handrail	_	_		Wall trim	Rafter	Baluster	
Action Le		Comp	-	2	6	4	15	16	25	30	32	53	5	57	

of 1 Limit Set: 0 Coding Set: 0 No Averaging Selected

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Daily Calibration

Tacoma WA 98411-

Project	Site	Date	Time	K-Shell ma/cm2	K-Avg. ma/cm2	L-Shell mg/cm2	L-Avg. mg/cm2	Scanner In #	Instr #	Oper
Starting Calibration	loi	09/10/04	11:04A	0.858	0.914	0.818	0.783	M41490	490	1817
Starting Calibration		09/10/04	11:05A	0.836		0.756		M41490	490	1817
Starting Calibration	ion	09/10/04	11:06A	0.966		0.787		M41490	490	1817
Starting Calibration	ion	09/10/04	11:06A	0.862		0.779		M41490	490	1817
Starting Calibration	ion	09/10/04	11:06A	0.911		0.763		M41490	490	1817
Starting Calibration	tion	09/10/04	11:07A	1.045		0.787		M41490	490	1817
4325	0001	09/10/04	01:37P	0.790	0.790	0.851	0.851	M41490	490	1817
4325	6000	09/10/04	02:48P	0.596	0.596	0.809	0.809	M41490	490	1817
Starting Calibration	tion	09/10/04	07:16A	0.842	0.914	0.774	0.783	M41490	490	1817
Starting Calibration	tion	09/10/04	07:17A	0.913		0.769		M41490	490	1817
Starting Calibration	tion	09/10/04	07:17A	0.965		0.829		M41490	490	1817
Starting Calibration	tion	09/10/04	07:18A	0.885		0.758		M41490	490	1817
Starting Calibration	tion	09/10/04	07:18A	0.971		0.790		M41490	490	1817
4326	0001	09/10/04	A00:00	0.905	0.905	0.919	0.919	M41490	490	1817
4326	0007	09/10/04	10:05A	0.657	0.657	0.749	0.749	M41490	490	1817

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**BUILDING 10813** 

Pierce County Housing Authority Tacoma, WA

### ALL TESTS BY COMPONENT & COLOR (EACH UNIT)

## VILLAGE SQUARE APARTMENTS BUILDING 10813

All components are painted beige unless otherwise indicated.         South Elevation       Wall       -0.48       -0.17       Negative         Wall       -0.48       -0.34       Negative         Wall       -0.47       0.06       Negative         Wall       -0.47       0.06       Negative         Wall       -0.47       0.06       Negative         Wall       -0.47       0.06       Negative         Fence       -0.16       -0.33       Negative         Wall       -0.70       0.18       Negative         Fascia-rust       -0.24       -0.13       Negative         Door-rust       -0.04       0.61       Negative         Door jamb-rust       0.24       0.03       Negative         Wall       -0.56       -0.52       Negative         Wall       -0.66       -0.52       Negative         Wall       -0.07       -0.09       Negative         Wall       -0.07       -0.09       Negative         Wall       -0.11       -0.20       Negative         Wall       -0.26       -0.41       Negative         Wall       -0.26       -0.41       Negative	UNIT	DESCRIPTION	K-GEN (mg/cm2)	L-GEN (mg/cm2)	COMMENTS
Wall-0.48-0.34NegativeFence-0.16-0.40NegativeWall-0.470.06NegativeSoffit0.08-0.29NegativeRafter-0.50-0.53NegativeFascia-rust-0.24-0.13NegativeMiddle CorridorWall-0.700.18NegativeDoor-rust-0.19-0.01NegativeDoor-rust0.040.61NegativeWall-0.56-0.52NegativeWall-0.56-0.52NegativeWall0.08-0.33NegativeWall0.011-0.20NegativeWall0.02-0.31NegativeWall0.02-0.31NegativeWall0.02-0.31NegativeWall0.02-0.31NegativeWall0.02-0.31NegativeWall0.02-0.31NegativeWall0.02-0.31NegativeWall0.02-0.31NegativeWall0.02-0.33NegativeWall0.21-0.26NegativeWall0.22-0.33NegativeWall0.25-0.42NegativeWall0.25-0.42NegativeWall0.25-0.55NegativeDoor-rust0.230.51NegativeDoor amb-rust0.25-0.55NegativeDoor orust0.38-0.58Nega	All components	are painted beige unless otherw	ise indicated.		
Fence         -0.16         -0.40         Negative           Wall         -0.47         0.06         Negative           Soffit         0.08         -0.29         Negative           Rafter         -0.50         -0.53         Negative           Fascia-rust         -0.24         -0.13         Negative           Middle Corridor         Wall         -0.70         0.18         Negative           Wall trim-rust         -0.19         -0.01         Negative         Door-rust           Door jamb-rust         0.24         0.03         Negative           Wall         -0.56         -0.52         Negative           Wall         -0.56         -0.52         Negative           Wall         -0.07         -0.09         Negative           Wall         -0.11         -0.20         Negative           Wall         -0.11         -0.20         Negative           Wall         -0.11         -0.20         Negative           Wall         -0.11         -0.20         Negative           Wall         -0.21         -0.23         Negative           Wall         0.21         -0.26         Negative              Soffit	South Elevation	Wall	-0.48	-0.17	Negative
Wall $-0.47$ $0.06$ Negative           Soffit $0.08$ $-0.29$ Negative           Rafter $-0.50$ $-0.53$ Negative           Fascia-rust $-0.24$ $-0.13$ Negative           Middle Corridor         Wall $-0.70$ $0.18$ Negative           Door-rust $-0.19$ $-0.01$ Negative           Door jamb-rust $0.24$ $0.03$ Negative           Wall $0.04$ $0.61$ Negative           Wall $0.04$ $0.61$ Negative           Wall $0.04$ $0.61$ Negative           Wall $0.08$ $-0.33$ Negative           Wall $0.08$ $-0.33$ Negative           Wall $0.07$ $-0.09$ Negative           Wall $0.02$ $-0.31$ Negative           Wall $0.02$ $-0.31$ Negative           Wall $0.26$ $-0.41$ Negative           Wall $0.20$ $-0.33$ Negative		Wall	-0.48		
Soffit0.08-0.29Negative RafterRafter-0.50-0.53Negative Fascia-rust-0.24-0.13NegativeMiddle CorridorWall-0.700.18Negative Door-rustNegative Door jamb-rust0.040.61Negative NegativeWall-0.700.18Negative Uoor jamb-rust0.040.61Negative 		Fence	-0.16	-0.40	
Rafter Fascia-rust-0.50 -0.24-0.53 -0.13NegativeMiddle CorridorWall wall trim-rust Door-rust-0.700.18 -0.01 NegativeNegativeMiddle CorridorWall wall trim-rust-0.19 -0.01 Negative-0.01 NegativeNegativeDoor-rust Door jamb-rust0.040.61 0.08 wallNegativeWall Wall-0.56 -0.52NegativeWall-0.11 -0.07-0.09 NegativeSouth ElevationWall Wall-0.02 -0.01-0.31 NegativeWest ElevationWall Wall-0.26 -0.11-0.41 -0.20 NegativeWest ElevationWall Wall-0.26 -0.21 -0.20-0.53 -0.26 -0.41 NegativeWest ElevationWall Wall -0.20-0.23 -0.23 -0.24Negative -0.26 -0.41 NegativeWest ElevationWall -0.20 -0.25-0.42 -0.44Negative -0.26 -0.51 Negative Wall -0.25North ElevationWall -0.26-0.51 -0.51 Negative Wall -0.26-0.51 -0.51 Negative Negative Wall -0.26-0.78 -0.78 -0.78 NegativeNorth ElevationWall Soffit Soffit Soffit -0.04-0.78 -0.94 -0.94 Negative Negative Negative Rafter-0.78 -0.44 -0.06 -0.44-0.66 -0.64		Wall	-0.47	0.06	
Fascia-rust-0.24-0.13NegativeMiddle CorridorWall-0.700.18NegativeWall trim-rust-0.19-0.01NegativeDoor rust0.040.61NegativeDoor jamb-rust0.240.03NegativeWall-0.56-0.52NegativeWall-0.07-0.09NegativeWall-0.07-0.09NegativeWall-0.07-0.09NegativeWall-0.07-0.09NegativeWall-0.11-0.20NegativeWall-0.11-0.20NegativeWest ElevationWall-0.26-0.41West ElevationWall-0.26-0.41Wall0.20-0.53NegativeWall0.20-0.53NegativeWall0.20-0.33NegativeWall0.20-0.33NegativeWall-0.25-0.42NegativeWall-0.25-0.42NegativeWall-0.25-0.42NegativeWall-0.26-0.51NegativeWall-0.26-0.51NegativeWall-0.26-0.51NegativeWall-0.26-0.51NegativeWall-0.26-0.51NegativeWall-0.26-0.51NegativeWall-0.26-0.51NegativeWall-0.26-0.51NegativeWall-0.26-		Soffit	0.08	-0.29	
Middle CorridorWall Wall trim-rust Door-rust-0.70 0.19 0.01Negative Negative 0.04Door jamb-rust0.04 0.240.61 0.08 0.33 Negative Wall0.08 0.08 0.03 0.08 0.011 0.02 0.0110.08 0.22 0.03 Negative WallSouth ElevationWall Wall0.02 0.07 0.09 Negative Wall0.02 0.011 0.007 0.09 Negative WallWest ElevationWall Wall0.02 0.02 0.0110.31 0.02 0.09 Negative Wall 0.011 0.011 0.02West ElevationWall Wall Wall0.02 0.02 0.031 Negative Wall 0.011 0.11 0.20 0.26 0.41 Negative Wall Bargeboard-rust Wall Door jamb-rust Door Jam		Rafter	-0.50	-0.53	
Wall trim-rust-0.19-0.01NegativeDoor-rust0.040.61NegativeDoor jamb-rust0.240.03NegativeWall0.08-0.33NegativeWall0.11-0.20NegativeWall0.11-0.20NegativeWall0.07-0.09NegativeWall0.02-0.31NegativeWall0.02-0.31NegativeWall0.02-0.31NegativeWest ElevationWall-0.26-0.41NegativeWall0.21-0.26NegativeWall0.21-0.26NegativeWall0.20-0.33NegativeWall0.21-0.26NegativeWall0.25-0.42NegativeWall0.25-0.42NegativeWall-0.25-0.42NegativeWall-0.25-0.42NegativeWall-0.25-0.42NegativeWall-0.25-0.42NegativeWall-0.26-0.51NegativeWall-0.26-0.51NegativeWall-0.62-0.36NegativeWall-0.62-0.36NegativeWall-0.26-0.51NegativeNorth ElevationWall-0.78-0.78North ElevationWall-0.78-0.78North ElevationWall-0.04-0.94North ElevationWall <t< td=""><td></td><td>Fascia-rust</td><td>-0.24</td><td>-0.13</td><td>Negative</td></t<>		Fascia-rust	-0.24	-0.13	Negative
Wall trim-rust-0.19-0.01NegativeDoor-rust0.040.61NegativeDoor jamb-rust0.240.03NegativeWall0.08-0.33NegativeWall0.11-0.20NegativeWall0.11-0.20NegativeWall0.07-0.09NegativeWall0.02-0.31NegativeWall0.02-0.31NegativeWall0.02-0.31NegativeWest ElevationWall-0.26-0.41West ElevationWall0.21-0.26Wall trim-rust-0.02-0.53NegativeWall0.21-0.26NegativeWall0.20-0.33NegativeWall0.25-0.42NegativeWall-0.25-0.42NegativeWall-0.25-0.42NegativeWall-0.25-0.42NegativeWall-0.25-0.42NegativeWall-0.25-0.42NegativeWall-0.26-0.51NegativeWall-0.26-0.51NegativeWall-0.62-0.36NegativeWall-0.62-0.36NegativeWall-0.62-0.36NegativeWall-0.62-0.36NegativeWall-0.62-0.36NegativeWall-0.62-0.36NegativeWall-0.62-0.36Negative<	Middle Corridor	Wall	-0.70	0.18	Negative
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Wall-0.11-0.20NegativeWest ElevationWall-0.26-0.41NegativeWall trim-rust-0.02-0.53NegativeWall0.21-0.26NegativeSoffit0.10-0.17NegativeBargeboard-rust-0.20-0.46NegativeWall0.20-0.33NegativeWall0.20-0.33NegativeDoor rust0.230.51NegativeDoor jamb-rust0.25-0.42NegativeDoor molding-rust-0.38-0.58NegativeWall-0.62-0.36NegativeWall-0.26-0.51NegativeWall-0.26-0.51NegativeMorth ElevationWall-0.78-0.78North ElevationWall-0.78-0.78Negative-0.04-0.94NegativeRafter-0.44-0.06Negative	South Elevation	Wall	0.02	-0.31	Negative
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Wall0.21-0.26NegativeSoffit0.10-0.17NegativeBargeboard-rust-0.20-0.46NegativeWall0.20-0.33NegativeWall-0.25-0.42NegativeDoor-rust0.230.51NegativeDoor jamb-rust0.25-0.65NegativeDoor molding-rust-0.38-0.58NegativeWall-0.62-0.36NegativeWall-0.26-0.51NegativeNorth ElevationWall-0.78-0.78North ElevationWall-0.04-0.94North Elevation-0.04-0.06Negative	West Live atter		-0.02	-0.53	Negative
NorthSoffit0.10-0.17NegativeBargeboard-rust-0.20-0.46NegativeWall0.20-0.33NegativeWall-0.25-0.42NegativeDoor-rust0.230.51NegativeDoor jamb-rust0.25-0.65NegativeDoor molding-rust-0.38-0.58NegativeWall-0.62-0.36NegativeWall-0.26-0.51NegativeNorth ElevationWall-0.78-0.78North ElevationWall-0.04-0.94NegativeRafter-0.44-0.06Negative			0.21		
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Door molding-rust-0.38-0.58NegativeWall-0.62-0.36NegativeWall-0.26-0.51NegativeNorth ElevationWall-0.78-0.78NegativeSoffit-0.04-0.94NegativeRafter-0.44-0.06Negative					
Wall-0.62-0.36NegativeWall-0.26-0.51NegativeNorth ElevationWall-0.78-0.78NegativeSoffit-0.04-0.94NegativeRafter-0.44-0.06Negative					
Wall-0.26-0.51NegativeNorth ElevationWall-0.78-0.78NegativeSoffit-0.04-0.94NegativeRafter-0.44-0.06Negative		-			
Soffit -0.04 -0.94 Negative Rafter -0.44 -0.06 Negative					
Soffit -0.04 -0.94 Negative Rafter -0.44 -0.06 Negative	North Elevation	Wall	-0.78	-0.78	Negative
Rafter -0.44 -0.06 Negative	TATEL PRODUCTION				
Fascia-rust 0.25 -0.05 Negative				-0.05	Negative

