Lead Paint Testing

2121 Garfield Ave S. # 108

May 2015

Per a conversation with Nathan Olson, Health Inspector with the City of Minneapolis, there was no lead paint found and KRC is not required to take any further action.

No Repairs are needed and it is not necessary to add to the lease.

The original report can be found in the "Building" file. A copy of this report has been added to the residents file, and also the "Incidents" file.

Jane Loney

6/3/2015

Minneapolis
City of Lakes

Health Department

250 South 4th Street - Room 510
Minneapolis, MN 55415

Office 612 673-2301
Fax 612 673-3866
TTY 612 673-2157

www.minneapolismn.gov/health

Hmong – Ceeb toom. Yog koj xau kev pab txhais cov xov rau koj dawb, hu 612-673-2800.

Somali – Ogow. Haddii aad dooneyso in lagaa kaalmeeyo tarjamadda macluumaadkani oo lacag la' aan wac 612-673-3500

Spanish – Atención. Si desea recibir asistencia gratuita para traducer esta información, llama 612-673-2700.

5/5/2015

Northern Gopher Enterprises
% Kleinman Realty Co.
Fridley MN 55421

Re 2121 Garfield AVE S 108

Dear Northern Gopher Enterprises:

Recently, a child that has lived at (or has regularly visited) the above referenced address over the past 12 months has been diagnosed as having an elevated blood lead level. This elevated blood lead level is most likely due to ingesting lead paint chips or dust particles from deteriorating lead based paint. Possible sources of lead exposure include loose or flaking paint and dust found on windows, doors, walls, porches and trim on both the interior and exterior of the home. Soil, water, batteries and other such items may also be sources of lead.

Minnesota State Statute 144.9501-144.9509 requires that the Minneapolis Health Department (MHD) perform a Lead Risk Assessment inspection at the property and issue corrective orders to the property owner to repair lead hazards.

State statute also allows the MHD to provide a free swab cleaning to the property owner. The purpose of a swab cleaning is to clean window sills, window wells and floors for lead dust in order to immediately remove accessible lead hazards from the child's environment. In some instances it may be necessary to stabilize deteriorated painted surfaces which cannot be cleaned in order reduce the hazard for the child(ren). A swab cleaning will be provided if the inspection indicates that the lead levels are found to be hazardous and immediately accessible to the child(ren). The swab service will be performed by a contractor hired by the Minneapolis Department of Health and is *free of charge to the property owner and occupants.* Please contact me if you have any questions or concerns about the swab cleaning.

Any sources of lead hazards found at the inspection will be identified in a written report and you will be required to correct them in a timely manner. Currently, there is grant money available to assist with the cost of repairing lead hazards. If you are interested in applying for the grant, please contact Alex Vollmer at 612-673-2710 for a grant application.

I appreciate your cooperation in reducing potential lead hazards for the children living at or visiting the property. If you have any questions please call me at (612) 673-3791

Sincerely,

Nathan Olson
Health Inspector
City of Minneapolis – Healthy Homes and Lead Hazard Control

Minneapolis
City of Lakes

Health Department

250 South 4th Street - Room 510
Minneapolis, MN 55415

Office 612 673-2301
Fax 612 673-3866
TTY 612 673-2157

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5/28/2015

Northern Gopher Enterprises
C/O Kleinman Realty Co,, 5021 East River Rd, #308
Fridley MN 55421

RE: 2121 Garfield AVE S #108 and common areas

Dear Northern Gopher Enterprises:

A child that has lived at or regularly visited the above referenced address in the past 12 months has been diagnosed as having an elevated blood lead level. As a result of an investigation at this address, it is our opinion that the dwelling contains amounts of lead that make it a hazard for children to live there. Due to the danger which lead and lead-based paint presents to children, the lead must be removed from the child's environment.

Enclosed with this letter please find the following:

- Lead Risk Assessment Report: This report includes the testing results and the lead orders to be performed by the owner of the property or a licensed lead abatement contractor. These results must be disclosed at property transfer and rental transactions.

- List of Contractors: This is a list of firms licensed to perform lead abatement in the State of Minnesota.

- Work Plan for the Owner: This form is a work plan to be submitted to the Minnesota Department of Health by the owner of the property or hired licensed lead abatement contractor.

- Working Safely with Lead: If you choose to perform the work orders yourself please review the enclosed information on how to work lead safe.

The lead orders are issued under Section 240.40 and 240.50 of the Minneapolis Code of Ordinances; Minnesota Statutes 144.9501-9509 as amended. Failure to comply may result in the condemnation of the referenced property.

MINNESOTA STATUTES 144.9501-9509 REQUIRE ANY CONTRACTOR WHO ABATES LEAD-BASED PAINT TO HAVE A MINNESOTA LEAD ABATEMENT LICENSE. EACH MEMBER OF THE WORK CREW MUST BE A LICENSED LEAD WORKER. LEAD ABATEMENT LICENSES ARE ISSUED BY THE MINNESOTA DEPARTMENT OF HEALTH (651-201-4620).

If the referenced property/dwelling becomes vacant, it may not be re-occupied until all lead specifications/orders are completed and complied with Minnesota Statutes 144.9501-9509.

The federal Residential Lead-Based Paint Hazard Reduction Act, 42 U.S.C. 4852d, requires sellers and landlords of most residential housing built before 1978 to disclose all available records and reports concerning lead-based paint and/or lead-based paint hazards, including the test results contained in this notice, to purchasers and tenants at the time of sale or lease or upon lease renewal. This disclosure must occur even if hazard reduction or abatement has been completed. Failure to disclose these test results is a violation of the U.S. Department of housing and Urban Development and the U.S. Environmental Protection Agency regulations at 24 CFR Part 35 and 40 CFR Part 745 and can result in a fine of up to $11,000 per violation. To find out more information about your obligations under federal lead-based paint requirements call 1-800-424-LEAD.

Sincerely,

Nathan Olson
Environmental Health Specialist
City of Minneapolis - Healthy Homes and Lead Hazard Control
(612) 673-3791

Lead-Based Paint Risk Assessment Report

2121 Garfield AVE S #108 and common areas

Minneapolis MN, 55405

Prepared For:

Northern Gopher Enterprises

C/O Kleinman Realty Co,, 5021 East River Rd, #308

Fridley, MN 55421

No Phone Number Available

By:

Nathan Olson
City of Minneapolis
250 S 4th St, Rm. 414
Minneapolis, MN 55415-1372

Minnesota License Number: LR2217

5/28/2015

City of Minneapolis - Healthy Homes and Lead Hazard Control

Paint Inspection / Risk Assessment Summary

Site Address: 2121 Garfield AVE S #108 and common areas

Property Information:

Owner: Northern Gopher Enterprises
C/O Kleinman Realty Co., 5021 East River Rd, #308
Fridley, MN 55421

Date of Construction: 1970

Occupancy Status: Occupied

Inspection Date: 5/19/2015

Report Date: 5/28/2015

Summary of Findings: No lead Hazards were found.

Summary of Locations of Lead-Based Paint:

Interior

Summary of Lead-Based Paint Hazards:
Paint Hazards: None. Visible dust and debris was not found at the time of the initial inspection.
Dust Hazards: None
Soil Hazards: None. No bare soil.

Information Included in Report:

Appendix A: Residential Questionnaire
Appendix B: Dwelling Sketches
Appendix C: Exterior Building Assessment
Appendix D: Paint Sampling Results
Appendix E: Visual Assessment Survey
Appendix F: Analytical Results
Appendix G: Lead Violations/Orders/Recommendations
Appendix H: Monitoring Schedules
Appendix I: Niton Performance Characteristics Sheet
Appendix J: Lead Risk Assessor License

Risk Assessor (for more information):

Nathan Olson
Minnesota License Number: LR2217
City of Minneapolis
Healthy Homes and Lead Hazard Control
250 S 4th Street, Rm 414
Minneapolis, MN 55415
(612) 673-3791

Report prepared by:

Nathan Olson
City of Minneapolis
Healthy Homes and Lead Hazard Control
250 S 4th Street, Rm 414
Minneapolis, MN 55415
(612) 673-3791

Appendix A:
Residential Questionnaire

Risk Assessment Report Questionnaire – Public Data

Address:	Date:
2121 Garfield Ave. South, Minneapolis, MN 55405	5/19/15

1. Occupied or Vacant:
   - ○ Vacant
   - ⊗ Occupied

2. Which entrance is used most often?	Front door to Street
3. Which windows are opened most often?	Living room
4. Are window ACs used? If so, where?	no window AC's
5. Do you have a garden? If so, where?	no
6. Are you planning any new gardening or landscaping activities?	no
7. Has there been any painting, repair, or renovation done on the property within the last 12 months? *If yes:*	
• What type of work was done?	none
• When was the work performed?	no
• Where was the work performed?	no
• Was the family home at the time of the work?	NA
• Where was debris stored afterwards?	NA
8. Are you planning any painting, repair, or renovation work in the near future?	no

Appendix B:
Dwelling Sketches

These sketches are diagrams of the exterior and interior rooms of the reference property. The room numbers on the sketches correspond to the "Room" column on the XRF report and the "Room #" column on the analytical sample sheets.

