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December 20, 2018

Public Housing Agency of the City of St. Paul
555 Wabasha Street North, Suite 400
St. Paul, Minnesota 55102

Attn: Ka Yang 651-292-6089
PHA Project Leader

Subject: Lead Risk Assessment
McDonough Homes (MN1-1, MN1-4 and MN1-8) and Community Center
St. Paul, Minnesota
PSI Project No. 06731050-5

Dear Mr. Yang:

On November 2, 7, 9, 13, 14, 15, 16, 19, 21, 28, 29, 30 and December 3, 4, 5, 2018, Mr. John Lynch and Mr. Jacob Frahm of Professional Service Industries, Inc. (PSI), an Intertek company, conducted a lead risk assessment at the above multi-family housing development. Mr. Lynch and Mr. Frahm are certified Risk Assessors through the Minnesota Department of Health. The current owner of this property is the Public Housing Agency of the City of St. Paul (PHA).

Were Lead-Based Paint (LBP) Hazards discovered at this development? ☒ **Yes** ☐ **No**

A *lead-based paint hazard* is any of the following:

- LBP on a friction surface subject to abrasion and where the dust levels on the nearest horizontal surface (sill or floor) exceed the floor or window levels shown below;
- LBP damaged by impact;
- LBP showing evidence of teeth marks; or
- Any other deteriorated LBP.

Based on the HUD Guidelines, the following lead hazards were identified:

MN 1-1

ADDRESS #	ROOM #	COMPONENT	LOCATION	SUBSTRATE	COLOR	CONDITION
135 BIGLOW #C	1 - BASEMENT	STAIR	X	WOOD	GRAY	FAIR
163 BIGLOW #A	1 - BASEMENT	HVAC DUCT	X	METAL	WHITE	FAIR

NOTE: X = not along a wall

MN 1-4

ADDRESS #	ROOM #	COMPONENT	LOCATION	SUBSTRATE	COLOR	CONDITION
117 ARLINGTON	1 - BASEMENT	POST	X	METAL	RED	POOR
121 ARLINGTON	1 - BASEMENT	POST	X	METAL	RED	POOR
123 ARLINGTON	1 - BASEMENT	POST	X	METAL	GRAY	POOR
125 ARLINGTON	1 - BASEMENT	POST	X	METAL	RED	POOR
129 ARLINGTON	1 - BASEMENT	POST	X	METAL	RED	POOR
133 ARLINGTON	1 - BASEMENT	POST	X	METAL	RED	POOR
135 ARLINGTON	1 - BASEMENT	POST	X	METAL	RED	POOR
137 ARLINGTON	1 - BASEMENT	POST	X	METAL	RED	POOR
139 ARLINGTON	1 - BASEMENT	POST	X	METAL	RED	POOR
147 ARLINGTON	1 - BASEMENT	POST	X	METAL	RED	POOR
149 ARLINGTON	1 - BASEMENT	POST	X	METAL	RED	POOR
151 ARLINGTON	1 - BASEMENT	POST	X	METAL	RED	POOR
153 ARLINGTON	1 - BASEMENT	POST	X	METAL	RED	POOR
155 ARLINGTON	1 - BASEMENT	POST	X	METAL	RED	POOR
159 ARLINGTON	1 - BASEMENT	POST	X	METAL	BROWN	FAIR
165 ARLINGTON	1 - BASEMENT	POST	X	METAL	RED	POOR
169 ARLINGTON	1 - BASEMENT	POST	X	METAL	GRAY	FAIR
171 ARLINGTON	1 - BASEMENT	POST	X	METAL	RED	POOR
173 ARLINGTON	1 - BASEMENT	POST	X	METAL	RED	POOR
175 ARLINGTON	1 - BASEMENT	POST	X	METAL	WHITE	POOR
177 ARLINGTON	1 - BASEMENT	POST	X	METAL	RED	POOR
179 ARLINGTON	1 - BASEMENT	POST	X	METAL	RED	POOR
181 ARLINGTON	1 - BASEMENT	POST	X	METAL	RED	POOR
183 ARLINGTON	1 - BASEMENT	POST	X	METAL	RED	POOR
189 ARLINGTON	1 - BASEMENT	POST	X	METAL	RED	POOR
199 ARLINGTON	1 - BASEMENT	POST	X	METAL	RED	POOR