Pierce County Housing Authority Tacoma, WA

Page 2 Lead Paint Testing Village Square Building 10813

UNIT	DESCRIPTION	K-GEN (mg/cm2)	L-GEN (mg/cm2)	COMMENTS
North Elevation	Wall	-0.44	-0.20	Negative
	Fence	0.15	-0.44	Negative
	Wall	-0.28	-0.39	Negative
	Wood beam	-0.21	0.08	Negative
	Soffit	-0.06	-0.27	Negative
	Wall	-0.11	-0.14	Negative
	Wall	-0.17	-0.04	Negative
	Wall	-0.06	-0.39	Negative
East Elevation	Wall	0.15	-0.21	Negative
	Wall trim-rust	-0.18	-0.60	Negative
	Wall	0.34	-0.31	Negative
	Door-rust	0.40	0.52	Negative
	Door jamb-rust	0.35	-0.15	Negative
	Door molding-rust	-0.59	-0.77	Negative
	Wall	-0.23	-0.56	Negative
	Wall	-0.04	-0.12	Negative
	Soffit	0.01	-0.38	Negative
	Bargeboard-rust	-0.27	-0.07	Negative

Tacoma WA 98411

Pierce County Housing Authority PO Box 45410 Tacoma, WA 98445 Customer:

Project Name: Village Square Apartments 10810 Lakeview Avenue SW Lakewood, WA 98499

**XRF** and Lab Results

Site Name: Exterior Building 10813

Paint	
- 1 - 1 - D	
	cm2
	b 1.000 mg /cm2
	Lab 1

Component         Substrate $Condition         mag/cm2 mag/cm2           Name         *         *         0.000 X         0.000 X           Name         *         *         0.000 X         0.000 X           Name         Wood         Good         -0.434 K         -0.166 L           Wall         Wood         Good         -0.436 K         -0.402 L           Name         Wood         Good         -0.475 K         -0.401 L           Name         Wood         Good         -0.475 K         -0.203 L           Name         Wood         Good         -0.475 K         -0.138 L           Name         Wood         Good         -0.435 K         -0.138 L           Name         Wood         Good         -0.191 K         -0.138 L           Name         Wood         Good         -0.191 K         -0.232 L$	Action Level 1.000 mg /cm2	0 mg /cn		Lab 1.000 mg /cm2	cm2			Doint		Total Assays Reported	Man		54
*         *         0.000 X         0.000 X         0         0           Wall         Wood         Good $-0.484$ K $-0.166$ L         0 $P$ Wall         Wood         Good $-0.484$ K $-0.166$ L         0 $P$ Wall         Wood         Good $-0.436$ K $-0.345$ L         0 $P$ Fence         Wood         Good $-0.156$ K $-0.402$ L $0$ $P$ Wall         Wood         Good $-0.156$ K $-0.402$ L $0$ $P$ Wall         Wood         Good $-0.475$ K $0.060$ L $0$ $P$ Wall         Wood         Good $-0.435$ K $-0.231$ L $0$ $P$ Facta         Wood         Good $-0.245$ K $-0.128$ L $0$ $P$ Vall         Wood         Good $-0.245$ K $0.177$ L $0$ $P$ Vall         Wood         Good $-0.231$ K $0.177$ L $0$ $P$ Vall         Wood         Good	Site Room Tested			#	Wall	Component	Substrate	Paint Condition	K-Shell mg/cm2	L-Shell mg/cm2	datu #	Lab	Result
Wall         Wood         Good         -0.484 K         -0.166 L         0         1           Wall         Wood         Good         -0.476 K         -0.345 L         0         0         1           Fence         Wood         Good         -0.156 K         -0.345 L         0         0         1           Fence         Wood         Good         -0.156 K         -0.345 L         0         0         1           Wood         Good         0.060 L         0.060 L         0         1         1           Soffit         Wood         Good         -0.503 K         -0.231 L         0         1           Wood         Good         -0.503 K         -0.231 L         0         1         1           Rafter         Wood         Good         -0.245 K         -0.128 L         0         1           Wood         Good         -0.245 K         -0.121 L         0         1         1           Wall         Wood         Good         -0.245 K         -0.121 L         0         1         1           Wall         Wood         Good         -0.131 K         -0.121 L         0         1         1           Door <td>0007 Calibration</td> <td></td> <td></td> <td>*</td> <td></td> <td>*</td> <td>*</td> <td>*</td> <td>0.000 X</td> <td>0.000 X</td> <td>0</td> <td></td> <td></td>	0007 Calibration			*		*	*	*	0.000 X	0.000 X	0		
Wall         Wood         Good         -0.476 K         -0.345 L         0         1           Fence         Wood         Good         -0.156 K         -0.402 L         0         1           Wall         Wood         Good         -0.472 K         0.060 L         0         1           Soffit         Wood         Good         -0.472 K         0.023 L         0         1           Soffit         Wood         Good         -0.475 K         -0.233 L         0         1           Soffit         Wood         Good         -0.503 K         -0.231 L         0         1           Soffit         Wood         Good         -0.503 K         -0.128 L         0         1           Fascia         Wood         Good         -0.245 K         -0.121 L         0         1           Wall         Wood         Good         -0.237 K         0.121 L         0         1           Wood         Good         -0.134 K         -0.012 L         0         1         1           Wall         Wood         Good         -0.184 K         -0.122 L         0         1         1           Door Jamb         Wood         Good         -0.	Exterior					Wall	Wood	Good	-0.484 K	-0.166 L	0		Neg
Fence         Wood         Good         Good         -0.402 L         0         1           Wall         Wood         Good         -0.472 K         0.060 L         0         1           Soffit         Wood         Good         -0.472 K         0.060 L         0         1           Soffit         Wood         Good         -0.637 K         -0.293 L         0         1           Soffit         Wood         Good         -0.697 K         -0.128 L         0         1           Fascia         Wood         Good         -0.697 K         -0.171 L         0         1           Wall         Wood         Good         -0.611 K         -0.128 L         0         1           Wall         Wood         Good         -0.614 K         0.177 L         0         1           Wall         Wood         Good         -0.191 K         0.177 L         0         1           Wall         Wood         Good         -0.191 K         0.0121 L         0         1           Wall         Wood         Good         -0.184 K         0.0251 L         0         1           Door Molding         Wood         Good         -0.184 K         <	0007 Exterior 1			<u> </u>	=	Wall	Wood	Good	-0.476 K	-0.345 L	0		Neg
WallWoodGood $-0.472$ K $0.060$ L $0$ $1$ SoffitWoodGood $0.081$ K $-0.293$ L $0$ $1$ RafterWoodGood $0.081$ K $-0.293$ L $0$ $1$ RafterWoodGood $0.081$ K $-0.231$ L $0$ $1$ RafterWoodGood $0.040$ K $0.177$ L $0$ $1$ VallWoodGood $0.040$ K $0.177$ L $0$ $1$ Wall trimWoodGood $0.040$ K $0.012$ L $0$ $1$ DorMetalGood $0.040$ K $0.026$ L $0$ $1$ DorMetalGood $0.040$ K $0.026$ L $0$ $0$ DorMetalWoodGood $0.131$ K $0.026$ L $0$ $0$ DorMoldingWoodGood $0.136$ K $0.026$ L $0$ $0$ WallWoodGood $0.134$ K $0.026$ L $0$ $0$ $0$ WallWoodGood $0.030$ K $0.036$ L $0$ $0$ $0$ WallWoodGood $0.016$ K $0.036$ L $0$ $0$ $0$ WallWoodGood $0.010$ K $0.036$ L	0007 Exterior 1		-			Fence	Wood	Good	-0.156 K	-0.402 L	0		Neg
Soffit         Wood         Good         0.081         K         -0.293         L         L           Rafter         Wood         Good         -0.503         K         -0.531         L         0         1           Rafter         Wood         Good         -0.503         K         -0.531         L         0         1           Fascia         Wood         Good         -0.503         K         -0.128         L         1         1           Vall         Wood         Good         -0.503         K         -0.128         D         1         1           Wall         Wood         Good         -0.503         K         -0.121         D         1         1           Wall         Wood         Good         -0.131         K         0         1         1         1           Door         Math         Wood         Good         -0.131         N         1	0007 Exterior 1		1		-	Wall	Wood	Good	-0.472 K	0.060 L	0		Neg
Rafter         Wood         Good         -0.503 K         -0.531 L         0         1           Fascia         Wood         Good         -0.245 K         -0.128 L         0         0         1           Fascia         Wood         Good         -0.245 K         -0.128 L         0         1           Wall         Wood         Good         -0.697 K         0.177 L         0         1           Wall         Wood         Good         -0.691 K         -0.012 L         0         1           Wall         Wood         Good         -0.191 K         -0.012 L         0         1           Wood         Good         0.040 K         0.012 L         0         1         1           Door Jamb         Wood         Good         0.237 K         0.026 L         0         1         1           Door Jamb         Wood         Good         0.184 K         0.330 L         0         1         1           Wall         Wood         Good         0.080 K         0.320 L         0         1         1           Wall         Wood         Good         0.080 K         0.320 L         0         1         1           W	0007 Exterior 1		1		1	Soffit	Wood	Good	0,081 K	-0.293 L	0		Neg
Fascia         wood         Good         -0.245 K         -0.128 L         0         1           Wall         wood         Good         -0.697 K         0.177 L         0         1           Wall         wood         Good         -0.697 K         0.177 L         0         1           Wall         wood         Good         -0.697 K         0.171 L         0         1           Wall trim         Wood         Good         0.040 K         -0.012 L         0         1           Door Molding         Wood         Good         0.040 K         0.066 L         0         1           Door Molding         Wood         Good         0.018 K         0.0251 L         0         1           Door Molding         Wood         Good         -0.184 K         -0.332 L         0         1           Wall         Wood         Good         -0.184 K         -0.332 L         0         1           Wall         Wood         Good         -0.184 K         -0.332 L         0         1           Wall         Wood         Good         -0.186 K         -0.202 L         0         1           Wall         Wood         Good         0.108 K<	0007 Exterior 1		-		1	Rafter	Wood	Good	-0.503 K	-0.531 L	0		Neg
Wall         Wood         Good         -0.697 K         0.177 L         0         0           Wall trim         Wood         Good         -0.191 K         -0.012 L         0         0         1           Wall trim         Wood         Good         -0.191 K         -0.012 L         0         0         1           Door Jamb         Wood         Good         0.040 K         0.026 L         0         0         1           Door Jamb         Wood         Good         0.134 K         0.026 L         0         1         1           Door Jamb         Wood         Good         0.134 K         0.026 L         0         1         1           Door Molding         Wood         Good         0.136 K         -0.530 L         0         1         1           Wall         Wood         Good         0.108 K         -0.530 L         0         1	0007 Exterior 1		1			Fascia	Wood	Good	-0.245 K	-0.128 L	0		Neg
Wall trim         Wood         Good         -0.191 K         -0.012 L         0         0           Door         Metal         Good         0.040 K         0.606 L         0         <	0007 Exterior 1		1			Wall	Wood	Good	-0.697 K	0.177 L	0		Neg
DoorMetalGoodGood0.040 K $0.606 L$ $0$ $0$ Door JambWoodGood $0.237 K$ $0.026 L$ $0$ $0$ Door MoldingWoodGood $0.184 K$ $-0.530 L$ $0$ $0$ WallWoodGood $0.080 K$ $-0.332 L$ $0$ $0$ WallWoodGood $0.010 K$ $-0.308 L$ $0$ $0$ WallWoodGood $0.010 K$ $-0.308 L$ $0$ $0$ WallWoodGood $-0.112 K$ $-0.199 L$ $0$ $0$ WallWoodGood $-0.112 K$ $-0.199 L$ $0$ $0$	0007 Exterior 1		1		*	Wall trim	Wood	Good	-0.191 K	-0.012 L	0		Neg
Door Jamb         Wood         Good         0.237 K         0.026 L         0           Door Molding         Wood         Good         -0.184 K         -0.530 L         0         0           Wall         Wood         Good         -0.184 K         -0.530 L         0         0           Wall         Wood         Good         0.080 K         -0.532 L         0         0           Wall         Wood         Good         -0.562 K         -0.332 L         0         0           Wall         Wood         Good         -0.562 K         -0.302 L         0         0           Wall         Wood         Good         -0.562 K         -0.502 L         0         0           Wall         Wood         Good         0.108 K         -0.502 L         0         0           Wall         Wood         Good         0.108 K         -0.202 L         0         0           Wall         Wood         Good         0.108 K         -0.202 L         0         0           Wall         Wood         Good         0.108 K         -0.202 L         0         0           Wall         Wood         Good         0.108 K         -0.202 L	0007 Exterior 1		1		*	Door	Metal	Good	0.040 K	0.606 L	0		Neg
Door Molding         Wood         Good         -0.184 K         -0.530 L         0           Wall         Wood         Good         0.080 K         -0.332 L         0         0           Wall         Wood         Good         -0.562 K         -0.530 L         0         0           Wall         Wood         Good         -0.562 K         -0.530 L         0         0           Wall         Wood         Good         -0.562 K         -0.520 L         0         0           Wall         Wood         Good         -0.562 K         -0.520 L         0         0           Wall         Wood         Good         0.108 K         -0.502 L         0         0           Wall         Wood         Good         0.108 K         -0.202 L         0         0           Wall         Wood         Good         -0.011 K         -0.089 L         0         0           Wall         Wood         Good         -0.112 K         -0.199 L         0         0           Wall         Wood         Good         -0.112 K         -0.199 L         0         0         0	0007 Exterior 1	Exterior	1		*	Door Jamb	Wood	Good		0.026 L	0		Neg
Wall         Wood         Good         0.080 K         -0.332 L         0           Wall         Wood         Good         -0.562 K         -0.520 L         0         0           Wall         Wood         Good         0.108 K         -0.520 L         0         0           Wall         Wood         Good         0.108 K         -0.202 L         0         0           Wall         Wood         Good         0.0108 K         -0.202 L         0         0           Wall         Wood         Good         0.010 K         -0.308 L         0         0           Wall         Wood         Good         0.019 K         -0.308 L         0         0           Wall         Wood         Good         -0.112 K         -0.199 L         0         0           Wall         Wood         Good         -0.112 K         -0.199 L         0         0	0007 Exterior 1	Exterior	1		*	Door Molding	Wood	Good	-0.184 K	-0.530 L	•		Neg
Wall         Wood         Good         -0.562 K         -0.520 L         0           Wall         Wood         Good         0.108 K         -0.202 L         0         0           Wall         Wood         Good         0.0108 K         -0.202 L         0         0           Wall         Wood         Good         -0.071 K         -0.089 L         0         0           Wall         Wood         Good         -0.011 K         -0.089 L         0         0           Wall         Wood         Good         -0.112 K         -0.308 L         0         0           Wall         Wood         Good         -0.112 K         -0.199 L         0         0           Wall         Wood         Good         -0.260 K         -0.408 L         0         0         0	0007 Exterior 1	Exterior	1		*	Wall	Wood	Good	0.080 K	-0.332 L	0		Neg
Wall         Wood         Good         0.108 K         -0.202 L         0           Wall         Wood         Good         -0.071 K         -0.089 L         0         0           Wall         Wood         Good         0.019 K         -0.308 L         0         0           Wall         Wood         Good         0.012 K         -0.308 L         0         0           Wall         Wood         Good         0.012 K         -0.308 L         0         0           Wall         Wood         Good         -0.112 K         -0.199 L         0         0           Wall         Wood         Good         -0.206 K         -0.199 L         0         0	0007 Exterior 1	Exterior	Ţ		*	Wall	Wood	Good	-0.562 K	-0.520 L	0		Neg
Wall         Wood         Good         -0.071 K         -0.089 L         0           Wall         Wood         Good         0.019 K         -0.308 L         0         0           Wall         Wood         Good         0.019 K         -0.308 L         0         0           Wall         Wood         Good         -0.112 K         -0.199 L         0         0           Wall         Wood         Good         -0.112 K         -0.199 L         0         0	0007 Exterior 1	Exterior	1	-	*	Wall	Wood	Good	0.108 K	-0.202 L	0		Neg
Wall         Wood         Good         0.019 K         -0.308 L         0           Wall         Wood         Good         -0.112 K         -0.199 L         0           Wall         Wood         Good         -0.112 K         -0.199 L         0           Wall         Wood         Good         -0.260 K         -0.408 L         0	0007 Exterior 1	Exterior	1		*	Wall	Wood	Good	-0.071 K	-0.089 L	0		Neg
Wall         Wood         Good         -0.112 K         -0.199 L         0           Wall         Wood         Good         -0.260 K         -0.408 L         0	0007 Exterior 1	Exterior	1		1		Wood	Good	0.019 K	-0.308 L	0		Neg
Wall         Wood         Good         -0.260 K         -0.408 L         0	0007 Exterior 1	Exterior	-				Wood	Good	-0.112 K	-0.199 L	0		Neg
	0007 Exterior 1	Exterior	-		2		Wood	Good		-0.408 L	0		Neg
				ות		)							