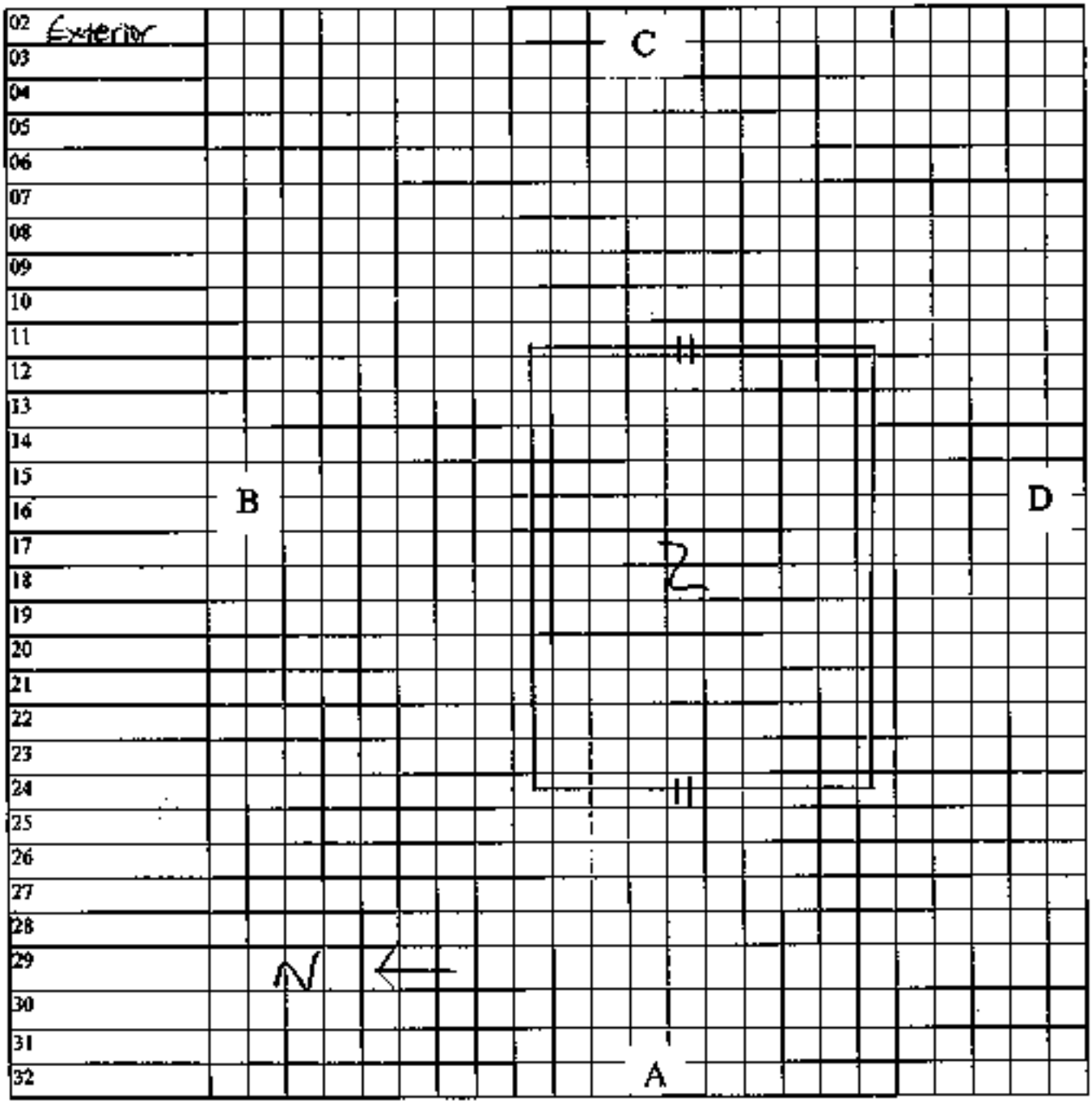
Each room in a dwelling unit or common area is given a room number including the exterior and the garage. Dwelling units and common areas are treated separately and individually numbered beginning with Room 02 (Room 01 is never used).
The exterior and garage are numbered as part of the common areas.

The sketches include the locations of both lead dust and soil samples that were collected at the Risk Assessment. They are marked on the sketches as follows:

Window sill – WS
Window well – WW
Floor – FW
Soil Sample – SS

City of Minneapolis – Lead Hazard Control – Dwelling Sketch

Case Type	Tracking #	Property Address	Dwelling Unit	
EBL	12373	2121 Garfield Ave S	[redacted] Common	
Risk Assessor	Page Number	Exterior / Floor Level	Drawn By	Date
NJO	Page 1 of 4	Exterior	NO	5/20/15

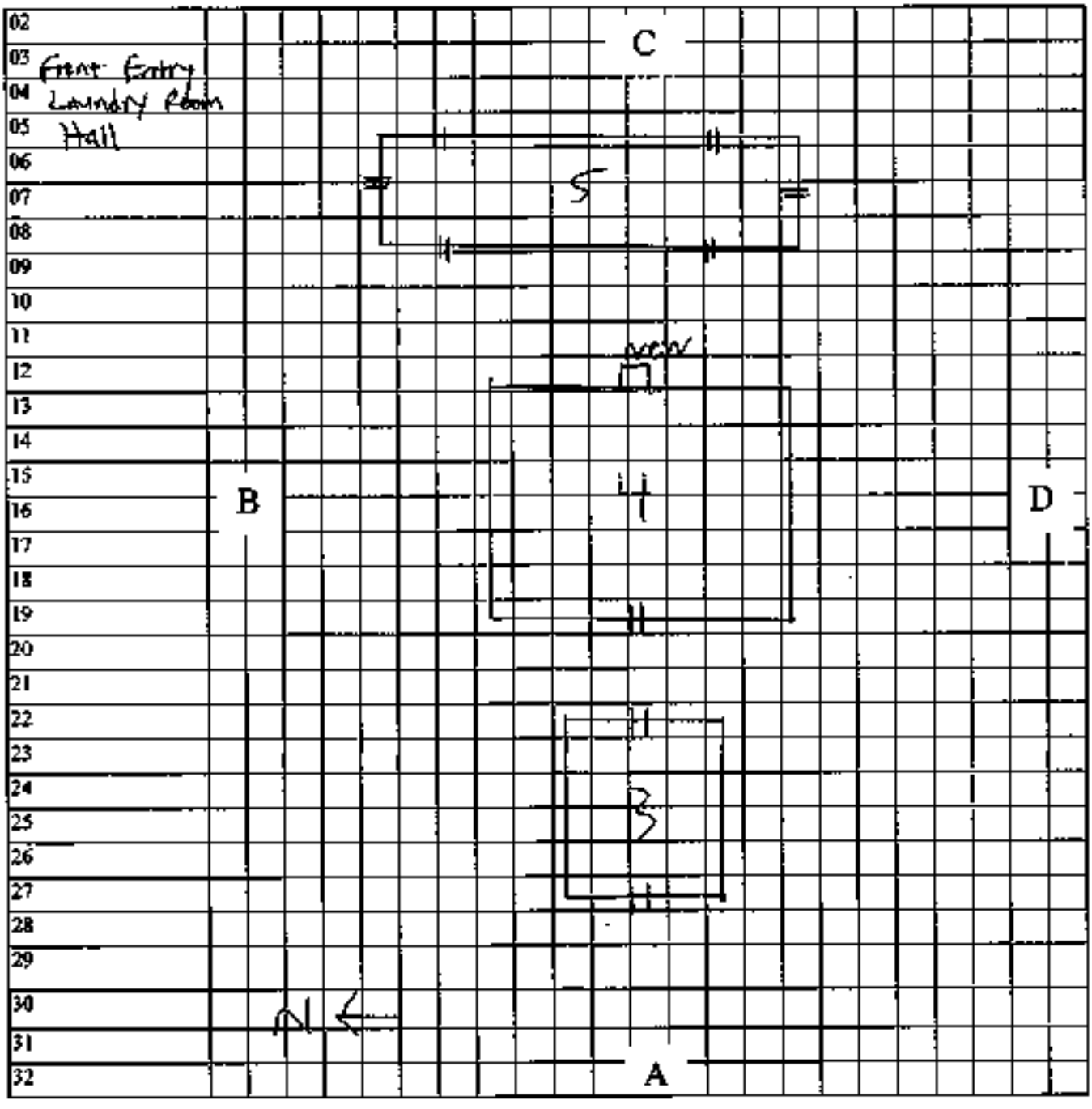


Street used in address of residence: Garfield Avenue South

This sketch is not to scale.

City of Minneapolis – Lead Hazard Control – Dwelling Sketch

Case Type	Tracking #	Property Address	Dwelling Unit	
EBL	12373	2121 Garfield Ave S	[redacted] Common	
Risk Assessor	Page Number	Exterior / Floor Level	Drawn By	Date
NJO	Page 2 of 4	first floor, garden level	NO	5/20/15

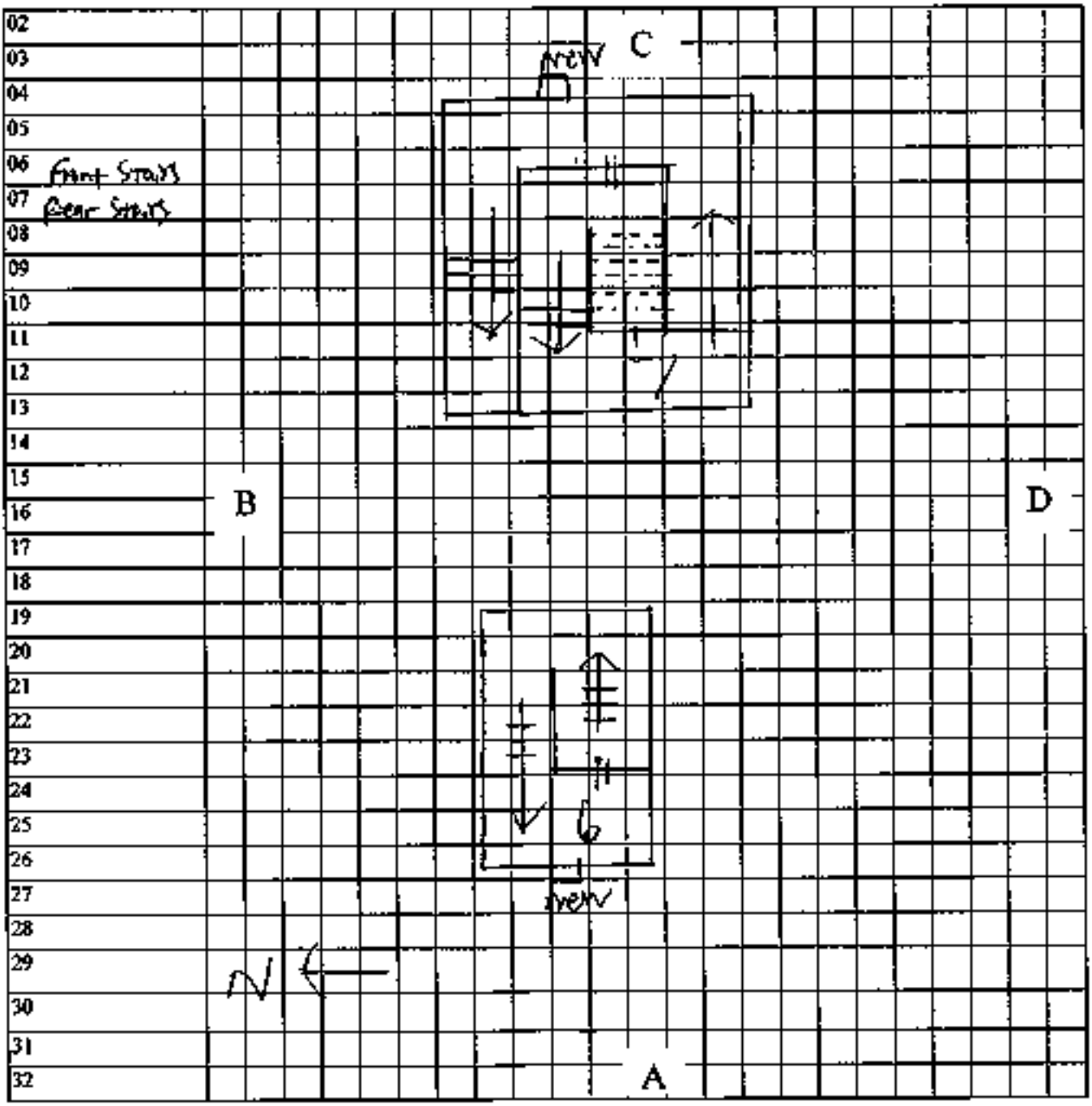


Street used in address of residence: Garfield Avenue South

This sketch is not to scale.

City of Minneapolis – Lead Hazard Control – Dwelling Sketch

Case Type	Tracking #	Property Address	Dwelling Unit	
EBL	12373	2121 Garfield Ave S	[redacted] Common	
Risk Assessor	Page Number	Exterior / Floor Level	Drawn By	Date
NJO	Page 3 of 4	First floor	NO	5/20/15

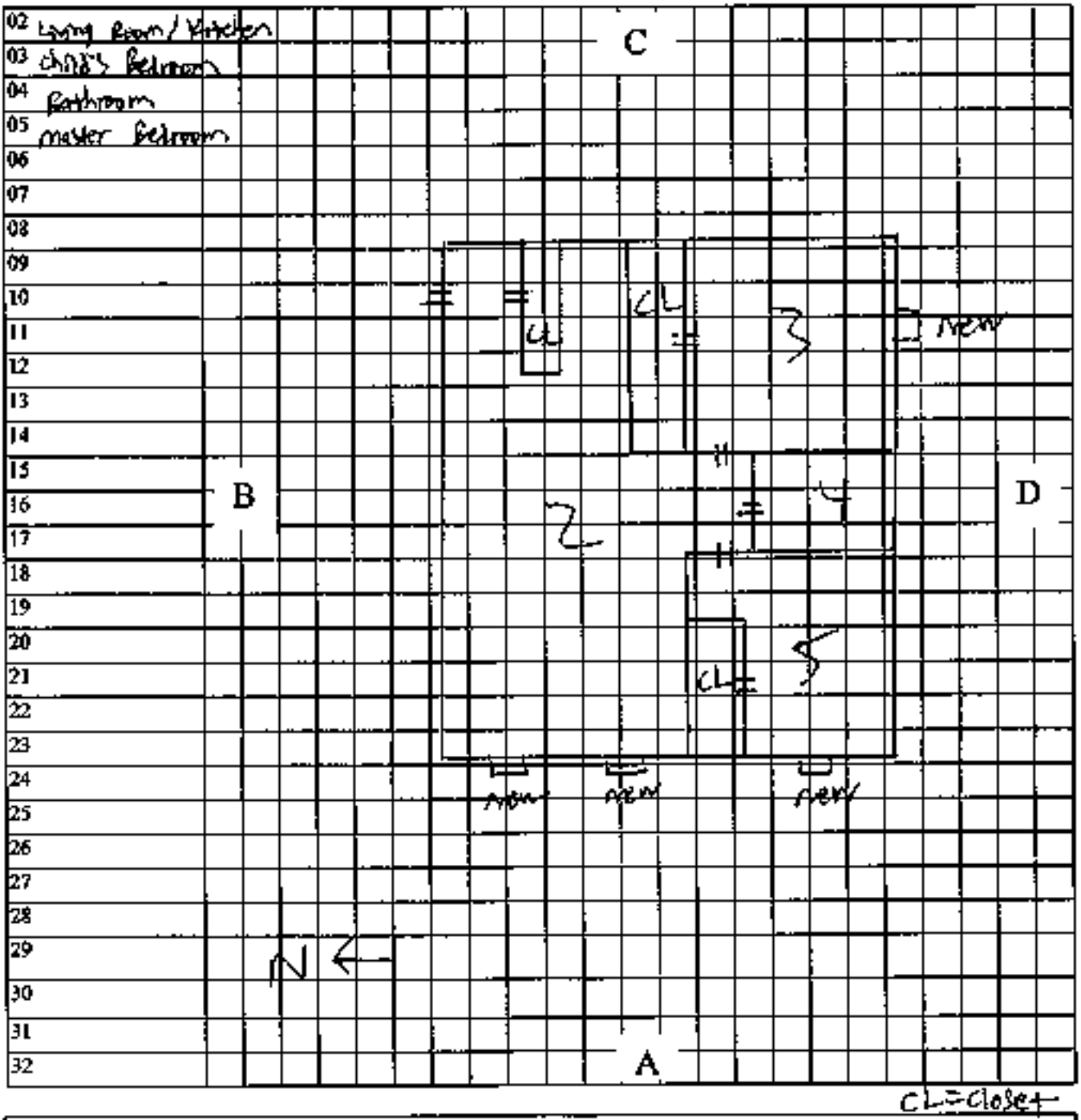


Street used in address of residence: Garfield Avenue South

This sketch is not to scale.