PO Box 110493 HTH

Tacoma WA 98411

Pierce County Housing Authority PO Box 45410 Tacoma,WA 98445 Customer:

Project Name: Village Square Apartments 10810 Lakeview Avenue SW Lakewood,WA 98499

XRF and Lab Results

Site Name: Exterior Building 10813

Reporte
Assays
Total

	Í	Tacoma, WA 98445				Landwow, W 22 / 0		I	f	-		24
A ntion I e	arial 1 00	Action I arial 1 000 mg /cm2 I alb 1.(	Lab 1.000 mg /cm2	cm2				10.T.	Total Assays Reported	Lied		5
	Site	ested	*#	Wall	Component	Substrate	Paint Condition	K-Shell mg/cm2	L-Shell mg/cm2	Map #	Lab	Result
14663	1	Exterior	-	2	Wall trim	Wood	Good	-0.020 K	-0.531 L	0		Neg
14664		Exterior	-	2	Wall	Wood	Good	0.213 K	-0.259 L	0		Neg
14665		Exterior	1	6	Soffit	Wood	Good	0.101 K	-0.169 L	0		Neg
14666		Exterior	1	7	Bargeboard	Wood	Good	-0.201 K	-0.459 L	0		Neg
14667			1	7	Wall	Wood	Good	0.202 K	-0.327 L	0		Neg
14668			-	2	Wall	Wood	Good	-0.250 K	-0.422 L	0		Neg
14669		Exterior	-	2	Door	Metal	Good	0.232 K	0.513 L	0		Neg
14670			-	5	Door Jamb	Wood	Good	0.246 K	-0.647 L	0		Neg
14671			-	2	Door Molding	Wood	Good	-0.384 K	-0.579 L	0		Neg
14672		Exterior	1	2	Wall	Wood	Good	-0.623 K	-0.356 L	0		Neg
14673	0007	Exterior	1	7	Wall	Wood	Good	-0.259 K	-0.508 L	0		Neg
14674	0001	Exterior	-	3	Wall	Wood	Good	-0.779 K	-0.784 L	0		Neg
14675	s 0007	Exterior	-	3	Soffit	Wood	Good	-0.036 K	-0.944 L	0		Neg
14676	6 0007	Exterior	-		3 Rafter	Wood	Good	-0.443 K	-0.060 L	0		Neg
14677	7 0007	Exterior	-	3	Fascia	Wood	Good	0.247 K	-0.048 L	0		Neg
14678	8 0007	Exterior	-	3	Wall	Wood	Good	-0.438 K	-0.201 L	0		Neg
14679	9 0007	Exterior			3 Fence	Wood	Good	0.146 K	-0.437 L	0		Neg
14680	0007	Exterior	-	9	Wall	Wood	Good	-0.275 K	-0.384 L	0		Neg
14681	1 0007	7 Exterior	-	3	Wood beam	Wood	Good	-0.212 K	0.082 L	0		Neg
14682	2 0007	1		3	Soffit	Wood	Good	-0.056 K	-0.269 L	0		Neg
Page	5	of 3 Limit Set: 0	Codin	Coding Set: 0	No Averaging Selected	elected						
,												

Tacoma WA 98411

Pierce County Housing Authority Tacoma, WA 98445 PO Box 45410 Customer:

Action Level

Project Name: Village Square Apartments 10810 Lakeview Avenue SW

XRF and Lab Results

Site Name: Exterior

Building 10813

				-	-	T	1	-	-	- 1	1	1		T			Π
	54	;	Result	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg	
			Lab														
	rted	Map	#	•	0	•	0	0	0	0	0	0	0	0	0	0	
)	Total Assays Reported	L-Shell	mg/cm2	-0.138 L	-0.039 L	-0.387 L	-0.211 L	-0.604 L	-0.310 L	0.524 L	-0.147 L	-0.769 L	-0.558 L	-0.124 L	-0.380 L	-0.069 L	
	To	K-Shell	mg/cm2	-0.107 K	-0.169 K	-0.059 K	0.154 K	-0.181 K	0.338 K	0.404 K	0.351 K	-0.595 K	-0.229 K	-0.040 K	0.008 K	-0.265 K	
499		Paint	Condition	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	
Lakewood, WA 98499			Substrate	Wood	Wood	Wood	Wood	Wood	Wood	Metal	Wood	Wood	Wood	Wood	Wood	Wood	
			Component	3 Wall	Wall	Wall	Wall	4 Wall trim	4 Wall	Door	Door Jamb	4 Door Molding	4 Wall	Wall	4 Soffit	4 Bargeboard	
	Cur		Wall	3	6	3	4	4	4	4	4	4	4	4	4	4	
	00 ma /c	19mm nn	#	-	-	-	-	-	-	-	-	-	-	-	-	-	
PO Box 45410 Tacoma WA 98445	0 /	EVEL 1.000 IIIG /CIIIZ LAU 1.00	Room Tested	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior		Exterior	Exterior	Exterior	Exterior	
Υ Υ	1 1 000	ACI 1.00	Site	0007	0007	0007	0007	0007	0001	0007	0007	0007	0007	0007	000	0001	
		- I -				-	-	-0		100	1 0	1 100	60	1 100	1 10	1 10	- #

Neg

490

0.749 L

0.657 K

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0007 Calibration

14696 14695

14693 14694

14689 14690 14691 14692

14685 14686 14687 14688

14683 14684

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No Averaging Selected Coding Set: 0 3 Limit Set: 0 of c

Tacoma WA 98411-

Customer:

Pierce County Housing Authority PO Box 45410 Tacoma, WA 98445

Project Name: Village Square Apartments 10810 Lakeview Avenue SW Lakewood,WA 98499

Summary Analysis

Site Name: Exterior Building 10813

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Lab
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Action

Γ	_	1		Т	Т	Τ	Т			T	T		T	
ſ		(%)	(%)	(% 0	(%)	(% 0	(%)	(%) (%)	(% ()	(% 0	(% 0	(% 0	(% 0	
		Pos (	) 0	) 0	) ()	) ()	) ()	) 0	) <b>0</b>	) 0	) 0	) (	) (	0
	Lab	Tested	0	0	0	0	0	0	0	0	0	0	0	0
-		(%)	(% 0	(%)	(%)	(% 0	(% 0	(% 0	(% 0	(% 0	(% 0	(%)	(%)	
	Num	Incl (	) 0	) 0	) (	) (	) (	) (	) (	) ()	) 0	) 0	) 0	0
		(%)	3 ( 100 %)	100 %)	100 %)	26 ( 100 %)	100 %)	100 %)	100 %)	100 %)	100 %)	2 ( 100 %)	100 %)	
	Num	Neg (	3 (	3 (	3 (	26 (	5 (	1 (	3 (	2 (	2 (	2 (	2 (	52
		(%	(% 0	(% 0	(% 0	(% 0	(% 0	(% 0	(% 0	(% 0	(% 0	(% 0	(% 0	
	Num	Pos (	0	) 0	) (	) (	) ()	) 0	) (	) (	) (	) (	) 0	0
Lab 1.000 mg /CIII2	Number	Tested	e S	3	3	26	S.	1	3	2	2	2	2	52
Action Level 1.000 mg /cm2 Lab 1.00		Component Name	Door		Door Molding	Wall	Soffit	Wood beam	Wall trim	Rafter	Fence	Fascia	Bargeboard	Total Reported
Action Le		Comp		7	3	4	25	32	53	54	55	62	63	

No Averaging Selected Coding Set: 0 1 Limit Set: 0 of -

Daily Calibration

Tacoma WA 98411-

Project	Site	Date	Time	K-Shell mg/cm2	K-Avg. mg/cm2	L-Shell mg/cm2	L-Avg. mg/cm2	Scanner In #	instr #	Oper
Starting Calibration	noi	09/10/04	11:04A	0.858	0.914	0.818	0.783	M41490	490	1817
Starting Calibration	ion	09/10/04	11:05A	0.836		0.756		M41490	490	1817
Starting Calibration	ion	09/10/04	11:06A	0.966		0.787		M41490	490	1817
Starting Calibration	ion	09/10/04	11:06A	0.862		0.779		M41490	490	1817
Starting Calibration	ion	09/10/04	11:06A	0.911		0.763		M41490	490	1817
Starting Calibration	ion	09/10/04	11:07A	1.045		0.787		M41490	490	1817
4325	0001	09/10/04	01:37P	0.790	062.0	0.851	0.851	M41490	490	1817
4325	6000	09/10/04	02:48P	0.596	0.596	0.809	0.809	M41490	490	1817
Starting Calibration	ion	09/10/04	07:16A	0.842	0.914	0.774	0.783	M41490	490	1817
Starting Calibration	ion	09/10/04	07:17A	0.913		0.769		M41490	490	1817
Starting Calibration	ion	09/10/04	07:17A	0.965		0.829		M41490	490	1817
Starting Calibration	tion	09/10/04	07:18A	0.885		0.758		M41490	490	1817
Starting Calibration	tion	09/10/04	07:18A	0.971		0.790		M41490	490	1817
4326	0001	09/10/04	A90:00	0.905	0.905	0.919	0.919	M41490	490	1817
4326	0007	09/10/04	10:05A	0.657	0.657	0.749	0.749	M41490	490	1817

Page

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MANAGER OFFICE

Pierce County Housing Authority Tacoma, WA

### ALL TESTS BY COMPONENT & COLOR (EACH UNIT)

## VILLAGE SQUARE APARTMENTS MANAGER OFFICE

UNIT	DESCRIPTION	K-GEN (mg/cm2)	L-GEN (mg/cm2)	COMMENTS
All components	are painted beige unless othe	rwise indicated.		
East Elevation	Wall	-1.17	-0.16	Negative
	Door-rust	-0.15	-0.30	Negative
	Door jamb-rust	-0.21	-0.46	Negative
	Door molding-rust	-0.57	-0.63	Negative
	Handrail-rust	-0.04	-0.24	Negative
	Wood post	0.13	-0.07	Negative
	Wall	-0.35	-0.40	Negative
	Soffit	-0.31	-0.11	Negative
	Bargeboard-rust	0.04	-0.06	Negative
South Elevation	Wall	-0.06	-0.00	Negative
South Elevation	Wall	-0.34	-0.01	Negative
	Rafter	-0.01	-0.41	Negative
	Soffit	0.10	-0.36	Negative
	Wall	0.13	-0.19	Negative
	Wall	-0.23	0.12	Negative
	Wall	-0.10	-0.27	Negative
West Elevation	Wall	-0.35	-0.46	Negative
TOST LIVE ALLOW	Wall trim-rust	-0.32	-0.35	Negative
	Wall	0.28	-0.62	Negative
	Wall	-0.60	-0.22	Negative
	Bargeboard-rust	-0.03	0.06	Negative
North Elevation	Wall	-0.24	-1.13	Negative
vitit 210 i utivit	Door-rust	0.01	0.15	Negative
	Door jamb-rust	-0.18	-0.03	Negative
	Door molding-rust	-0.20	-0.50	Negative
	Wall	-0.38	0.11	Negative
	Rafter	0.06	0.19	Negative
	Soffit	-0.56	-0.09	Negative
	Fascia-rust	0.13	0.15	Negative
	Wall	-0.06	-0.53	Negative

Tacoma WA 98411

Customer: Pierce County Housing Authority PO Box 45410 Tacoma, WA 98445

Project Name: Village Square Apartments 10810 Lakeview Avenue SW Lakewood, WA 98499

**XRF** and Lab Results

Manager Office Site Name: Exterior

	I .	C++0K	1 000	(				To	Total Assays Reported	rted		31
Action Le	site	Action Level 1.000 mg/cm/2 Lao 1.0 # Site Room Tested	Tao 1.000 mg /umz	Wall	Component	Substrate	Paint Condition	K-Shell mø/cm2	L-Shell mg/cm2	Map #	Lab	Result
14552	5000		*	*	*	*	*	0.000 X	0.000 X	0		
14553	0005		-	-	Wall	Wood	Good	-1.170 K	-0.163 L	0		Neg
14554	0005	Exterior	-	=	Door	Metal	Good	-0.151 K	-0.302 L	0		Neg
14555		1	-	1	Door Jamb	Wood	Good	-0.213 K	-0.457 L	0		Neg
14556	0005		-	1	Door Molding	Wood	Good	-0.575 K	-0.627 L	0		Neg
14557	0005	Exterior	=	1	Stair Handrail	Wood	Good	-0.039 K	-0.238 L	0		Neg
14558	0005	Exterior	1	1	Wood post	Wood	Good	0.129 K	-0.072 L	0		Neg
14559	0005	Exterior	1	1	Wall	Wood	Good	-0.352 K	-0.404 L	0		Neg
14560	0005	Exterior	-	1	Soffit	Wood	Good	-0.312 K	-0.113 L	0		Neg
14561	0005	Exterior	1	1	Bargeboard	Wood	Good	0.037 K	-0.055 L	0		Neg
14562	0005	Exterior	-	2	Wall	Wood	Good	-0.058 K	-0.003 L	0		Neg
14563	0005	Exterior	1	2	Wall	Wood	Good	-0.345 K	-0.009 L	0		Neg
14564	000	Exterior	1	5	Rafter	Wood	Good	-0.012 K	-0.410 L	0		Neg
14565	0005	Exterior	1	2	Soffit	Wood	Good	0.101 K	-0.361 L	0		Neg
14566	0005	Exterior	1	2	Wall	Wood	Good	0.131 K	-0.194 L	0		Neg
14567	0005	Exterior	1	2	Wall	Wood	Good	-0.233 K	0.124 L	0		Neg
14568	0005	Exterior	1	2	Wall	Wood	Good	-0.097 K	-0.267 L	0		Neg
14569	0005	Exterior	1	3	Wall	Wood	Good	-0.348 K	-0.464 L	0		Neg
14570	0005	Exterior	1	3	Wall trim	Wood	Good	-0.324 K	-0.350 L	0		Neg
14571	0005	Exterior	-	3	Wall	Wood	Good	0.277 K	-0.616 L	0		Neg
Page	-	of 2 Limit Set: 0	Coding	Coding Set: 0	No Averaging Selected	elected						