City of Minneapolis – Lead Hazard Control – Dwelling Sketch

Case Type	Tracking #	Property Address	Dwelling Unit	
EBL	12373	2121 Garfield Ave S	108	
Risk Assessor	Page Number	Exterior / Floor Level	Drawn By	Date
NJO	Page 4 of 4	Garden level	NO	5/20/15



Street used in address of residence: Garfield Avenue South

This sketch is not to scale.

Appendix C
Exterior Building Assessment:

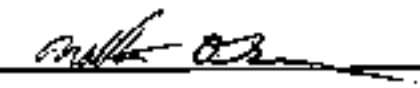
Exterior Visual Assessment

Address	2121 Garfield Avenue South, Minneapolis, MN 55405
Date of inspection	5/19/15

Findings- Circled items indicate *poor* condition* Nothing in Poor Condition

House	Garage	Porch
Walls	Walls	Walls
Soffit	Soffit	Floor
Fascia	Fascia	Stair
Trim	Trim	Column
Door	Door	Door
Roof	Roof	Ceiling
Chimney		

*EPA/HUD definition of deteriorated paint: peeling, chipping, chalking, cracking or any paint coating located on any interior/exterior surface or figure that is otherwise damaged or separated from the surface.
Intact= <10% peeling, chipping, chalking, cracking, damaged or separated
Poor= >10% peeling, chipping, chalking, cracking; damaged or separated; boards missing or loose, holes evident, many shingles missing, roof sagging.

Signature	

Appendix D:
Paint Sampling Results Report

An XRF device was used to test painted surfaces for lead content. The paint inspection was conducted according to established HUD guidelines and according to the City of Minneapolis Protocol.

Paint Standard
The legal definition of lead paint is $\geq$1.0 mg/cm^2. The result column will indicate "**pos**" when the lead content of the paint is greater than this standard.

Please note that some painted surfaces tested below this legal definition. However, the paint will contain lead if the result is >0 mg/cm^2 and it therefore, has the potential to cause lead poisoning. It is best to always use lead safe work practices when disturbing paint that contains *any* lead.

Explanation of Column Headings:
Reading # (No)- the reading number generated by the XRF machine
Insp/XRF – the initials of the inspector and the serial number of the machine
Floor – Floor level tested
Room – room being tested (see site diagrams also included)
Side - Wall side of the room starting with A on the street side and going clock-wise.
Component- the structural component tested (e.g. wall, window sill, floor)
Substrate – the composition of the tested component
Condition – the condition of the paint
Color – the color of the paint
DI – Depth Index – the larger the number the deeper the lead-based paint layer
Results – the result of the test (positive for lead or negative for lead)
Pbc – the total combined lead in the layers of paint
Pbc Error – the error of the total combined lead level

2121 Garfield Avenue South, #108 and common areas

XRF #	Inspector/XRF#	Site	Floor	Room	Side	Component	Substrate	Condition	Color	D I	Results	PbC	PbC Error
1	CMZ/22261	Unit #108	0	Shutter Cal.								7.94	0
2	CMZ/22261	Unit #108	0	Calibrate								9.01	0
3	CMZ/22261	Unit #108	0	Calibrate						1.07	Positive	1	0.1
4	CMZ/22261	Unit #108	0	Calibrate						1.13	Positive	1.1	0.1
5	CMZ/22261	Unit #108	0	Calibrate						2.76	Positive	1.1	0.1
6	CMZ/22261	Unit #108	0	Living Room/Kitchen 2	A	Wall	Drywall	Intact	Beige	1	Negative	0	0.02
7	CMZ/22261	Unit #108	0	Living Room/Kitchen 2	B	Wall	Drywall	Intact	Beige	1	Negative	0	0.02
8	CMZ/22261	Unit #108	0	Living Room/Kitchen 2	C	Wall	Drywall	Intact	Beige	1	Negative	0	0.02
9	CMZ/22261	Unit #108	0	Living Room/Kitchen 2	D	Wall	Drywall	Intact	Beige	1	Negative	0	0.02
10	CMZ/22261	Unit #108	0	Living Room/Kitchen 2	A	Window Sill	Wood	Intact	Natural	1	Negative	0	0.03
11	CMZ/22261	Unit #108	0	Living Room/Kitchen 2	A	Window Stop	Wood	Intact	Natural	1	Negative	0	0.03
12	CMZ/22261	Unit #108	0	Living Room/Kitchen 2	C	Door Casing	Wood	Intact	Natural	2.76	Negative	0.01	0.08
13	CMZ/22261	Unit #108	0	Living Room/Kitchen 2	C	Door Jamb	Wood	Intact	Natural	1	Negative	0	0.03
14	CMZ/22261	Unit #108	0	Living Room/Kitchen 2	C	Door	Wood	Intact	Natural	1	Negative	0	0.03
15	CMZ/22261	Unit #108	0	Living Room/Kitchen 2	C	Door Threshold	Wood	Intact	Natural	1	Negative	0.01	0.04
16	CMZ/22261	Unit #108	0	Living Room/Kitchen 2	B	Door	Wood	Intact	Natural	1	Negative	0	0.02
17	CMZ/22261	Unit #108	0	Living Room/Kitchen 2	D	Closet Door	Wood	Intact	Natural	1	Negative	0	0.02
18	CMZ/22261	Unit #108	0	Living Room/Kitchen 2	D	Closet Wall	Drywall	Intact	Beige	1	Null	0	0.02
19	CMZ/22261	Unit #108	0	Living Room/Kitchen 2	D	Closet Wall	Drywall	Intact	Beige	1	Negative	0	0.02
20	CMZ/22261	Unit #108	0	Living Room/Kitchen 2	B	Baseboard	Wood	Intact	Natural	1	Negative	0	0.02
21	CMZ/22261	Unit #108	0	Living Room/Kitchen 2		Floor	Carpet	Intact	Multi	1	Negative	0	0.02
22	CMZ/22261	Unit #108	0	Living Room/Kitchen 2		Ceiling	Drywall	Intact	Beige	1	Negative	0	0.02
23	CMZ/22261	Unit #108	0	Living Room/Kitchen 2	B	Wall	Drywall	Intact	Beige	1	Negative	0	0.02
24	CMZ/22261	Unit #108	0	Living Room/Kitchen 2	C	Wall	Drywall	Intact	Beige	1	Negative	0	0.02
25	CMZ/22261	Unit #108	0	Living Room/Kitchen 2	D	Wall	Drywall	Intact	Beige	1	Negative	0	0.02
26	CMZ/22261	Unit #108	0	Living Room/Kitchen 2		Floor	Vinyl	Intact	Multi	1	Negative	0	0.02
27	CMZ/22261	Unit #108	0	Living Room/Kitchen 2		Ceiling	Drywall	Intact	Beige	1	Negative	0	0.02
28	CMZ/22261	Unit #108	0	Living Room/Kitchen 2	A	Cabinet	Wood	Intact	Natural	1	Negative	0	0.04
29	CMZ/22261	Unit #108	0	Child's Bedroom 3	A	Wall	Drywall	Intact	Beige	1.32	Negative	0	0.02
30	CMZ/22261	Unit #108	0	Child's Bedroom 3	B	Wall	Drywall	Intact	Beige	1	Negative	0	0.02
31	CMZ/22261	Unit #108	0	Child's Bedroom 3	C	Wall	Drywall	Intact	Beige	1	Negative	0	0.02
32	CMZ/22261	Unit #108	0	Child's Bedroom 3	D	Wall	Drywall	Intact	Beige	3.29	Negative	0.01	0.02
33	CMZ/22261	Unit #108	0	Child's Bedroom 3	D	Window Sill	Wood	Intact	Natural	1	Negative	0	0.03

XRF #	Inspector/XRF#	Site	Floor	Room	Side	Component	Substrate	Condition	Color	D I	Results	PbC	PbC Error
34	CMZ/22261	Unit #108	0	Child's Bedroom 3	D	Window Stop	Wood	Intact	Natural	1	Negative	0	0.02
35	CMZ/22261	Unit #108	0	Child's Bedroom 3	A	Door Casing	Wood	Intact	Natural	1	Negative	0	0.02
36	CMZ/22261	Unit #108	0	Child's Bedroom 3	A	Door Jamb	Wood	Intact	Natural	1	Negative	0	0.02
37	CMZ/22261	Unit #108	0	Child's Bedroom 3	A	Door	Wood	Intact	Natural	1	Negative	0	0.02
38	CMZ/22261	Unit #108	0	Child's Bedroom 3	A	Door	Wood	Intact	Natural	1	Negative	0	0.03
39	CMZ/22261	Unit #108	0	Child's Bedroom 3	A	Baseboard	Wood	Intact	Natural	1	Negative	0	0.02
40	CMZ/22261	Unit #108	0	Child's Bedroom 3	D	Blinds	Vinyl	Intact	White	1	Negative	0	0.02
41	CMZ/22261	Unit #108	0	Child's Bedroom 3		Floor	Carpet	Intact	Multi	1	Negative	0	0.02
42	CMZ/22261	Unit #108	0	Child's Bedroom 3		Ceiling	Drywall	Intact	Beige	1	Null	0	0.02
43	CMZ/22261	Unit #108	0	Child's Bedroom 3		Ceiling	Drywall	Intact	Beige	1	Null	0	0.02
44	CMZ/22261	Unit #108	0	Child's Bedroom 3		Ceiling	Drywall	Intact	Beige	1	Negative	0	0.02
45	CMZ/22261	Unit #108	0	Child's Bedroom 3	B	Closet Wall	Drywall	Intact	Beige	1	Negative	0	0.02
46	CMZ/22261	Unit #108	0	Child's Bedroom 3	B	Closet Shelf	Wood	Intact	Beige	1	Negative	0	0.03
47	CMZ/22261	Unit #108	0	Child's Bedroom 3		Bed	Wood	Intact	White	1	Negative	0	0.02
48	CMZ/22261	Unit #108	0	Child's Bedroom 3		Bedside Cabinet	Wood	Intact	White	1	Negative	0	0.02
49	CMZ/22261	Unit #108	0	Bathroom 4	A	Wall	Drywall	Intact	White	1	Negative	0	0.02
50	CMZ/22261	Unit #108	0	Bathroom 4	B	Wall	Drywall	Intact	White	1	Negative	0	0.02
51	CMZ/22261	Unit #108	0	Bathroom 4	C	Wall	Drywall	Intact	White	1	Negative	0	0.02
52	CMZ/22261	Unit #108	0	Bathroom 4	D	Wall	Drywall	Intact	White	1	Negative	0	0.02
53	CMZ/22261	Unit #108	0	Bathroom 4	A	Wall	Ceramic	Intact	White	1.84	Positive	7.3	5.4
54	CMZ/22261	Unit #108	0	Bathroom 4	B	Wall	Ceramic	Intact	White	1.84	Positive	7.3	5.4
55	CMZ/22261	Unit #108	0	Bathroom 4	C	Wall	Ceramic	Intact	White	1.75	Positive	6.5	4.6
56	CMZ/22261	Unit #108	0	Bathroom 4	D	Wall	Ceramic	Intact	White	3.12	Negative	0.06	0.28
57	CMZ/22261	Unit #108	0	Bathroom 4	D	Wall	Ceramic	Intact	White	1	Negative	0.02	0.07
58	CMZ/22261	Unit #108	0	Bathroom 4	D	Wall	Ceramic	Intact	White	1	Negative	0.01	0.07
59	CMZ/22261	Unit #108	0	Bathroom 4	D	Wall	Ceramic	Intact	White	5.35	Negative	0.14	0.57
60	CMZ/22261	Unit #108	0	Bathroom 4		Ceiling	Drywall	Intact	Beige	1	Negative	0	0.02
61	CMZ/22261	Unit #108	0	Bathroom 4		Floor	Ceramic	Intact	White	1	Negative	0.01	0.04
62	CMZ/22261	Unit #108	0	Bathroom 4	B	Door Casing	Wood	Intact	Natural	1.05	Negative	0	0.04
63	CMZ/22261	Unit #108	0	Bathroom 4	B	Door Jamb	Wood	Intact	Natural	1	Negative	0	0.02
64	CMZ/22261	Unit #108	0	Bathroom 4	B	Door	Wood	Intact	Natural	2.87	Negative	0.01	0.07
65	CMZ/22261	Unit #108	0	Bathroom 4	C	Register	Metal	Intact	White	1	Negative	0	0.02
66	CMZ/22261	Unit #108	0	Bathroom 4	C	Cabinet	Wood	Intact	Natural	1.13	Negative	0	0.04

XRF #	Inspector/XRF#	Site	Floor	Room	Side	Component	Substrate	Condition	Color	D I	Results	PbC	PbC Error
67	CMZ/22261	Unit #108	0	Master Bedroom 5	A	Wall	Drywall	Intact	Beige	1	Negative	0	0.02
68	CMZ/22261	Unit #108	0	Master Bedroom 5	B	Wall	Drywall	Intact	Beige	1	Negative	0	0.02
69	CMZ/22261	Unit #108	0	Master Bedroom 5	C	Wall	Drywall	Intact	Beige	2.99	Negative	0.01	0.05
70	CMZ/22261	Unit #108	0	Master Bedroom 5	D	Wall	Drywall	Intact	Beige	1	Negative	0	0.02
71	CMZ/22261	Unit #108	0	Master Bedroom 5	A	Window Sill	Drywall	Intact	Beige	1	Negative	0.01	0.04
72	CMZ/22261	Unit #108	0	Master Bedroom 5	A	Window Sill	Wood	Intact	Natural	1	Negative	0	0.02
73	CMZ/22261	Unit #108	0	Master Bedroom 5	A	Window Stop	Wood	Intact	Natural	1	Negative	0	0.03
74	CMZ/22261	Unit #108	0	Master Bedroom 5	C	Door Casing	Wood	Intact	Natural	1	Negative	0	0.02
75	CMZ/22261	Unit #108	0	Master Bedroom 5	C	Door Jamb	Wood	Intact	Natural	1.42	Negative	0.01	0.05
76	CMZ/22261	Unit #108	0	Master Bedroom 5	C	Door	Wood	Intact	Natural	1	Negative	0	0.02
77	CMZ/22261	Unit #108	0	Master Bedroom 5	C	Door	Wood	Intact	Natural	1	Negative	0	0.02
78	CMZ/22261	Unit #108	0	Master Bedroom 5	B	Baseboard	Wood	Intact	Natural	1	Negative	0	0.02
79	CMZ/22261	Unit #108	0	Master Bedroom 5		Floor	Carpet	Intact	Multi	1	Negative	0	0.02
80	CMZ/22261	Unit #108	0	Master Bedroom 5		Ceiling	Drywall	Intact	Beige	1	Negative	0	0.02
81	CMZ/22261	Unit #108	0	Master Bedroom 5	B	Closet Wall	Drywall	Intact	Beige	1	Negative	0	0.02
82	CMZ/22261	Unit #108	0	Master Bedroom 5	A	Register	Metal	Intact	White	1	Negative	0	0.02
83	CMZ/22261	Unit #108	0	Calibrate						1.1	Positive	1	0.1
84	CMZ/22261	Unit #108	0	Calibrate						1.08	Positive	1	0.1
85	CMZ/22261	Unit #108	0	Calibrate						2.85	Positive	1.2	0.1
30	MA/15553	Unit #108	0	Shutter Cal.								6.77	0
31	MA/15553	Unit #108	0	Calibrate						1.09	Positive	1	0.1
32	MA/15553	Unit #108	0	Calibrate						1.11	Positive	1.1	0.1
33	MA/15553	Unit #108	0	Calibrate						2.64	Positive	1.1	0.1
34	MA/15553	Common	1st	Front Entry 3	A	Wall	Brick	Intact	Red	1	Negative	0	0.02
35	MA/15553	Common	1st	Front Entry 3	B	Wall	Plaster	Intact	White	1.71	Null	0.01	0.05
36	MA/15553	Common	1st	Front Entry 3	C	Wall	Plaster	Intact	White	1	Negative	0	0.02
37	MA/15553	Common	1st	Front Entry 3	C	Wall	Brick	Intact	Red	1	Negative	0	0.02
38	MA/15553	Common	1st	Front Entry 3	D	Wall	Brick	Intact	Red	1	Negative	0	0.02
39	MA/15553	Common	1st	Front Entry 3	A	Door Casing	Metal	Intact	Natural	1.48	Negative	0	0.02
40	MA/15553	Common	1st	Front Entry 3	A	Door	Metal	Intact	Natural	1.18	Negative	0	0.02
41	MA/15553	Common	1st	Front Entry 3	A	Door Jamb	Metal	Intact	Natural	1	Negative	0	0.02
42	MA/15553	Common	1st	Front Entry 3	A	Door Threshold	Metal	Intact	Natural	3.2	Negative	0.01	0.96
43	MA/15553	Common	1st	Front Entry 3	C	Baseboard	Wood	Deteriorated	Brown	1	Negative	0	0.03