PO Box 110493 HTH

Tacoma WA 98411

Pierce County Housing Authority PO Box 45410 Tacoma,WA 98445 Customer:

Project Name: Village Square Apartments 10810 Lakeview Avenue SW

Lakewood, WA 98499

XRF and Lab Results

Site Name: Exterior

Office	
Manager	

000 mg /cm2
-i
Lab
/cm2
ng
1.000 1
Level
Action

Total Assays Reported

31

	_	<u> </u>	-	<b>1</b>	r –	1	-	r	r -	-	
Result	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg
Lab											
Map #	0	0	0	•	0	0	0	0	0	0	0
L-Shell mg/cm2	-0.221 L	0.063 L	-1.127 L	0.152 L	-0.027 L	-0.502 L	0.112 L	0.186 L	-0.092 L	0.146 L	-0.527 L
K-Shell mg/cm2	-0.600 K	-0.029 K	-0.240 K	0.012 K	-0.181 K	-0.204 K	-0.378 K	0.055 K	-0.564 K	0.130 K	-0.058 K
Paint Condition	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good
Substrate	Wood	Wood	Wood	Metal	Wood	Wood	Wood	Wood	Wood	Wood	Wood
Component	3 Wall	3 Bargeboard	4 Wall	4 Door	4 Door Jamb	4 Door Molding	4 Wall	4 Rafter	4 Soffit	4 Fascia	4 Wall
Wall	3	S	4	4	4	4	4	4	4	4	4
#	1	1	1	1	1	1	1	Ŧ	1	1	1
Room Tested	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior
Site	0005	0005	0005	0005	0005	0005	0005	0005	0005	0005	0005
#	14572	14573	14574	14575	14576	14577	14578	14579	14580	14581	14582

No Averaging Selected Coding Set: 0 2 Limit Set: 0 of 2 Page

Tacoma WA 98411-

Customer: Pierce County Housing Authority PO Box 45410

Project Name: Village Square Apartments 10810 Lakeview Avenue SW Lakewood, WA 98499

Summary Analysis

Site Name: Exterior Manager Office

Action Level 1.000 mg /cm2 Lab 1.000 mg /cm2

Tacoma, WA 98445

Page 1 of 1 Limit Set: 0 Coding Set: 0 No Averaging Selected

Daily Calibration

Tacoma WA 98411-

Project	Site	Date	Time	K-Shell mg/cm2	K-Avg. mg/cm2	L-Shell mg/cm2	L-Avg. mg/cm2	Scanner #	Instr #	Oper
Starting Calibration	on	09/10/04	11:04A	0.858	0.914	0.818	0.783	M41490	490	1817
Starting Calibration	on	09/10/04	11:05A	0.836		0.756		M41490	490	1817
Starting Calibration	uo	09/10/04	11:06A	0.966		0.787		M41490	490	1817
Starting Calibration	uo	09/10/04	11:06A	0.862		0.779		M41490	490	1817
Starting Calibration	uo	09/10/04	11:06A	0.911		0.763		M41490	490	1817
Starting Calibration	ion	09/10/04	11:07A	1.045		0.787		M41490	490	1817
4325	0001	09/10/04	01:37P	0.790	0.790	0.851	0.851	M41490	490	1817
4325	6000	09/10/04	02:48P	0.596	0.596	0.809	0.809	M41490	490	1817
Starting Calibration	ion	09/10/04	07:16A	0.842	0.914	0.774	0.783	M41490	490	1817
Starting Calibration	ion	09/10/04	07:17A	0.913		0.769		M41490	490	1817
Starting Calibration	ion	09/10/04	07:17A	0.965		0.829		M41490	490	1817
Starting Calibration	ion	09/10/04	07:18A	0.885		0.758		M41490	490	1817
Starting Calibration	ion	09/10/04	07:18A	0.971		0.790		M41490	490	1817
4326	0001	09/10/04	A60:00	0.905	0.905	0.919	0.919	M41490	490	1817
4326	0007	09/10/04	10:05A	0.657	0.657	0.749	0.749	M41490	490	1817

Page

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LAUNDRY BUILDING

### ALL TESTS BY COMPONENT & COLOR (EACH UNIT)

### VILLAGE SQUARE APARTMENTS LAUNDRY ROOM

UNIT	DESCRIPTION	K-GEN (mg/cm2)	L-GEN (mg/cm2)	COMMENTS
All components	are painted beige unless othe	rwise indicated.		
West Elevation	Door-rust	0.00	0.19	Negative
	Door jamb-rust	-0.35	-0.51	Negative
	Door molding-rust	0.04	-0.68	Negative
	Wall	-0.23	-0.42	Negative
	Wall	-0.65	-0.14	Negative
	Bargeboard-rust	-0.14	-0.50	Negative
North Elevation	Wall	-0.91	-0.17	Negative
	Soffit	-03.2	-0.49	Negative
	Rafter	-0.49	-0.05	Negative
	Fascia-rust	0.25	-0.05	Negative
	Wall	-0.09	-0.03	Negative
East Elevation	Wall	-0.13	-0.38	Negative
	Bargeboard-rust	-0.41	-0.32	Negative
	Wall	-0.28	0.22	Negative
	Wall	-0.58	-0.32	Negative
South Elevation	Wall	-0.09	-0.14	Negative
	Soffit	-0.23	-0.15	Negative
	Rafter	-0.54	0.15	Negative
	Fascia-rust	-0.54	0.15	Negative
	Wall	-0.14	-0.49	Negative

Tacoma WA 98411

Pierce County Housing Authority PO Box 45410 Tacoma, WA 98445 Customer:

Project Name: Village Square Apartments 10810 Lakeview Avenue SW Lakewood, WA 98499

XRF and Lab Results

F Site Name: Exterior

Room	
Laundry	

21	Result		Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg		
	Lab		Ň	Ň	Z	Z	Z	Z	Z	Z	~	~	~	4	<u>E</u> .	4	R-1	F			-		
g	Map #	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Total Assays Reported	L-Shell M mg/cm2	0.000 X	0.189 L	-0.508 L	-0.676 L	-0.421 L	-0.143 L	-0.499 L	-0.172 L	-0.486 L	-0.052 L	-0.050 L	-0.028 L	-0.378 L	-0.324 L	0.217 L	-0.321 L	-0.145 L	-0.152 L	0.152 L	0.055 L		
Tot	K-Shell mg/cm2	0.000 X	0.001 K	-0.351 K	0.041 K	-0.235 K	-0.650 K	-0.140 K	-0.911 K	-0.316 K	-0.487 K	0.254 K	-0.092 K	-0.127 K	-0.410 K	-0.280 K	-0.577 K	-0.088 K	-0.232 K	-0.539 K	-0.109 K		
	Paint Condition	*	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good		
	Substrate	*	Metal	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Selected	סכוכרוית
	Component		Door	Door Jamb	Door Molding	Wall	Wall	Bargeboard	Wall	Soffit	Rafter	Fascia	Wall	Wall	Bargeboard	Wall	Wall	Wall	Soffit	Rafter	Fascia		NO AVEIABILIE SELECTED
Ç	Wall	*			1 T	-	-	Ē	2	2	2	3	5	3	3	3	3	4	4	4	4		Coding Set: U
1	Lao 1.000 mg /cm/2	*	-	-		-	1	1	1	-	-		-		-	-	-	-	-				Codin
C++0K	Action Level 1.000 mg/cm2 Lab 1.0 # Site Room Tested	Calibration	Campi actor Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior			Exterior			1	1		Exterior		Exterior			of 2 Limit Set: 0
T 3	site	0004			0004	0004	0004	0004	0004				1				0004	0004	0004	0004			1
	Action Le	14620	123F1	14532	14533	14534	14535	14536	14537	14538	14539	14540	14541	14542	14543	14544	14545	14546	14547	14548	14549		Page

Tacoma WA 98411

Customer: Pierce County Housing Authority PO Box 45410 Tacoma,WA 98445

Project Name: Village Square Apartments 10810 Lakeview Avenue SW Lakewood, WA 98499

XRF and Lab Results

Site Name: Exterior Laundry Room

21

Lab 1.000 mg /cm2

Total Assays Reported

A netton T	or 1 0	Lation I and 1 000 me /rm2 1 ab	Tah 1 000 mg /cm2	a /cm2				10	notionant expects the			
ACUOIL L	CACL L.V.									1 fee		
					1		Paint	K-Shell	L-Shell	Map	4 0 L	Dom!+
#	Site	Room Tested	#	Wall	Component	Substrate	Condition	mg/cm2	mg/cm2	#	LAU	Imesu
14550		0004 Exterior		4	4 Wall	Wood	Good	-0.138 K	0.487 L	9		Neg

No Averaging Selected Coding Set: 0 2 Limit Set: 0 ы 2

Tacoma WA 98411-

Customer: Pierce County Housing Authority PO Box 45410 Tacoma, WA 98445

Laundry Room

10810 Lakeview Avenue SW

Lakewood, WA 98499

Project Name: Village Square Apartments

Site Name: Exterior

Summary Analysis

Action L	Action Level 1.000 mg /cm2 Lab 1.0	Lab 1.000 mg /cm2						
		Number	Num	Num	Num	Lab		
Comp	Component Name	Tested	Pos ( %)	Neg (%)	Incl (%)	Tested	Pos (%)	
	Door	1	(% 0 ) 0	1 ( 100 %)	0 ( 0 %)	0	(% 0 ) 0	
1	Door Jamb	1	(% 0 ) 0	1 ( 100 %)	(% 0 ) 0	0	(% 0 ) 0	
	Door Molding	1	(% 0 ) 0	1 ( 100 %)	0 ( 0 %)	0	(% 0 ) 0	
4	Wall	6	(% 0 ) 0	9 ( 100 %)	(% 0 ) 0	0	(% 0 ) 0	
25	-	2	(% 0 ) 0	2 ( 100 %)	(% 0 ) 0	0	(% 0 ) 0	
54	Rafter	2	(% 0 ) 0	2 ( 100 %)	0 ( 0 %)	0	(% 0 ) 0	
62	Fascia	2	(% 0 ) 0	2 ( 100 %)	(% 0 ) 0	0	(% 0 ) 0	
63	Bargeboard	2	0% 0 ) 0	2 ( 100 %)	(% 0 ) 0	0	(% 0 ) 0	
	Total Reported	20	0	20	0	0	0	

No Averaging Selected
Coding Set: 0
1 of 1 Limit Set: 0 Coding Set: 0
of
-
Page

Daily Calibration

-

Tacoma WA 98411-

Project	Site	Date	Time	K-Shell mg/cm2	K-Avg. mg/cm2	L-Shell mg/cm2	L-Avg. mg/cm2	Scanner #	Instr #	Oper
Starting Calibration	ion	09/10/04	11:04A	0.858	0.914	0.818	0.783	M41490	490	1817
Starting Calibration	ion	09/10/04	11:05A	0.836		0.756		M41490	490	1817
Starting Calibration	ion	09/10/04	11:06A	0.966		0.787		M41490	490	1817
Starting Calibration	ion	09/10/04	11:06A	0.862		0.779		M41490	490	1817
Starting Calibration	ion	09/10/04	11:06A	0.911		0.763		M41490	490	1817
Starting Calibration	tion	09/10/04	11:07A	1.045		0.787		M41490	490	1817
4325	0001	09/10/04	01:37P	067.0	0.790	0.851	0.851	M41490	490	1817
4325	6000	09/10/04	02:48P	0.596	0.596	0.809	0.809	M41490	490	1817
Starting Calibration	tion	09/10/04	07:16A	0.842	0.914	0.774	0.783	M41490	490	1817
Starting Calibration	tion	09/10/04	07:17A	0.913		0.769		M41490	490	1817
Starting Calibration	tion	09/10/04	07:17A	0.965		0.829		M41490	490	1817
Starting Calibration	tion	09/10/04	07:18A	0.885		0.758		M41490	490	1817
Starting Calibration	tion	09/10/04	07:18A	0.971		0.790		M41490	490	1817
4326	0001	09/10/04	<b>V60:60</b>	0.905	0.905	0.919	0.919	M41490	490	1817
4326	0007	09/10/04	10:05A	0.657	0.657	0.749	0.749	M41490	490	1817

Page

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## Performance Characteristic Sheet

### EFFECTIVE DATE: June 26, 1996

EDITION NO.: 3

## MANUFACTURER AND MODEL:

Make:Scitec CorporationModel:MAP-4Source:57CoNote:This sheet supersedes all previous sheets for the XRFinstrument of the make, model, and source shown above.

## FIELD OPERATION GUIDANCE

#### **OPERATING PARAMETERS**

Test mode, Screen mode, or Unlimited mode.

#### **XRF CALIBRATION CHECK LIMITS**

0.6 to 1.2 mg/cm<sup>2</sup> (inclusive)

#### SUBSTRATE CORRECTION:

When using Unlimited mode, substrate correction recommended for.

None

When using Unlimited mode, substrate correction not recommended for.

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

When using Screen or Test mode, for XRF results below 4.0 mg/cm<sup>2</sup>, substrate correction recommended for:

Drywall, Metal, and Wood

When using Screen or Test mode, substrate correction not recommended for.

Brick, Concrete, and Plaster

#### INCONCLUSIVE RANGE OR THRESHOLD

UNLIMITED MODE READING DESCRIPTION	SUBSTRATE	INCONCLUSIVE RANGE (mg/cm²)
Results not corrected for substrate bias for unimited mode readings	Brick Concrete Drywall Metal Plaster Wood	0.91 to 1.19 0.91 to 1.19 0.91 to 1.19 0.91 to 1.19 0.91 to 1.19 0.91 to 1.19 0.91 to 1.19

SCREEN MODE READING DESCRIPTION	SUBSTRATE	INCONCLUSIVE RANGE (mg/cm <sup>2</sup> )
Results corrected for substrate bias for screen mode readings on drywall, metal, and wood substrates only	Brick Concrete Drywall Metal Plaster Wood	0.91 to 1.09 0.91 to 1.09 0.91 to 1.39 0.91 to 1.39 0.91 to 1.19 0.91 to 1.09 0.91 to 1.29

TEST MODE READING DESCRIPTION	SUBSTRATE	THRESHOLD (mg/cm <sup>2</sup> )	INCONCLUSIVE RANGE (mg/cm²)
Readings corrected for substrate bias for test mode readings on drywall, metal, and wood substrates only	Brick Concrete Drywall Metal Plaster Wood	0.9 0.9 None None 0.9 None	None None 0.91 to 1.39 0.91 to 1.09 None 0.91 to 1.29

## 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 an EPA/HUD evaluation using archived building components. Testing was conducted on approximately 150 test locations. All of the test locations were tested in February 1996 using two different instruments. One instrument had a new source installed in July 1994 and its strength at the time of testing was calculated as 9.4 mCi. The other instrument had a new source installed in September 1994 and its strength at the time of testing was calculated as 10.6 mCi.

#### **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/m<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 <u>bare</u> 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 <u>bare</u> 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):

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

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 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 and multi-family housing, a result is defined as 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 retest 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 screen, test, and confirm modes, the MAP 4 instrument tests until a K-shell result is obtained relative to a level of precision. A result is "positive", "negative" or "retest" as displayed by indicator lights. For the unlimited mode, the MAP 4 instrument tests until a K-shell result is indicated relative to an action level (1.0 mg/cm<sup>2</sup> for archive testing) and the current precision, or until the the reading is terminated by releasing the trigger. A few unlimited mode readings were terminated because they exceeded the two-minute limit used for archive testing. The following tables provide testing time information for three testing modes. Insufficient information is available to provide this information for confirm mode. All times have been scaled to match an initial 12 miC source. Note that source strength and factors such as substrate may affect testing times.

		UNLIMITED	MODE TESTIN	G TIMES (Second	s)	
		ALL DATA		MEDIAN	FOR LABORATORY-ME/ LEAD LEVELS (mg/cm²)	ASURED
SUBSTRATE	25 <sup>th</sup> Percentile	Median	75 <sup>th</sup> Percentile	Pb < 0.25	0.25 ≤ Pb < 1.0	1.0 ≤ Pb
Wood Drywall	3	4	6	4	13	3
Metal	3	4	8	4	9	3
Brick Concrete Plaster	4	5	8	6	6	3

"The general calibration was used for wood, drywall, brick, concrete, plaster. Steel calibration was used for metal. (There are no aluminum samples in the archive facility).

		SCREEN	MODE TESTING	TIMES (Seconds)	)		
		ALL DATA		MEDIAN	FOR LABORATORY-ME LEAD LEVELS (mg/cm <sup>2</sup> )	ASURED	
SUBSTRATE"	25 <sup>th</sup> Percentile	Median	75 <sup>th</sup> Percentile	Pb < 0.25	0.25 ≤ Pb < 1.0	1.0 ≤ Pb	
Wood Drywall	4	6	7	5	6	7	
Metal	4	5	6	5	5	5	
Brick Concrete Plaster	11	11	13	11	11	11	

"The general calibration was used for wood, drywall, brick, concrete, plaster. Steel calibration was used for metal (Thereare no aluminum samples in the archive facility).

		ALL DATA			FOR LABORATORY-ME LEAD LEVELS (mg/cm²)	
SUBSTRATE	25 <sup>th</sup> Percentile	Median	75 <sup>th</sup> Percentile	Pb < 0.25	0.25 ≤ Pb < 1.0	1.0 ≤ Pb
Wood Drywali	17	22	27	21	20	28
Metal	13	20 23		20	20	20
Brick Concrete Plaster	41	42	52	41	46	43

#### **BIAS AND PRECISION**

Do not use these bias and precision data to correct for substrate bias. These bias and precision data wer e computed without substrate correction from samples with laboratory-measured lead levels less than 4.0 mg/cm<sup>2</sup> lead. There were 15 testing locations taken in the screen mode with a laboratory-measured lead levels equal to or greater than 4.0 mg/cm<sup>2</sup> lead. None of these had XRF readings less than 1.0 mg/cm<sup>2</sup>. There were 15 testing locations taken in the laboratory-measured lead levels equal to or greater than 4.0 mg/cm<sup>2</sup> lead. None of these had XRF readings less than 1.0 mg/cm<sup>2</sup>. There were 15 testing locations taken in the test mode with a laboratory-measured lead levels equal to or greater than 4.0 mg/cm<sup>2</sup> lead. None of these had XRF readings less than 1.0 mg/cm<sup>2</sup>. There were not any testing locations taken in the confirm mode with a laboratory-measured lead levels equal to or greater than 4.0 mg/cm<sup>2</sup> lead. There were 15 testing locations taken in the unlimited mode with a laboratory-measured lead levels equal to or greater than 4.0 mg/cm<sup>2</sup> lead. There were 15 testing locations taken in the unlimited mode with a laboratory-measured lead levels equal to or greater than 4.0 mg/cm<sup>2</sup> lead. None of these had XRF readings less than 1.0 mg/cm<sup>2</sup>. All testing was done in February 1996 with two different instruments. The following data are for illustrative purposes only. Actual bias must be determined on the site. Inconclusive ranges provided above already account for bias and precision.

SCREEN MODE READING MEASURED AT	SUBSTRATE	BIAS (mg/cm²)	PRECISION' (mg/cm²)
	Brick	-0.1	0.3
	Concrete	-0.1	0.3
	Drywall	0.1	0.2
0.0 mg/cm <sup>2</sup>	Metal	0.1	0.3
	Plaster	-0.1	0.3
	Wood	0.0	0.2
	Brick	0.0	0.3
	Concrete	0.0	0.3
	Drywall	0.3	0.4
0.5 mg/cm <sup>2</sup>	Metal	02	0.3
old high and	Plaster	0.0	0.3
	Wood	0.2	0.4
	Brick	0.1	0.4
	Concrete	0.1	0.4
	Drywali	0.5	0.6
1.0 mg/cm <sup>2</sup>	Metal	0.3	0.3
1.00 11.00	Plaster	0.1	0.4
	Wood	0.4	0.6

	Brick	0.4	0.5
2.0 mg/cm <sup>2</sup>	Concrete	0.4	0.5
		0.9	0.8
	Drywall Metal	0.5	0.3
	Plaster	0.4	0.5
	Wood	0.7	0.8

Precision at 1 standard deviation

TEST MODE READING MEASURED AT	SUBSTRATE	BIAS (mg/cm²)	PRECISION (mg/cm²)
	Brick	-0.1	0.2
	Concrete	-0.1	0.2
	Drywall	0.1	0.1
	Metal	0.1	0.2
0.0 mg/cm <sup>2</sup>	Plaster	-0.1	02
	Wood	0.0	0.1
	Brick	-0.1	0.3
	Concrete	-0.1	0.3
	Drywaii	0.3	0.4
0.5 mg/cm <sup>2</sup>	Metal	0.2	0.2
	Plaster	-0.1	0.3
	Wood	0.2	0.4
	Brick	-0.1	0.3
	Concrete	-0.1	0.3
	Drywali	0.5	0.6
4.0	Metal	0.3	0.2
1.0 mg/cm <sup>2</sup>	Plaster	-0.1	0.3
	Wood	0.4	0.6
	Brick	0.0	0.4
	Concrete	0.0	0.4
	Drywall	1.0	0.8
2 0 miles 2	Metal	0.5	0.2
2.0 mg/cm <sup>2</sup>	Plaster	0.0	0.4
	Wood	0.8	0.8
Precision at 1 standard deviation			

#### CLASSIFICATION OF RESULTS

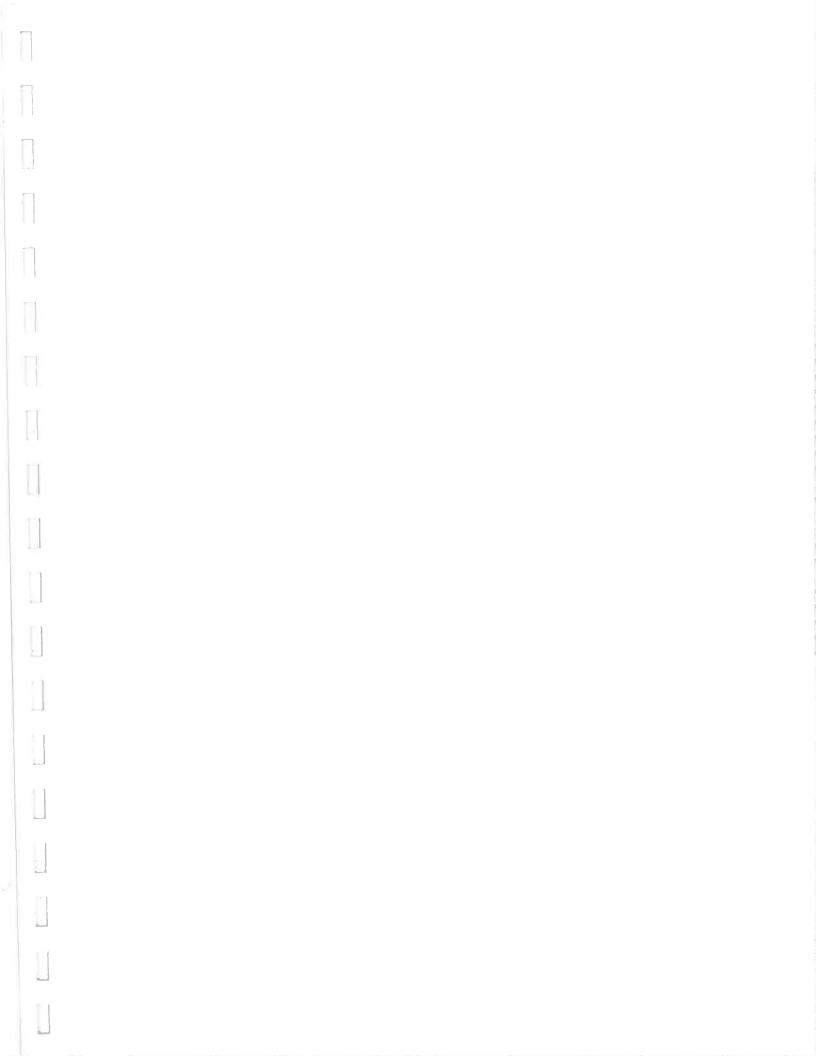
XRF results are classified as positive if they are greater than the upper boundary of the inconclusive range, and negative if they are less than the lower boundary of the inconclusive range, or inconclusive if in between. The inconclusive range includes both its upper and lower bounds. Earlier editions 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 ar e considered positive, negative, or inconclusive for a given XRF model and substrate remain unchanged, s o previous inspection results are not affected.

#### 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 Characteristics Sheet is a joint product of the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Housing and Urban Development (HUD). The issuance of this sheet does not constitute rulemaking. The information provided here is intended solely as guidance to be used in conjunction with Chapter 7, Lead-Based Paint Inspection, of the *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing*. EPA and HUD reserve the right to revise this guidance. Please address questions and comments on this sheet to: Director, Office of Lead Hazard Control (L), U.S. Department of Housing and Urban Development, 451 Seventh St, S.W., Washington, DC 20410.

# **STATE OF WASHINGTON** Department of Community, Trade and Economic Development Lead-Based Paint Program **MTH Environmental, LLC** Has fulfilled the certification requirements of Washington Administrative code (WAC) 365-230 and has been certified to conduct lead-based paint activities pursuant to WAC 365-230-200: **Certification # Issuance Date Expiration Date** 6/15/2007 0049 6/15/2004 **STATE OF WASHINGTON** Department of Community, Trade and Economic Development Lead-Based Paint Program Mike T Hara Has fulfilled the certification requirements of Washington Administrative code (WAC) 365-230 and has been certified to conduct lead-based paint activities pursuant to WAC 365-230-200 as a: **Risk Assessor**, Inspector **Certification** # **Issuance** Date **Expiration Date** 0014 6/15/2004 6/15/2007



# LEAD PAINT IDENTIFICATION SURVEY

## **PROJECT LOCATION:**

Oakleaf Apartment Complex 4111 – 110<sup>th</sup> Street SW Lakewood, Washington

**PREPARED FOR:** 

## PIERCE COUNTY HOUSING AUTHORITY

April 28, 2007

MTH Environmental, LLC Asbestos and Lead Based Paint Consultants 253.566.9377 Fax 253.566.9369 e-mail MTH LLC@gwest.net

> PO Box 110493 Tacoma, WA 98411

## LEAD PAINT IDENTIFICATION SURVEY

**PROJECT LOCATION:** 

Oakleaf Apartment Complex 4111 – 110<sup>th</sup> Street SW Lakewood, Washington

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April 28, 2007

MTH Environmental, LLC Asbestos and Lead Based Paint Consultants 253.566.9377 Fax 253.566.9369 e-mail MTH\_LLC@qwest.net

> PO Box 110493 Tacoma, WA 98411

EXECUTIVE SUMMARY



PO Box 110493 Tacoma, WA 98411

#### **EXECUTIVE SUMMARY**

*MTH Environmental, LLC*, at the request of the Pierce County Housing Authority, performed a lead paint inspection at the Oakleaf Apartments,  $4111 - 110^{\text{th}}$ Street SW, Lakewood, Washington on April 26, 2007. The complex consists of two (2) two-story structures and the report is divided into each individual building referred to as the north and south buildings.

The purpose of the inspection was to determine the presence of lead paint on the exterior surfaces only. No interior testing was conducted on the units. The testing was performed using the MAP4 XRF Spectrum Analyzer. This instrument is equipped with a Cobalt 57 radioactive source and has a built-in "automatic substrate correction" feature that enables testing of the component without manual corrections for substrate density. The testing was conducted using the "unlimited"-test mode of the instrument. With this mode, there is an "inconclusive" range of 0.2 mg/cm2 above and below the HUD Guideline level for lead paint of 1.0 mg/cm2 in the K-Shell (K-Gen) test mode. During the inspection, the "test" mode was also used. With this mode, there is no "inconclusive" range and the result is considered as accurate to the reading on the instrument console. All test locations were selected on a random basis by the inspector. The colors listed in the Test Component Section of this report may vary according to color tint, light and other artificial conditions present at the time of the inspection.

XRF test results indicate the presence of lead paint on the rafter and soffit components throughout the exterior. The soffit component refers to the 2<sup>nd</sup> floor plywood decking material. In addition, one test taken on the floor surface on the 2<sup>nd</sup> floor walkway and one beam tested negative. All other tests taken on these components tested negative. It is assumed that the positive results are isolated based upon other tests taken on the similar components.

All of the positive lead painted components are in stable and intact condition. If these components are to be disturbed during the renovation process, the use of HUD "Safe Work Practice" techniques must be used during the project.