XRF #	Inspector/XRF#	Site	Floor	Room	Side	Component	Substrate	Condition	Color	D I	Results	PbC	PbC Error
44	MA/15553	Common	1st	Front Entry 3		Floor	Carpet	Intact	Natural	1	Negative	0	0.02
45	MA/15553	Common	1st	Front Entry 3		Ceiling	Plaster	Intact	White	1	Negative	0	0.02
46	MA/15553	Common	1st	Front Stairs 6	A	Wall	Plaster	Intact	White	1	Negative	0	0.02
47	MA/15553	Common	1st	Front Stairs 6	B	Wall	Plaster	Intact	White	1	Negative	0	0.02
48	MA/15553	Common	1st	Front Stairs 6	C	Wall	Plaster	Intact	White	1	Null	0	0.02
49	MA/15553	Common	1st	Front Stairs 6	C	Wall	Plaster	Intact	White	3.9	Negative	0.01	0.02
50	MA/15553	Common	1st	Front Stairs 6	D	Wall	Plaster	Intact	White	1.12	Negative	0	0.02
51	MA/15553	Common	1st	Front Stairs 6	A	Door Casing	Wood	Intact	Natural	1.48	Negative	0.04	0.1
52	MA/15553	Common	1st	Front Stairs 6	A	Door Jamb	Metal	Intact	Natural	1	Negative	0	0.02
53	MA/15553	Common	1st	Front Stairs 6	A	Door Threshold	Metal	Intact	Natural	5.33	Negative	< LOD	0
54	MA/15553	Common	1st	Front Stairs 6	A	Door	Metal	Intact	Natural	1	Negative	0	0.02
55	MA/15553	Common	1st	Front Stairs 6	D	Baseboard	Wood	Intact	Natural	1	Negative	0	0.02
56	MA/15553	Common	2nd	Front Stairs 6	D	Floor	Carpet	Intact	Natural	1	Negative	0	0.02
57	MA/15553	Common	1.5	Front Stairs 6	D	Hand rail	Metal	Intact	Natural	2.51	Negative	0.03	0.12
58	MA/15553	Common	1.5	Front Stairs 6	D	Stair Tread	Carpet	Intact	Natural	1.68	Negative	0.01	0.05
59	MA/15553	Common	1.5	Front Stairs 6	D	Stair Riser	Carpet	Intact	Natural	1.36	Negative	0	0.02
60	MA/15553	Common	2nd	Front Stairs 6	A	Window Sash Int.	Metal	Intact	Beige	1	Negative	0.01	0.03
61	MA/15553	Common	1st	Front Stairs 6		Ceiling	Plaster	Intact	Beige	1.14	Negative	0	0.02
62	MA/15553	Common	1st	Front Stairs 6		Floor	Concrete	Deteriorated	Red	3.3	Negative	0.02	0.04
63	MA/15553	Common	1st	Hall 5	A	Wall	Plaster	Intact	Beige	1.72	Negative	0	0.02
64	MA/15553	Common	1st	Hall 5	B	Wall	Plaster	Intact	Beige	1	Negative	0	0.02
65	MA/15553	Common	1st	Hall 5	C	Wall	Plaster	Intact	Beige	1	Negative	0	0.02
66	MA/15553	Common	1st	Hall 5	D	Wall	Plaster	Intact	Beige	1.7	Negative	0.01	0.02
67	MA/15553	Common	1st	Hall 5	A	Door Casing	Metal	Intact	Red	1.16	Negative	0.01	0.05
68	MA/15553	Common	1st	Hall 5	A	Door Jamb	Metal	Intact	Red	3.01	Negative	0.03	0.14
69	MA/15553	Common	1st	Hall 5	A	Door Threshold	Metal	Intact	Gold	2.95	Negative	0.06	0.84
70	MA/15553	Common	1st	Hall 5	A	Door	Wood	Intact	Natural	1	Negative	0	0.02
71	MA/15553	Common	1st	Hall 5	A	Baseboard	Wood	Intact	Natural	1	Negative	0	0.02
72	MA/15553	Common	1st	Hall 5		Floor	Carpet	Intact	Natural	1.5	Negative	0	0.02
73	MA/15553	Common	1st	Hall 5		Ceiling	Plaster	Intact	White	1	Negative	0	0.02
74	MA/15553	Common	1st	Rear Stairs 7	A	Wall	Plaster	Intact	White	1	Negative	0	0.02
75	MA/15553	Common	1st	Rear Stairs 7	B	Wall	Plaster	Intact	White	1.76	Negative	0	0.02
76	MA/15553	Common	1st	Rear Stairs 7	C	Wall	Plaster	Intact	White	1	Negative	0	0.02

XRF #	Inspector/XRF#	Site	Floor	Room	Side	Component	Substrate	Condition	Color	D I	Results	PbC	PbC Error
77	MA/15553	Common	1st	Rear Stairs 7	D	Wall	Plaster	Intact	White	1.05	Negative	0	0.02
78	MA/15553	Common	1st	Rear Stairs 7	A	Door Casing	Metal	Intact	Red	2.11	Negative	0.03	0.11
79	MA/15553	Common	1st	Rear Stairs 7	A	Door Jamb	Metal	Intact	Red	1.33	Negative	0.01	0.05
80	MA/15553	Common	1st	Rear Stairs 7	A	Door	Wood	Intact	Natural	1	Negative	0	0.02
81	MA/15553	Common	1st	Rear Stairs 7	A	Door Threshold	Metal	Intact	Natural	1	Negative	0	0.02
82	MA/15553	Common	1st	Rear Stairs 7		Floor	Carpet	Intact	Natural	1	Negative	0	0.02
83	MA/15553	Common	2nd	Rear Stairs 7	A	Window Sash Int.	Metal	Intact	Natural	1.23	Negative	0	0.02
84	MA/15553	Common	2nd	Rear Stairs 7	A	Baseboard	Wood	Intact	Natural	3.49	Negative	0.02	0.12
85	MA/15553	Common	1.5	Rear Stairs 7	D	Hand rail	Metal	Intact	Black	1.57	Negative	0.03	0.1
86	MA/15553	Common	1.5	Rear Stairs 7	D	Stair Tread	Carpet	Intact	Natural	1.13	Negative	0.01	0.03
87	MA/15553	Common	1.5	Rear Stairs 7	D	Stair Riser	Carpet	Intact	Natural	1	Negative	0	0.02
88	MA/15553	Common	1st	Rear Stairs 7		Ceiling	Plaster	Intact	White	1.29	Negative	0	0.02
89	MA/15553	Common	1st	Laundry Room 4	A	Wall	Plaster	Intact	White	1.66	Negative	0.01	0.03
90	MA/15553	Common	1st	Laundry Room 4	B	Wall	Plaster	Intact	White	1	Negative	0	0.02
91	MA/15553	Common	1st	Laundry Room 4	C	Wall	Concrete	Intact	White	2.81	Negative	0.01	0.02
92	MA/15553	Common	1st	Laundry Room 4	D	Wall	Concrete	Intact	White	1	Negative	0	0.02
93	MA/15553	Common	1st	Laundry Room 4	C	Window Casing	Wood	Intact	White	1.71	Negative	0	0.02
94	MA/15553	Common	1st	Laundry Room 4	C	Window Sill	Wood	Intact	White	1.03	Negative	0	0.02
95	MA/15553	Common	1st	Laundry Room 4	C	Window Sill	Wood	Intact	White	1	Negative	0	0.03
96	MA/15553	Common	1st	Laundry Room 4	C	Window Sash Int.	Metal	Intact	Natural	1	Negative	0	0.02
97	MA/15553	Common	1st	Laundry Room 4	A	Door Casing	Wood	Intact	Natural	1.26	Negative	0.01	0.04
98	MA/15553	Common	1st	Laundry Room 4	A	Door Jamb	Wood	Intact	Natural	1	Negative	0	0.02
99	MA/15553	Common	1st	Laundry Room 4	D	Wall	Drywall	Intact	White	1.78	Negative	0.03	0.09
100	MA/15553	Common	1st	Laundry Room 4	A	Baseboard	Rubber	Intact	White	3.53	Negative	0.03	0.04
101	MA/15553	Common	1st	Laundry Room 4	B	Baseboard	Wood	Intact	Natural	1	Negative	0	0.02
102	MA/15553	Common	1st	Laundry Room 4		Floor	Ceramic	Intact	White	1.82	Positive	1.2	0.2
103	MA/15553	Common	1st	Laundry Room 4		Floor	Ceramic	Intact	White	1.75	Null	1.1	0.1
104	MA/15553	Common	1st	Laundry Room 4		Floor	Ceramic	Intact	White	2.09	Positive	1.3	0.2
105	MA/15553	Common	1st	Laundry Room 4	B	Storage Door	Wood	Intact	Natural	1	Negative	0	0.02
106	MA/15553	Common	1st	Laundry Room 4		Ceiling	Plaster	Intact	White	1.37	Negative	0.01	0.03
107	MA/15553	Common	1st	Exterior 2	A	Wall	Brick	Intact	Red	1.91	Negative	0.01	0.02
108	MA/15553	Common	1st	Exterior 2	A	Door Casing	Metal	Intact	Natural	1	Negative	0	0.02
109	MA/15553	Common	1st	Exterior 2	A	Door	Metal	Intact	Natural	1	Negative	0	0.02