### **OAK LEAF APARTMENTS**

### **SOUTH BUILDING**

XRF AND LAB RESULTS

#### ALL TESTS BY COMPONENT & COLOR (EACH UNIT)

#### OAK LEAF APARTMENTS SOUTH BUILDING 4111 – 110<sup>TH</sup> STREET SW LAKEWOOD, WASHINGTON

UNIT	DESCRIPTION	K-GEN (mg/cm2)	L-GEN (mg/cm2)	COMMENTS
EXTERIOR TE	STING ONLY			
South Elevation	Wall-gray	0.11	0.13	Negative
	Door-gray	-0.32	-0.45	Negative
	Door jamb-green	-0.58	0.20	Negative
	Door casing-green	0.16	-0.08	Negative
	Wall-gray	-0.06	-0.64	Negative
	Wood post-gray	-0.09	-0.19	Negative
	Rafter-gray	7.06	1.26	Positive
	Soffit-gray	6.06	0.76	Positive
	Wall-gray	-0.47	0.14	Negative
	Wood post-gray	0.05	0.42	Negative
	Rafter-gray	5.25	1.21	Positive
	Soffit-gray	6.63	1.39	Positive
	Handrail-gray	2.15	0.43	Positive
	Stair stringer-gray	0.10	0.04	Negative
	Stair tread-gray	-0.01	<b>-0.7</b> 1	Negative
	Wood post-gray	0.22	0.12	Negative
	Exterior 2 <sup>nd</sup> floor landing wall-green	1.06	-0.11	Inconclusive
	Exterior 2 <sup>nd</sup> floor landing wall-green	0.90	-0.14	Inconclusive
	Door-gray	0.20	-0.03	Negative
	Door jamb-green	-0.19	-0.17	Negative
	Door casing-green	0.44	-0.14	Negative
	Wall-gray	-0.01	-0.27	Negative
	Rafter-gray	4.04	1.14	Positive
	Soffit-gray	3.15	0.62	Positive
	Handrail-gray	-0.60	0.33	Negative
	Stair stringer-gray	-0.49	-0.52	Negative
	Exterior 2 <sup>nd</sup> floor landing wall-green	-0.36	0.17	Negative
	Wall-gray	0.23	-0.08	Negative
	Wall-gray	0.39	-0.15	Negative
	Door-gray	-0.49	0.20	Negative
	Door jamb-green	0.34	0.15	Negative
	Door casing-green	0.45	-0.23	Negative
	Floor (decking)-gray	0.16	-0.24	Negative
	Wood beam-gray	-0.47	0.04	Negative
	Rafter-gray	2.75	0.07	Positive

Pierce County Housing Authority Tacoma, WA

Page 2 Lead Paint Testing South Building Oak Leaf Apartments 4111 – 110<sup>th</sup> Street SW Lakewood, WA

UNIT	DESCRIPTION	K-GEN (mg/cm2)	L-GEN (mg/cm2)	COMMENTS
South Elevation	Soffit-gray	3.06	0.83	Positive
South Elevation	Exterior 2 <sup>nd</sup> floor landing wall-green	0.09	-0.22	Negative
West Elevation	Wall-gray	-0.20	-0.42	Negative
	Wall-gray	0.15	-0.32	Negative
North Elevation	Wall-gray	-0.36	-0.29	Negative
	Wall-gray	-0.04	-0.23	Negative
	Wall-gray	-0.30	0.91	Negative
	Wall-gray	0.07	-0.10	Negative
	Wall-gray	-0.30	0.08	Negative
	Fascia-green	0.07	0.18	Negative
	Soffit-gray	3.06	1.32	Positive
	Soffit-gray	2.81	1.11	Positive
	Wall-gray	-0.15	-0.14	Negative
East Elevation	Wall-gray	0.05	-0.18	Negative
	Fascia-green	-0.08	-0.31	Negative
	Wall-gray	-0.03	-0.29	Negative
	Wall-gray	-0.34	-0.33	Negative

XRF and Lab Results

Customer: Pierce County Housing Authority

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Project Name: Oakleaf Apartments 4111 - 110th Street SW Lakewood, WA

Oakleaf Apartments Site Name: South Building

Result		Incl	Neg	Neg	Neg	Neg	Neg	Neg	Pos	Pos	Neg	Neg	Pos	Pos	Pos	Neg	Neg	Neg	Incl	Neg	Neg
Lab										4											
Map #	0	490	490	490	490	490	490	490	490	490	490	490	490	490	490	490	490	490	490	490	490
L-Shell mg/cm2	0.000 X	1.061 L	0.134 L	-0.449 L	0.199 L	-0.084 L	-0.637 L	-0.186 L	1.256 L	0.756 L	0.136 L	-0.416 L	1.209 L	1.385 L	0.430 L	0.039 L	-0.706 L	0.119 L	-0.110 L	-0.144 L	-0.028 L
K-Shell mg/cm2	0.000 X	0.968 K	0.113 K	-0.323 K	-0.581 K	0.156 K	-0.062 K	-0.091 K	7.061 K	6.060 K	-0.468 K	0.050 K	5.252 K	6.635 K	2.147 K	0.096 K	-0.007 K	0.221 K	1.064 K	0.899 K	0.198 K
Paint Condition	*	*	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good
Substrate	*	*	Wood	Metal	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Metal
Component	*	*	Wall	Door	Door Jamb	Door Casing	Wall	Wood post	Rafter	Soffit	Wall	Wood post	Rafter	Soffit	Stair Handrail	Stair Stringer	Stair Tread	Wood post	Miscellaneous	Miscellaneous	Door
Wall	*	4	-		1	1	1	1			1	1	F			1	1	-	1	1	1
M #	*	*	1	1	-	1	1	1	-	1	1	-	-	-	-	1	-	1	1	1	1
# Site Room Tested	Calibration	Calibration	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior
Site	0001	0001	0001	0001	0001	0001	0001	0001	0001	0001	0001	0001	0001	0001	0001	0001	0001	0001	0001	0001	0001
#	6766	6767	6768	6769	6770	6771	6772	6773	6774	6775	6776	6777	6778	6779	6780	6781	6782	6783	6784	6785	6786

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XRF and Lab Results

Customer: Pierce County Housing Authority

Project Name: Oakleaf Apartments 4111 - 110th Street SW Lakewood, WA

Oakleaf Apartments Site Name: South Building

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54	Result							3 - 1					-
S	Re	Neg	Neg	Neg	Neg	Neg	Pos	Pos	Neg	Neg	Neg	Neg	Neg
	Lab							2. 10					
orted	Map #	490	490	490	490	490	490	490	490	490	490	490	490
Total Assays Reported	L-Shell mg/cm2	-0.231 L	0.908 L	-0.099 L	0.083 L	0.179 L	1.325 L	1.113 L	-0.142 L	-0.185 L	-0.307 L	-0.291 L	-0.326 L
Tc	K-Shell mg/cm2	-0.035 K	-0.300 K	0.065 K	-0.302 K	0.069 K	3.055 K	2.809 K	-0.148 K	0.053 K	-0.077 K	-0.034 K	-0.344 K
	Paint Condition	Good	Good	Good	Good	Good	Good						
	Substrate	Wood	Wood	Wood	Wood	Wood	Wood						
	Component	3 Wall	Wall	Wall	3 Wall	3 Fascia	3 Soffit	3 Soffit	3 Wall	4 Wali	4 Fascia	4 Wall	4 Wall
m2	Wall	6	6	e	3	6	3	3	3	4	4	4	4
Lab 1.000 mg /cm2	#	1	1	1	1	1		-	1	1	1	1	1
Action Level 1.000 mg /cm2 Lab 1.0	Room Tested	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior						
vel 1.00	Site	0001	0001	0001	0001	0001	0001	0001	0001	1000	0001	0001	0001
Action Lev	#	6808	6809	6810	6811	6812	6813	<del>†</del> 189	6815	6816	6817	6818	6819

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SUMMARY ANALYSIS

Customer: Pierce County Housing Authority

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Project Name: Oakleaf Apartments 4111 - 110th Street SW Lakewood, WA

Oakleaf Apartments Site Name: South Building

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Summary Analysis

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	Num Incl ( %)	(% 0 ) 0	0 (0 % 0 %)	0 (0 %) 0	0 ( 0 %)	(% 0 ) 0	(% 0) 0	(% 0 ) 0	(% 0 ) 0	(% 0 ) 0	(% 0 ) 0	(% 0)0	(% 0 ) 0	(% 0 ) 0	1 ( 25 %)	-
	Num Neg ( %)	3 ( 100 %)	3 ( 100 %)	3 ( 100 %)	17 ( 100 %)	1 ( 100 %)	2 ( 100 %)	1 ( 50 %)	1 ( 100 %)	(% 0 ) 0	3 ( 100 %)	1 ( 100 %)	(% 0 ) 0	2 ( 100 %)	3 ( 75 %)	10
	Num Pos ( %)	(% 0 ) 0	(% 0 ) 0	(% 0 ) 0	(% 0 ) 0	(% 0 ) 0	(% 0 ) 0	1 ( 50 %)	(% 0 ) 0	6 ( 100 %)	(% 0 ) 0	(% 0 ) 0	4 ( 100 %)	(% 0 ) 0	0% 0 ) 0	11
Lab 1.000 mg /cm2	Number Tested	3	e	3	17	1	2	2	1	9	3	1	4	2	4	
Action Level 1.000 mg /cm2 Lab 1.00	Component Name	Door	Door Jamb	Door Casing	Wall	Stair Tread	Stair Stringer	Stair Handrail	Floor	Soffit	Wood post	Wood beam	Rafter	Fascia	Miscellaneous	Total Danantad
Action Le	Comp	-	2	e	4	13	15	16	18	25	30	32	54	62	64	

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CONFIRMED POSITIVE RESULTS

Confirmed Positives

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Customer: Pierce County Housing Authority

Project Name: Oakleaf Apartments 4111 - 110th Street SW Lakewood,WA

Oakleaf Apartments Site Name: South Building

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Action Lo	evel 1.00	Action Level 1.000 mg /cm2 Lab 1.0	Lab 1.000 mg /cm2	im2				Tc	Total Assays Reported	Inted		11
**	Site	Room Tested	iit.	Wall	Component	Substrate	Paint Condition	K-Shell mg/cm2	L-Shell mg/cm2	Map #	Lab	Result
6774	1000	Exterior	-		l Rafter	Wood	Good	7.061 K	1.256 L	490		Pos
6775	0001	Exterior	Ţ		Soffit	Wood	Good	6.060 K	0.756 L	490		Pos
6778	1000	Exterior	-	1	l Rafter	Wood	Good	5.252 K	1.209 L	490	191.	Pos
6779	1000	Exterior		I	l Soffit	Wood	Good	6.635 K	1.385 L	490		Pos
6780	1000	Exterior	1	I	1 Stair Handrail	Wood	Good	2.147 K	0.430 L	490		Pos
6790	1000	Exterior	T	1	1 Rafter	Wood	Good	4.039 K	1.139 L	490		Pos
1629	1000	Exterior	1	1	l Soffit	Wood	Good	3.154 K	0.625 L	490	Ten - a	Pos
6802	0001	Exterior	1	1	1 Rafter	Wood	Good	2.752 K	0.072 L	490		Pos
6803	1000	Exterior	-		Soffit	Wood	Good	3.060 K	0.834 L	490		Pos
6813	0001	Exterior	-	3	3 Soffit	Wood	Good	3.055 K	1.325 L	490	10 8	Pos
1189	0001	Exterior	-	3	3 Soffit	Wood	Good	2.809 K	1.113 L	490		Pos

### **OAK LEAF APARTMENTS**

### **NORTH BUILDING**

XRF AND LAB RESULTS

Customer: Pierce County Housing Authority

Project Name: Oakleaf Apartments 4111 - 110th Street SW Lakewood,WA

Site Name: North Building Oakleaf Apartments

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XRF and Lab Results

Action L	evel 1.0(	Action Level 1.000 mg /cm2 Lab 1.	Lab 1.000 mg /cm2	cm2				Tc	Total Assays Reported	orted		58
#	Site	Room Tested	#	Wall	Component	Substrate	Paint Condition	K-Shell mg/cm2	L-Shell mg/cm2	Map #	Lab	Result
6821	0002	Calibration	÷	*	*	*	*	0.000 X	0.000 X	0		
6822	0002	Exterior	1	1	Wall	Wood	Good	-0.529 K	-0.198 L	0		Neg
6823	0002	Exterior	1	1	Door	Metal	Good	-0.118 K	-0.158 L	0		Neg
6824	0002	Exterior	1	1	Door Jamb	Wood	Good	-0.455 K	-0.280 L	0		Neg
6825	0002	Exterior	1	1	Door Casing	Wood	Good	0.081 K	-0.010 L	0		Neg
6826	0002	Exterior	1	* 1	Wood post	Wood	Good	0.363 K	-0.342 L	0		Neg
6827	0002	Exterior	1		Wood beam	Wood	Good	2.034 K	0.535 L	0		Pos
6828	0002	Exterior	1	1	Rafter	Wood	Good	-0.423 K	-0.036 L	0		Neg
6829	0002	Exterior	1	1	Soffit	Wood	Good	-0.725 K	-0.678 L	0		Neg
6830	0002	Exterior	1	1	Wall	Wood	Good	0.236 K	-0.121 L	0		Neg
6831	0002	Exterior	1	1	Wood post	DooW	Good	0.142 K	-0.275 L	0		Neg
6832	0002	Exterior	1	1	Wood post	Wood	Good	-0.494 K	0.025 L	0		Neg
6833	0002	Exterior	1	1	Stair Handrail	Wood	Good	-0.264 K	0.308 L	0		Neg
6834	0002	Exterior	1	1	Stair Stringer	Wood	Good	0.102 K	-0.204 L	0		Neg
6835	0002	Exterior	1	1	Stair Tread	Wood	Good	-0.453 K	0.164 L	0		Neg
6836	0002	Exterior	1	1	Miscellaneous	Wood	Good	0.161 K	-0.224 L	0		Neg
6837	0002	Exterior	1	1	Wall	Wood	Good	-0.471 K	-0.432 L	0		Neg
6838	0002	Exterior	1	1	Door	Metal	Good	0.089 K	0.040 L	0		Neg
6839	0002	Exterior	1	1	Door Jamb	Wood	Good	-0.617 K	-0.624 L	0		Neg
6840	0002	Exterior	1	1	Door Casing	Wood	Good	-0.558 K	0.423 L	0	-	Neg
6841	0002	Exterior	1	1	Wood beam	Wood	Good	0.164 K	-0.280 L	0		Neg
			ļ									
Page	1	of 3 Limit Set: 0	Coding Set: 0	Set: 0	No Averaging Selected	lected						

Customer: Pierce County Housing Authority

Project Name: Oakleaf Apartments 4111 - 110th Street SW Lakewood, WA

Site Name: North Building Oakleaf Apartments

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XRF and Lab Results

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Action Lé	svel 1.00	Action Level 1.000 mg /cm2 Lab 1.0	Lab 1,000 mg /cm2	cm2				Tc	Total Assays Reported	nted		58
**	Site	Room Tested	#	Wall	Component	Substrate	Paint Condition	K-Shell mg/cm2	L-Shell mg/cm2	Map #	Lab	Result
6842	0002	Exterior		I	Rafter	Wood	Good	2.906 K	0.297 L	0		Pos
643	0002	Exterior	1	1	Soffit	Wood	Good	3.394 K	0.626 L	0		Pos
6844	0002	Exterior	1	1	Wall	Wood	Good	0.009 K	-0.047 L	0		Neg
6845	0002	Exterior		1	Floor	Wood	Good	1.334 K	0.198 L	0		Pos
6846	0002	Exterior	1	1	Floor	Wood	Good	0.601 K	0.096 L	0		Neg
6847	0002	Exterior	1	1	Floor	W00d	Good	0.832 K	0.245 L	0		Neg
6848	0002	Exterior	1	1	Floor	Wood	Good	1.003 K	0.281 L	0		Incl
6189	0002	Exterior	1	1	Railing cap	Wood	Good	0.336 K	-0.190 L	0		Neg
6850	0002	Exterior	1	1	Wall	Wood	Good	-0.359 K	-0.271 L	0		Neg
6851	0002	Exterior	1	1	Wall trim	Wood	Good	0.430 K	-0.118 L	0		Neg
6852	0002	Exterior	1	1	Rafter	Wood	Good	2.498 K	1.100 L	0		Pos
6853	0002	Exterior	1	I	Soffit	Wood	Good	2.977 K	1.180 L	0		Pos
6854	0002	Exterior	1	1	Miscellaneous	Wood	Good	0.556 K	-0.145 L	0		Neg
6855	0002	Exterior	1	1	Wood post	Wood	Good	-0.209 K	-0.022 L	0		Neg
6856	0002	Exterior	I		Wood beam	Wood	Good	3.530 K	0.576 L	0	a mar	Pos
6857	0002	Exterior	I	1	Rafter	Wood	Good	3.770 K	1.448 L	0	4.00	Pos
6858	0002	Exterior	1		Soffit	Wood	Good	1.788 K	0.175 L	0		Pos
6859	0002	Exterior	1	2	Wall	Wood	Good	0.235 K	-0.032 L	0		Neg
6860	0002	Exterior	1	2	Wall	Wood	Good	0.203 K	-0.150 L	0		Neg
6861	0002	Exterior	1	2	Wall	Wood	Good	-0.402 K	-0.269 L	0		Neg
6862	0002	Exterior	1	3	Wall	Wood	Good	-0.220 K	-0.210 L	0		Neg
Page	6	of 3 Linit Set: 0	Coding Set: 0	; Set: 0	No Averaging Selected	lected						

Site Name: North Building Oakleaf Apartments

Project Name: Oakleaf Apartments 4111 - 110th Street SW

Customer: Pierce County Housing Authority

Lakewood, WA

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XRF and Lab Results

58	Result	Neg	Neg	Neg	Neg	Pos	Neg	Neg	Pos	Neg	Neg	Neg	Neg	Neg	Neg	Neg	Neg
	Lab	N	N	N	N	P	N	N	P	N	N	N	N	N	N	N	N
rted	Map #	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Assays Reported	L-Shell mg/cm2	-0.148 L	-0.062 L	-0.039 L	-0.414 L	0.687 L	-0.222 L	-0.384 L	0.617 L	-0.302 L	-0.135 L	0.123 L	-0.045 L	-0.014 L	-0.233 L	-0.948 L	0.029 L
To	K-Shell mg/cm2	0.116 K	-0.135 K	-0.216 K	0.123 K	1.846 K	0.091 K	0.735 K	2.107 K	-1.303 K	0.207 K	0.772 K	0.459 K	0.071 K	0.282 K	-0.738 K	-0.246 K
	Paint Condition	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good
	Substrate	Wood	Wood	Wood	Wood	Wood	Wood	Concrete	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood
	Component	Wall	Wall	Wall	Wood post	Soffit	3 Wood beam	3 Floor	Soffit	Wall	3 Fascia	3 Door Casing	Wall	Soffit	Fascia	4 Wood beam	4 Wall
m2	Wall	3	3	3	3	3 5	3 1	3	3 8	3	3]	3]	4	4	4	4	4
Lab 1.000 mg /cm2	#	1	1	1	1	I	1	1		1	1	1	1	1	1	1	1
Action Level 1.000 mg /cm2 Lab 1.0	Room Tested	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior	Exterior
svel 1.00	Site	0002	0002	0002	0002	0002	0002	0002	0002	0002	0002	0002	0002	0002	0002	0002	0002
Action L	#	6863	6864	6865	6866	6867	6868	6989	6870	6871	6872	6873	6874	6875	6876	6877	6878

No Averaging Selected Coding Set: 0 3 Limit Set: 0 of ŝ Page

SUMMARY ANALYSIS

(% 0 (% (% 0 (% 0 (% 0 (% 0 (%) 0 (% 0 (% 0 (%) (%) (%) (%) % (%) (%) % • • • • • • 0 0 ) ( ) ( ) ( 0 ) 0 ) 0 ) 0 ) ( ) ( ) ( 0 ) 0 0 ) 0 ) 0 • • Lab Pos 0 0 0 0 0 0 • • 0 0 0 0 • 0 • Φ 0 Tested Lab 20 %) (% 0 (% 0 (% 0 (% 0 (% 0 (% 0 (% 0 (% 0 (% 0 (% 0 (% 0 (% 0 (% 0 (% 0 (%) 0 % ) 0 ) 0 ) ( ) ( ) 0 )0 ) ( 1( ) 0 ) ( 0 )0 ) ( 0 • • -Num Incl 100 %) 100 %) 100 %) 100 %) 100 %) 100 %) 100 %) 100 %) 100 %) (% 09 28 %) (% 09 100 %25 %) 100 %) 100 %) % 2 ( 1 ( ) [ 1 ( **5** ( 3 ( 1 5 ( 2 ( 2 5 15 ( 3 ( 1( 1( 3 ( 45 Num Neg % (%) (% (% 0 (%) (%) (%) % (%) % (% (%) (%) (%) (%) % % 20 11 40 0 75 • • 0 Φ 0 • 0 0 0 0 5 ( ) ( 0 0 ) ( ) 0 ) 0 ) ( ) ( ) ( 1 ) ( 2 ( 0 3 ( 0 11 Num Pos n N 0 15 5 5 5 4 0 0 3 21 --1 Number Lab 1.000 mg /cm2 Tested Component Name Action Level 1.000 mg /cm2 **Total Reported Stair Handrail** Miscellaneous Stair Stringer **Door Casing** Wood beam Stair Tread **Railing cap** Door Jamb Wood post Wall trim Fascia Rafter Soffit Floor Door Wall 64 62 49 3 3 13 18 32 30 N ŝ 15 16 32 4 Comp

Summary Analysis

**Oakleaf Apartments** 

4111 - 110th Street SW

Lakewood, WA

Project Name: Oakleaf Apartments

Site Name: North Building

Customer: Pierce County Housing Authority

No Averaging Selected

Coding Set: 0

1 Limit Set: 0

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Page

#### ALL TESTS BY COMPONENT & COLOR (EACH UNIT)

#### OAKLEAF APARTMENTS NORTH BUILDING 4111 – 110<sup>TH</sup> STREET SW LAKEWOOD, WASHINGTON

UNIT	DESCRIPTION	K-GEN (mg/cm2)	L-GEN (mg/cm2)	COMMENTS
EXTERIOR TE	STING ONLY			
North Elevation	Wall-gray	-0.53	-0.20	Negative
	Door-gray	-0.12	-0.16	Negative
	Door jamb-green	-0.46	-0.28	Negative
	Door casing-green	0.08	-0.01	Negative
	Wood post-gray	0.36	-0.34	Negative
	Wood beam-gray	2.03	0.54	Positive
	Rafter-gray	-0.42	-0.04	Negative
	Soffit-gray	-0.72	-0.68	Negative
	Wall-gray	0.24	-0.12	Negative
	Wood post-gray	0.14	-0.28	Negative
	Wood post-gray	-0.49	0.03	Negative
	Handrail-green	-0.26	0.31	Negative
	Stair stringer-gray	0.10	-0.20	Negative
	Stair tread-gray	-0.45	0.16	Negative
	Exterior 2nd floor landing wall-gree	en 0.16	-0.22	Negative
	Wall-gray	-0.47	0.43	Negative
	Door-gray	0.09	0.04	Negative
	Door jamb-green	-0.62	-0.62	Negative
	Door casing-green	-0.56	0.42	Negative
	Wood beam-gray	0.16	-0.28	Negative
	Rafter-gray	2.91	0.30	Positive
	Soffit-gray	3.39	0.63	Positive
	Wall-gray	0.01	-0.05	Negative
	Floor-2 <sup>nd</sup> floor	1.33	0.20	Positive
	Floor-2 <sup>nd</sup> floor	0.60	0.10	Negative
	Floor-2 <sup>nd</sup> floor test	0.83	0.24	Negative
	Floor-2 <sup>nd</sup> floor test	1.00	0.28	Positive
	Railing cap-green	0.34	-0.19	Negative
	Wall-gray	-0.36	-0.27	Negative
	Wall trim-green	0.43	-0.12	Negative
	Rafter-gray	2.50	1.10	Positive
	Soffit-gray	2.98	1.18	Positive
	Exterior 2nd floor landing wall-gree	en 0.56	-0.14	Negative
	Wood post-gray	-0.21	-0.02	Negative
	Wood beam-gray	3.53	0.58	Positive

Pierce County Housing Authority Tacoma, WA

Page 2 Lead Paint Testing North Building Oak Leaf Apartments 4111 – 110<sup>th</sup> Street SW Lakewood, WA

UNIT	DESCRIPTION	K-GEN (mg/cm2)	L-GEN (mg/cm2)	COMMENTS
North Elevation	Rafter-gray	3.77	1.45	Positive
	Soffit-gray	1.79	0.17	Positive
East Elevation	Wall-gray	0.23	-0.03	Negative
	Wall-gray	0.20	-0.15	Negative
	Wall-gray	-0.40	-0.27	Negative
South Elevation	Wall-gray	-0.22	-0.21	Negative
	Wall-gray	0.12	-0.15	Negative
	Wall-gray	-0.14	-0.06	Negative
	Wall-gray	-0.22	-0.04	Negative
	Wood post-gray	0.12	-0.41	Negative
	Soffit-gray	1.85	0.69	Positive
	Wood beam-gray	0.09	-0.22	Negative
	Floor-gray	0.73	-0.38	Negative
	Soffit-gray	2.11	0.62	Positive
	Wall-gray	-1.30	-0.30	Negative
	Fascia-green	0.21	-0.14	Negative
	Door casing-green	0.77	0.12	Negative
West Elevation	Wall-gray	0.46	-0.04	Negative
	Soffit-gray	0.07	-0.01	Negative
	Fascia-green	0.28	-0.23	Negative
	Wood beam-gray	-0.74	-0.95	Negative
	Wall-gray	-0.25	0.03	Negative

CONFIRMED POSITIVE RESULTS

**Confirmed Positives** 

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Customer: Pierce County Housing Authority

Project Name: Oakleaf Apartments 4111 - 110th Street SW Lakewood, WA

Site Name: North Building Oakleaf Apartments

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#SiteRoom Tested $#$ WallComponentPaintPaintK-ShellL-ShellMa682002Exterior11Nood beamNoodGood fill2.034 K0.535 L0684002Exterior11Nood beamNoodGood fill2.034 K0.535 L0684002Exterior11NoodGood fill2.034 K0.535 L0684002Exterior11NoodGood fill3.394 K0.505 L0684002Exterior11NoodGood fill3.394 K0.108 L0685002Exterior11NoodGood fill0.334 K0.198 L0685002Exterior11NoodGood fill3.394 K0.198 L0685002Exterior11NoodGood fill3.536 K0	Action L	evel 1.00	Action Level 1.000 mg /cm2 Lab 1.0	Lab 1.000 mg /cm2	sm2				Tc	Total Assays Reported	orted		=
0002         Exterior         1         Nood beam         Wood         Good         2.034 K         0.535 L         0.535 L           0002         Exterior         1         1         Rafter         Wood         Good         2.906 K         0.297 L         0.297 L           0002         Exterior         1         1         Soffit         Wood         Good         3.394 K         0.626 L         0.297 L           0002         Exterior         1         1         Roter         Wood         Good         0.394 K         0.198 L           0002         Exterior         1         Roter         Wood         Good         0.344 K         0.198 L           0002         Exterior         1         Roter         Wood         Good         2.498 K         1.100 L           0002         Exterior         1         Nood         Good         2.977 K         1.180 L           0002         Exterior         1         Nood         Good         3.530 K         0.576 L           0002         Exterior         1         Nood         Good         3.770 K         1.488 L           0002         Exterior         1         Nood         Good         1.788 K	#	Site	Room Tested	41:	Wall	Component	Substrate	Paint Condition	K-Shell mg/cm2	L-Shell mg/cm2	Map #	Lab	Result
0002         Exterior         1         Rafter         Wood         Good         2.906 K         0.297 L         2           0002         Exterior         1         1         Soffit         Wood         Good         3.394 K         0.026 L         0.026 L           0002         Exterior         1         1         Floor         Wood         Good         1.334 K         0.026 L         0.026 L           0002         Exterior         1         1         Rafter         Wood         Good         1.334 K         0.028 L         0.026 L           0002         Exterior         1         1         Rafter         Wood         Good         2.498 K         1.180 L         0.057 L           0002         Exterior         1         1         Nood beam         Wood         Good         3.530 K         0.576 L         1.180 L           0002         Exterior         1         1         Wood         Good         3.530 K         0.576 L         1.438 L           0002         Exterior         1         Nood         Good         3.530 K         0.175 L         1.448 L           0002         Exterior         1         Nood         Good         1.788 K	6827			T	-	Wood beam	Wood	Good	2.034 K	0.535 L	0		Pos
0002         Exterior         1         1         Soffit         Wood         Good         3.394 K         0.626 L         0.626 L           0002         Exterior         1         1         Roor         Wood         Good         1.334 K         0.626 L         0.626 L           0002         Exterior         1         1         Roor         Wood         Good         1.334 K         0.198 L           0002         Exterior         1         1         Rafter         Wood         Good         2.498 K         1.100 L           0002         Exterior         1         1         Soffit         Wood         Good         2.498 K         1.180 L           0002         Exterior         1         Nood beam         Wood         Good         3.530 K         1.180 L           0002         Exterior         1         Nood         Good         3.570 K         1.448 L           0002         Exterior         1         Nood         Good         1.788 K         0.175 L           002         Exterior         1         Nood         Good         1.360 K         0.468 L           002         Exterior         1         Nood         Good         1.860	6842		Contraction of the local distance of the loc	-	-	Rafter	Wood	Good	2.906 K	0.297 L	•	1	Pos
0002         Exterior         1         1         Floor         Wood         Good         1.334 K         0.198 L           0002         Exterior         1         1         Rafter         Wood         Good         2.498 K         1.100 L           0002         Exterior         1         1         Soffit         Wood         Good         2.977 K         1.180 L           0002         Exterior         1         1         Nood beam         Wood         Good         2.977 K         1.180 L           0002         Exterior         1         1         Nood beam         Wood         Good         3.530 K         0.576 L           0002         Exterior         1         1         Rafter         Wood         Good         3.530 K         0.576 L           0002         Exterior         1         1         Rafter         Wood         Good         1.488 K         0.148 L           0002         Exterior         1         Soffit         Wood         Good         1.846 K         0.175 L           0002         Exterior         1         Soffit         Wood         Good         1.846 K         0.687 L           0002         Exterior	643				1	Soffit	Wood	Good	3.394 K	0.626 L	0		Pos
0002         Exterior         1         Rafter         Wood         Good         2.498 K         1.100 L           0002         Exterior         1         1         Soffit         Wood         Cood         2.977 K         1.180 L           0002         Exterior         1         1         Nood beam         Wood         Good         2.977 K         1.180 L           0002         Exterior         1         1         Nood beam         Wood         Good         3.530 K         0.576 L           0002         Exterior         1         1         Rafter         Wood         Good         3.770 K         1.448 L           0002         Exterior         1         Soffit         Wood         Good         1.758 K         0.175 L           0002         Exterior         1         3         Soffit         Wood         Good         1.584 K         0.687 L           0002         Exterior         1         3         Soffit         Wood         Cood         1.846 K         0.687 L	51-89	1000	1000	1	I	Floor	Wood	Good	1.334 K	0.198 L	0	1	Pos
0002         Exterior         1         Soffit         Wood         Good         2.977 K         1.180 L           0002         Exterior         1         1         Nood beam         Wood         Good         3.530 K         0.576 L           0002         Exterior         1         1         Rafter         Wood         Good         3.530 K         0.576 L           0002         Exterior         1         1         Rafter         Wood         Good         3.770 K         1.448 L           0002         Exterior         1         1         Soffit         Wood         Good         1.788 K         0.175 L           0002         Exterior         1         3         Soffit         Wood         Good         1.846 K         0.687 L           0002         Exterior         1         3         Soffit         Wood         Good         1.846 K         0.687 L	6852	E.	1.00	-	-	Rafter	Wood	Good	2.498 K	1.100 L	0		Pos
0002         Exterior         1         Wood beam         Wood         Good         3.530 K         0.576 L         0.576 L           0002         Exterior         1         1         Rafter         Wood         Good         3.770 K         1.448 L         1.448 L           0002         Exterior         1         1         Soffit         Wood         Good         1.788 K         0.175 L           0002         Exterior         1         3         Soffit         Wood         Good         1.788 K         0.175 L           0002         Exterior         1         3         Soffit         Wood         Good         1.846 K         0.687 L           0002         Exterior         1         3         Soffit         Wood         Good         1.846 K         0.687 L	6853					Soffit	Wood	Good	2.977 K	1.180 L	0		Pos
0002         Exterior         1         Rafter         Wood         Good         3.770 K         1.448 L           0002         Exterior         1         1         Soffit         Wood         Good         1.788 K         0.175 L           0002         Exterior         1         3         Soffit         Wood         Good         1.788 K         0.175 L           0002         Exterior         1         3         Soffit         Wood         Good         1.846 K         0.687 L           0002         Exterior         1         3         Soffit         Wood         Good         1.846 K         0.687 L	6856	1.8	1000			Wood beam	Wood	Good	3.530 K	0.576 L	0		Pos
0002         Exterior         1         Nod         Wood         Good         1.788 K         0.175 L           0002         Exterior         1         3         Soffit         Wood         Good         1.846 K         0.687 L           0002         Exterior         1         3         Soffit         Wood         Good         1.846 K         0.687 L           0002         Exterior         1         3         Soffit         Wood         Good         2.107 K         0.617 L	6857	1000	10.000			Rafter	Wood	Good	3.770 K	1.448 L	•		Pos
0002         Exterior         1         3         Soffit         Wood         Good         1.846 K         0.687 L           0002         Exterior         1         3         Soffit         Wood         Good         2.107 K         0.617 L	8589			-		Soffit	Wood	Good	1.788 K	0.175 L	0		Pos
0002         Exterior         1         3         Soffit         Wood         Good         2.107 K         0.617 L	6867		1000	1	3	Soffit	Wood	Good	1.846 K	0.687 L	0		Pos
	6870		Exterior	I	3	Soffit	Wood	Good	2.107 K	0.617 L	0		Pos