XRF #	Inspector/XRF#	Site	Floor	Room	Side	Component	Substrate	Condition	Color	D I	Results	PbC	PbC Error
110	MA/15553	Common	1st	Exterior 2	A	Door Jamb	Metal	Intact	Natural	1.13	Negative	0	0.02
111	MA/15553	Common	1st	Exterior 2	A	Hand rail	Metal	Intact	Black	1	Negative	0.02	0.06
112	MA/15553	Common	1st	Exterior 2	A	Stair Tread	Concrete	Intact	Natural	1	Negative	0	0.02
113	MA/15553	Common	1st	Exterior 2	A	Stair Riser	Concrete	Intact	Natural	1.02	Negative	0	0.02
114	MA/15553	Common	1st	Exterior 2	A	Window Casing	Metal	Intact	Natural	1	Negative	0	0.02
115	MA/15553	Common	1st	Exterior 2	A	Window Sash Ext.	Metal	Intact	Natural	1	Negative	0	0.02
116	MA/15553	Common	1st	Exterior 2	A	Window Sill	Concrete	Intact	Natural	3.04	Negative	0.03	0.91
117	MA/15553	Common	1st	Exterior 2	B	Wall	Stucco	Intact	Beige	1.03	Negative	0	0.02
118	MA/15553	Common	1st	Exterior 2	C	Wall	Stucco	Intact	Beige	3.65	Negative	0.01	0.04
119	MA/15553	Common	1st	Exterior 2	C	Grate	Metal	Deteriorated	White	1.9	Negative	0.03	0.08
120	MA/15553	Common	1st	Exterior 2	D	Wall	Stucco	Intact	Beige	4.29	Negative	0.03	0.04
121	MA/15553	Unit #108	0	Calibrate						1.07	Positive	1	0.1
122	MA/15553	Unit #108	0	Calibrate						1.08	Positive	1	0.1
123	MA/15553	Unit #108	0	Calibrate						2.66	Null	1.1	0.1
124	MA/15553	Unit #108	0	Calibrate						2.71	Positive	1.2	0.1
Note: The tile surrounding the bathtub appears to be newer than the tile that tested positive. All tile was in good condition.													
The building had three halls, they were all similar in paint history, tested the lower level hall in the building.													

Appendix E:
Visual Assessment Survey

The information below is generic in nature. The specific locations of deteriorated paint, dust and soil hazards can be found in Appendices D & F. Any deviations of items 3-4 below can be found at the end of Appendix D.

1) **Area description**

Please use the bulleted points below as a guide throughout this report.

- **Location of building component** can be found on the XRF spreadsheet for each component tested.
- **Location of dust** can be found on the analytical results in conjunction with the dwelling sketches
- **Location of bare soil** can be found on the analytical results in conjunction with the dwelling sketches.

2) **Deteriorated Paint**

is defined in the HUD Lead Safe Housing Rule, 24 CFR 35 as any interior or exterior paint or other coating that is peeling, chipping, chalking or cracking, or any paint or coating located on an interior or exterior surface or fixture that is otherwise damaged or separated from the substrate.

3) **Probable cause of deterioration**

The following are assumed to be the "probable cause of deterioration" for the components tested *unless otherwise specified* at the end of the XRF report.

Exterior walls, soffits, fascias, doors, door/window trim, roof, foundations, porch floors, columns, ceilings are due to moisture, ultraviolet light, extreme heat/cold and wind.

Interior components

- Windows and window components including (double hung, crank out and swing windows), floors, and stair surfaces are due to friction.
- Doors, door frames, baseboards, and walls are due to impaction through repeated and sudden force.
- Ceilings- moisture
- Radiators, window trim, closet walls due to excessive heat and cold, age and normal wear and tear

4) **Friction/Impact Surfaces**

The following components are **friction surfaces** unless *specifically noted at the end of the XRF report*: Windows and window components including (double hung, crank out and swing windows), floors, and stair surfaces

The following components are **impact surfaces** unless *specifically noted at the end of the XRF report*: Doors, door frames, baseboards, and walls

5) Visible teeth marks
Window sills with **visible teeth marks** are specifically *noted at the end of the XRF report.*

Appendix F:
Analytical Results

Analytical Laboratory:
EMSL Analytical, Inc.
14375 23rd Ave N
Plymouth, MN 55447
Tel: 763-449-4922
AIHA Lab ID: 163162

Dust wipes are collected by Minnesota licensed lead risk assessors and according to HUD guidelines in accordance with the City of Minneapolis Protocol.

A copy of the lead dust and soil sample results are attached. The locations of the samples are indicated on the building sketches by a star (*). The standards for the lead dust wipes are based on the US Environmental Protection Agency Dust Wipe standards. The soil standard is based on the Minnesota Department of Health standard for soil hazards.

The lead dust and soil is considered a lead hazard when it exceeds the applicable standard below.

Floor Wipe (FW)	40 $\mu g/ft^2$
Window Sill (WS)	250 $\mu g/ft^2$
Window Well (WW)	400 $\mu g/ft^2$
Soil (SS)	100 ppm

EMSL Analytical, Inc.
14375 23rd Avenue North, Minneapolis, Mn 55447
Phone/Fax: (763) 449-4922 / (763) 449-4924
http://www.EMSL.com minneapolislab@emsl.com

EMSL Order:	351502987
CustomerID:	MNHD42
CustomerPO:	436813
ProjectID:	

Attn: **Nathan Olson**
Minneapolis Health Department
250 S. 4th Street
Room 414
Minneapolis, MN 55415

Phone:	(612) 673-5874
Fax:	(612) 673-2635
Received:	05/20/15 9:30 AM
Collected:	5/19/2015

CLEARANCE

Project: **2121 Garfield Ave. S., #108**

Test Report: Lead in Dust by Flame AAS (SW 846 3050B/7000B)*

Client SampleDescription	*Collected*	*Analyzed*	*Area Sampled*	*RDL*	*Lead Concentration*
2121-1 *351502987-0001*	5/19/2015 Site: Living Room Floor	5/22/2015	144 in²	10 µg/ft²	<10 µg/ft²
2121-2 *351502987-0002*	5/19/2015 Site: Living Room Window Sill	5/22/2015	57 in²	25 µg/ft²	<25 µg/ft²
2121-3 *351502987-0003*	5/19/2015 Site: Child's Bed Floor	5/22/2015	144 in²	10 µg/ft²	<10 µg/ft²
2121-4 *351502987-0004*	5/19/2015 Site: Child's Bed Window Sill	5/22/2015	76.75 in²	18 µg/ft²	<18 µg/ft²
2121-5 *351502987-0005*	5/19/2015 Site: Front Stairs Floor	5/22/2015	144 in²	10 µg/ft²	<10 µg/ft²
2121-6 *351502987-0006*	5/19/2015 Site: Front Stairs Window Sill	5/22/2015	33 in²	44 µg/ft²	<44 µg/ft²
2121-7 *351502987-0007*	5/19/2015 Site: Master Bed Floor	5/22/2015	144 in²	10 µg/ft²	<10 µg/ft²
2121-8 *351502987-0008*	5/19/2015 Site: Master Bed Window Sill	5/22/2015	67.0625 in²	21 µg/ft²	<21 µg/ft²
2121-9 *351502987-0009*	5/19/2015 Site: Field Blank	5/22/2015	n/a	10 µg/wipe	<10 µg/wipe

Rachel Travis, Laboratory Manager
or other approved signatory

*Analysis following Lead in Dust by EMSL SOP/ Determination of Environmental Lead by FLAA. Reporting limit is 10 ug/wipe. ug/wipe = ug/ft2 x area sampled in ft2. Unless noted, results in this report are not blank corrected. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities (such as volume sampled) or analytical method limitations. Samples received in good condition unless otherwise noted. The lab is not responsible for data reported in µg/ft² which is dependant on the area provided by non-lab personnel. The test results contained within this report meet the requirements of NELAC unless otherwise noted. "<" (less than) results signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. The QC data associated with the sample results included in this report meet the recovery and precision requirements established by the AIHA-LAP, unless specifically indicated otherwise.

Samples analyzed by EMSL Analytical, Inc. Minneapolis, Mn AIHA-LAP, LLC--ELLAP Accredited #163162

Initial report from 05/22/2015 15:17:45

Appendix G:

Lead Violations/Recommendations

LEAD VIOLATIONS

*No lead violations were found at the property.

Appendix H:
Monitoring Schedule

The following is guidance for property owners to monitor the property for lead hazards into the future. The attached XRF spreadsheet outlines all the locations that lead based paint was found on the property and therefore areas that require ongoing monitoring.

The owner shall conduct an annual visual assessment of all painted surfaces if interim control methods (stabilize and paint) were used to resolve the lead hazards found in this lead risk assessment report. All deteriorated surfaces should be repaired using lead-safe work practices.

Monitoring is not required if lead dust, lead in soil, or lead-based paint was not found.

If no hazards are found, but lead-based paint is found, an owner's visual survey should occur annually and all surfaces with lead-based paint should receive regular maintenance.

If lead dust, lead in soil, and/or lead-based paint hazards were found to be present, then choosing to *remove* all lead-based paint, will require less on-going maintenance.

In general, all painted surfaces should be monitored. A result found to be negative for lead does not necessarily mean that lead is not present; but rather it indicates that the coating is not considered lead paint under a legal definition of 1.0 mg/cm^2. Therefore all painted surfaces should be maintained in accordance with the Minneapolis Housing Ordinances.

The federal Residential Lead-Based Paint Hazard Reduction Act, 42 U.S.C. 4852d, requires sellers and landlords of most residential housing built before 1978 to disclose all available records and reports concerning lead-based paint and/or lead-based paint hazards, including the test results contained in this notice, to purchasers and tenants at the time of sale or lease or upon lease renewal. <u>This disclosure must occur even if hazard reduction or abatement has been completed.</u>

Failure to disclose these test results is a violation of the U.S. Department of Housing and Urban Development and the U.S. Environmental Protection Agency regulations at 24 CFR Part 35 and 40CFR Part 745 and can result in a fine of up to $11,000 per violation. To find out more information about your obligations under federal lead-based paint requirements call 1-800-424-LEAD.

2121 Garfield Avenue South, #108 and common areas

XRF #	Inspector/XRF#	Site	Floor	Room	Side	Component	Substrate	Condition	Color	D I	Results	PbC	PbC Error
3	CMZ/22261	Unit #108	0	Calibrate						1.07	Positive	1	0.1
4	CMZ/22261	Unit #108	0	Calibrate						1.13	Positive	1.1	0.1
5	CMZ/22261	Unit #108	0	Calibrate						2.76	Positive	1.1	0.1
53	CMZ/22261	Unit #108	0	Bathroom 4	A	Wall	Ceramic	Intact	White	1.84	Positive	7.3	5.4
54	CMZ/22261	Unit #108	0	Bathroom 4	B	Wall	Ceramic	Intact	White	1.84	Positive	7.3	5.4
55	CMZ/22261	Unit #108	0	Bathroom 4	C	Wall	Ceramic	Intact	White	1.75	Positive	6.5	4.6
83	CMZ/22261	Unit #108	0	Calibrate						1.1	Positive	1	0.1
84	CMZ/22261	Unit #108	0	Calibrate						1.08	Positive	1	0.1
85	CMZ/22261	Unit #108	0	Calibrate						2.85	Positive	1.2	0.1
31	MA/15553	Unit #108	0	Calibrate						1.09	Positive	1	0.1
32	MA/15553	Unit #108	0	Calibrate						1.11	Positive	1.1	0.1
33	MA/15553	Unit #108	0	Calibrate						2.64	Positive	1.1	0.1
102	MA/15553	Common	1st	Laundry Room 4		Floor	Ceramic	Intact	White	1.82	Positive	1.2	0.2
104	MA/15553	Common	1st	Laundry Room 4		Floor	Ceramic	Intact	White	2.09	Positive	1.3	0.2
121	MA/15553	Unit #108	0	Calibrate						1.07	Positive	1	0.1
122	MA/15553	Unit #108	0	Calibrate						1.08	Positive	1	0.1
124	MA/15553	Unit #108	0	Calibrate						2.71	Positive	1.2	0.1

Appendix I:
Niton Performance Characteristics Sheet

Serial numbers of XRFs used by the City of Minneapolis

Niton XL 309 U9914096LY
Niton Xli 15553
Niton Xlp 3006AW 23480
Niton Xlp 303A 22261

Performance Characteristic Sheet

EFFECTIVE DATE: **September 24, 2004** **EDITION NO.: 1**

MANUFACTURER AND MODEL:

Make: *Niton LLC*
Tested Model: *XLp 300*
Source: ^{109}Cd
Note: This PCS is also applicable to the equivalent model variations indicated below, for the Lead-in-Paint K+L variable reading time mode, in the XLi and XLp series:

XLi 300A, XLi 301A, XLi 302A and XLi 303A.
XLp 300A, XLp 301A, XLp 302A and XLp 303A.
XLi 700A, XLi 701A, XLi 702A and XLi 703A.
XLp 700A, XLp 701A, XLp 702A, and XLp 703A.

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

FIELD OPERATION GUIDANCE

OPERATING PARAMETERS:

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

XRF CALIBRATION CHECK LIMITS:

0.8 to 1.2 mg/cm^2 (inclusive)

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

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

SUBSTRATE CORRECTION:

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

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

INCONCLUSIVE RANGE OR THRESHOLD:

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

BACKGROUND INFORMATION

EVALUATION DATA SOURCE AND DATE:

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

OPERATING PARAMETERS:

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

SUBSTRATE CORRECTION VALUE COMPUTATION:

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

EVALUATING THE QUALITY OF XRF TESTING:

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

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

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

Compute the Retest Tolerance Limit by the following steps:

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

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

Square the average for each testing combination.

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

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

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

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

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

Compute the average of all ten original XRF results.

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

Find the absolute difference of the two averages.

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

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

TESTING TIMES:

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

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

CLASSIFICATION RESULTS:

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

DOCUMENTATION:

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

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

Appendix J:
Minnesota Department of Health
Licensed Lead Risk Assessor
License

Risk Assessor	Initials	Risk Assessor License #
Lisa Smestad	LAFS	LR269
Eliza Schell	EMS	LR507
Nathan Olson	NJO	LR2217
Jennifer Tschida	JAT	LR2312
Alex Vollmer	AJV	LR3509
Fardowza Omar	FAO	LR3236
Michelle Anderson	MEA	LR4761
Hanna Henscheid	HBH	LR4397
Christine McCune-Zierath	CMZ	LR4970