No Averaging Selected Coding Set: 0 I Limit Set: 0 Of 1=-( Page XRF PERFORMANCE CHARACTERISTICS SHEET

#### **Performance Characteristic Sheet**

EFFECTIVE DATE: June 26, 1996

EDITION ND.: 3

#### **MANUFACTURER AND MODEL:**

Make:Scitec CorporationModel:MAP-4Source:57CoNote:This sheet supersedes all previous sheets for the XRF<br/>instrument of the make, model, and source shown above.

#### FIELD OPERATION GUIDANCE

#### **OPERATING PARAMETERS**

Test mode, Screen mode, or Unlimited mode.

#### **XRF CALIBRATION CHECK LIMITS**

0.6 to 1.2 mg/cm<sup>2</sup> (inclusive)

#### SUBSTRATE CORRECTION:

When using Unlimited mode, substrate correction recommended for:

None

When using Unlimited mode, substrate correction not recommended for:

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

When using Screen or Test mode, for XRF results below 4.0 mg/cm<sup>2</sup>, substrate correction recommended for:

Drywall, Metal, and Wood

When using Screen or Test mode, substrate correction not recommended for:

Brick, Concrete, and Plaster

#### **INCONCLUSIVE RANGE OR THRESHOLD**

UNLIMITED MODE READING DESCRIPTION	SUBSTRATE	INCONCLUSIVE RANGE (mg/cm²)
Results not corrected for substrate bias for unlimited mode readings	Brick Concrete Drywall Metal Plaster Wood	0.91 to 1.19 0.91 to 1.19 0.91 to 1.19 0.91 to 1.19 0.91 to 1.19 0.91 to 1.19 0.91 to 1.19

SCREEN MODE READING DESCRIPTION	SUBSTRATE	INCONCLUSIVE RANGE (mg/cm²)
Results corrected for substrate bias for screen mode readings on drywall, metal, and wood substrates only	Brick Concrete Drywali Metal Plaster Wood	0.91 to 1.09 0.91 to 1.09 0.91 to 1.39 0.91 to 1.19 0.91 to 1.09 0.91 to 1.29

TEST MODE READING DESCRIPTION	SUBSTRATE	THRESHOLD (mg/cm <sup>2</sup> )	INCONCLUSIVE RANGE (mg/cm²)
Readings corrected for substrate bias for test mode readings on drywall, metal, and wood substrates only	Brick Concrete Drywall Metal Plaster Wood	0.9 0.9 None None 0.9 None	None None 0.91 to 1.39 0.91 to 1.09 None 0.91 to 1.29

#### 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 an EPA/HUD evaluation using archived building components. Testing was conducted on approximately 150 test locations. All of the test locations were tested in February 1996 using two different instruments. One instrument had a new source installed in July 1994 and its strength at the time of testing was calculated as 9.4 mCi. The other instrument had a new source installed in September 1994 and its strength at the time of testing was calculated as 10.6 mCi.

#### **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:

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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 <u>bare</u> 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):

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

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 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 and multi-family housing, a result is defined as 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 retest 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 screen, test, and confirm modes, the MAP 4 instrument tests until a K-shell result is obtained relative to a level of precision. A result is "positive", "negative" or "retest" as displayed by indicator lights. For the unlimited mode, the MAP 4 instrument tests until a K-shell result is indicated relative to an action level (1.0 mg/cm<sup>2</sup> for archive testing) and the current precision, or until the the reading is terminated by releasing the trigger. A few unlimited mode readings were terminated because they exceeded the two-minute limit used for archive testing. The following tables provide testing time information for three testing modes. Insufficient information is available to provide this information for confirm mode. All times have been scaled to match an initial 12 miC source. Note that source strength and factors such as substrate may affect testing times.

		UNLIMITED	MODE TESTING	G TIMES (Second	s)			
		ALL DATA MEDIAN FOR LABORATORY-MEASURED LEAD LEVELS (mg/cm²)						
SUBSTRATE	25 <sup>th</sup> Percentile	Median	75 <sup>th</sup> Percentile	Pb < 0.25	0.25 ≤ Pb < 1.0	1.0 ≤ Pb		
Wood Drywall	3	4	6	4	13	3		
Metal	3	4	8	4	9	3		
Brick Concrete Plaster	4	5	8	6	6	3		

\*The general calibration was used for wood, drywall, brick, concrete, plaster. Steel calibration was used for metal. (There are no aluminum samples in the archive facility).

		SCREEN	MODE TESTING	TIMES (Seconds)				
		ALL DATA		MEDIAN FOR LABORATORY-MEASURED LEAD LEVELS (mg/cm²)				
SUBSTRATE	25 <sup>th</sup> Percentile	Median	75 <sup>th</sup> Percentile	Pb < 0.25	0.25 ≲ Pb < 1.0	1.0 ≤ Pb		
Wood Drywall	4	6	7	5	6	7		
Metal	4	5	6	5	5	5		
Brick Concrete Plaster	11	11	13	11	11	11		

"The general calibration was used for wood, drywall, brick, concrete, plaster. Steel calibration was used for metal. (There are no aluminum samples in the archive facility).

				IMES (Seconds)				
		ALL DATA		MEDIAN FOR LABORATORY-MEASURED LEAD LEVELS (mg/cm²)				
SUBSTRATE	26 <sup>th</sup> Percentile	Median	75 <sup>th</sup> Percentile	Pb < 0.25	0.25 ≤ Pb < 1.0	1.0 ≤ Pb		
Wood Drywali	17	22	27	21	20	28		
Metal	13	20	23	20	20	20		
Brick Concrete Plaster	41	42	52	41	46	43		

"The general calibration was used for wood, drywall, brick, concrete, plaster. Steel calibration was used for metal. (There are no aluminum samples in the archive facility).

#### **BIAS AND PRECISION**

Do not use these bias and precision data to correct for substrate bias. These bias and precision data wer e computed without substrate correction from samples with laboratory-measured lead levels less than 4.0 mg/cm<sup>2</sup> lead. There were 15 testing locations taken in the screen mode with a laboratory-measured lead levels equal to or greater than 4.0 mg/cm<sup>2</sup> lead. None of these had XRF readings less than 1.0 mg/cm<sup>2</sup>. There were 15 testing locations taken in the laboratory-measured lead levels equal to or greater than 4.0 mg/cm<sup>2</sup> lead. None of these had XRF readings less than 1.0 mg/cm<sup>2</sup>. There were 15 testing locations taken in the test mode with a laboratory-measured lead levels equal to or greater than 4.0 mg/cm<sup>2</sup> lead. None of these had XRF readings less than 1.0 mg/cm<sup>2</sup>. There were not any testing locations taken in the confirm mode with a laboratory-measured lead levels equal to or greater than 4.0 mg/cm<sup>2</sup> lead. There were 15 testing locations taken in the unlimited mode with a laboratory-measured lead levels equal to or greater than 4.0 mg/cm<sup>2</sup> lead. There were 15 testing locations taken in the unlimited mode with a laboratory-measured lead levels equal to or greater than 4.0 mg/cm<sup>2</sup> lead. None of these had XRF readings less than 1.0 mg/cm<sup>2</sup>. All testing was done in February 1996 with two different instruments. The following data are for illustrative purposes only. Actual bias must be determined on the site. Inconclusive ranges provided above already account for bias and precision.

SCREEN MODE READING MEASURED AT	SUBSTRATE	BIAS (mg/cm²)	PRECISION <sup>°</sup> (mg/cm²)
	Brick	-0.1	0.3
	Concrete	-0.1	0.3
	Drywall	0.1	0.2
	Metal	0.1	0.3
0.0 mg/cm <sup>2</sup>	Plaster	-0.1	0.3
	Wood	0.0	0.2
	Brick	0.0	0.3
	Concrete	0.0	0.3
	Drywall	0.3	0.4
	Metal	0.2	0.3
0.5 mg/cm <sup>2</sup>	Plaster	0.0	0.3
	Wood	0.2	0.4
	Brick	0.1	0.4
	Concrete	0.1	0.4
	Drywall	0.5	0.6
	Metal	0.3	0.3
1.0 mg/cm <sup>2</sup>	Plaster	0.1	0.4
	Wood	0.4	0.6

	Brick	0.4	0.5
	Concrete	0.4	0.5
	Drywall	0.9	0.8
2.0 mg/cm <sup>2</sup>	Metal	0.5	0.3
	Plaster	0.4	0.5
	Wood	0.7	0.8

TEST MODE READING MEASURED AT	SUBSTRATE	BIAS (mg/cm²)	PRECISION (mg/cm²)
	Brick	-0.1	0.2
	Concrete	-0.1	0.2
	Drywall	0.1	0.1
	Metal	0.1	0.2
0.0 mg/cm <sup>2</sup>	Plaster	-0.1	0.2
	Wood	0.0	0.1
	Brick	-0.1	0.3
	Concrete	-0.1	0.3
	Drywall	0.3	0.4
	Metal	0.2	0.2
0.5 mg/cm <sup>2</sup>	Plaster	-0.1	0.3
	Wood	0.2	0.4
	Brick	-0.1	0.3
	Concrete	-0.1	0.3
	Drywall	0.5	0.6
	Metal	0.3	0.2
1.0 mg/cm <sup>2</sup>	Plaster	-0.1	0.3
	Wood	0.4	0.6
	Brick	0.0	0.4
	Concrete	0.0	0.4
	Drywall	1.0	0.8
	Metal	0.5	0.2
2.0 mg/cm <sup>2</sup>	Plaster	0.0	0.4
	Wood	0.8	0.8
Precision at 1 standard deviation			

#### CLASSIFICATION OF 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, s o previous inspection results are not affected.

#### 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 Characteristics Sheet is a joint product of the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Housing and Urban Development (HUD). The issuance of this sheet does not constitute rulemaking. The information provided here is intended solely as guidance to be used in conjunction with Chapter 7, Lead-Based Paint Inspection, of the *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing*. EPA and HUD reserve the right to revise this guidance. Please address questions and comments on this sheet to: Director, Office of Lead-Hazard Control (L), U.S. Department of Housing and Urban Development, 451 Seventh St, S.W., Washington, DC 20410.

## **CERTIFICATIONS**

# **STATE OF WASHINGTON** Department of Community, Trade and Economic Development Lead-Based Paint Program Mike T Hara Has fulfilled the certification requirements of Washington Administrative code (WAC) 365-230 and has been certified to conduct lead-based paint activities pursuant to WAC 365-230-200 as a: **Risk Assessor Expiration Date Certification** # **Issuance Date** 12/29/2009 12/15/2006 0014

## **STATE OF WASHINGTON**

Department of Community, Trade and Economic Development Lead-Based Paint Program

Mike T. Hara

Has fulfilled the certification requirements of Washington Administrative code (WAC) 365-230 and has been certified to conduct lead-based paint activities pursuant to WAC 365-230-200 as a:

## Inspector

Certification #	<b>Issuance Date</b>	<b>Expiration Date</b>
0014	12/15/2006	12/29/2009

## CALIBRATION LOG

Daily Calibration

		Timo	K-Shell	K-Avg.	L-Shell	L-Avg.	Scanner	Instr	Oper
-	nate		mg/cm2	mg/cm2	mg/cm2	mg/cm2	#	#	
	04/26/07	08:27A	0.968	0.968	1.061	1.061	M41490	490	1817
	04/26/07	09:39A	0.981	0.981	0.882	0.882	M41490	490	1817

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