NOTE: X = not along a wall

MN 1-8

ADDRESS #	ROOM #	COMPONENT	LOCATION	SUBSTRATE	COLOR	CONDITION
255 ARLINGTON	1 - BASEMENT	POST	X	METAL	RED	FAIR
1451 L'ORIENT	1 - BASEMENT	POST	X	METAL	RED	FAIR
1453 L'ORIENT	1 - BASEMENT	POST	X	METAL	WHITE	FAIR
1455 L'ORIENT	1 - BASEMENT	POST	X	METAL	RED	FAIR
1459 L'ORIENT	1 - BASEMENT	POST	X	METAL	RED	FAIR
1481 L'ORIENT	1 - BASEMENT	POST	X	METAL	RED	POOR
	1 - BASEMENT	STAIR	X	WOOD	GRAY	POOR
	1 - BASEMENT	RAILING	X	WOOD	GRAY	POOR
1487 L'ORIENT	1 - BASEMENT	POST	X	METAL	WHITE	POOR
1489 L'ORIENT	1 - BASEMENT	POST	X	METAL	RED	POOR
1491 L'ORIENT	1 - BASEMENT	POST	X	METAL	RED	POOR
	1 - BASEMENT	POST	X	METAL	BROWN	POOR
	1 - BASEMENT	RAILING	X	WOOD	BROWN	POOR
	1 - BASEMENT	STAIR	X	WOOD	BROWN	FAIR
1493 L'ORIENT	1 - BASEMENT	POST	X	METAL	WHITE	FAIR
1497 L'ORIENT	1 - BASEMENT	POST	X	METAL	GRAY	POOR
1499 L'ORIENT	1 - BASEMENT	POST	X	METAL	RED	POOR
	1 - BASEMENT	STAIR	X	WOOD	BROWN	FAIR
1501 L'ORIENT	1 - BASEMENT	POST	X	METAL	RED	FAIR
1503 L'ORIENT	1 - BASEMENT	POST	X	METAL	DARK GRAY	FAIR
1515 L'ORIENT	1 - BASEMENT	POST	X	METAL	RED	POOR
1517 L'ORIENT	1 - BASEMENT	POST	X	METAL	BROWN	POOR
1525 L'ORIENT	1 - BASEMENT	POST	X	METAL	RED	POOR
	1 - BASEMENT	STAIR	X	WOOD	GRAY	FAIR
1527 L'ORIENT	1 - BASEMENT	POST	X	METAL	RED	FAIR
1537 L'ORIENT	1 - BASEMENT	POST	X	METAL	RED	FAIR
1539 L'ORIENT	1 - BASEMENT	POST	X	METAL	RED	FAIR
1541 L'ORIENT	1 - BASEMENT	POST	X	METAL	RED	FAIR
1543 L'ORIENT	1 - BASEMENT	POST	X	METAL	RED	FAIR
1547 L'ORIENT	1 - BASEMENT	POST	X	METAL	WHITE	POOR
1549 L'ORIENT	1 - BASEMENT	POST	X	METAL	RED	FAIR
1551 L'ORIENT	1 - BASEMENT	POST	X	METAL	WHITE	POOR
1553 L'ORIENT	1 - BASEMENT	POST	X	METAL	WHITE	POOR
1555 L'ORIENT	1 - BASEMENT	POST	X	METAL	RED	POOR

NOTE: X = not along a wall

Based on the HUD Guidelines, the following components must be treated as LBP throughout the buildings.

COMPONENT	# TESTED	# POSITIVE	% POSITIVE
Development Breakdown			
Development 1-4 – Basement Post	29	25	86
Development 1-8 – Basement Post	37	32	86

No other components tested were found to contain lead at greater than or equal to 1.0 mg/cm^2. Detailed XRF testing results are contained in Section A-1 of this report.

Were Lead Dust Hazards discovered at this development? ☒**Yes** ☐**No**

A lead-dust hazard is surface dust exceeding the levels shown below on one or more of the following components:

• Floors: 40µg/Square Foot • Window Sills: 250µg/Square Foot • Window Troughs 400µg/Square Foot

Dust sample results location: Section A-2. Hazard recommendations: Section A-3

The average dust level for each category was determined to be:

	BASEMENT FLOORS	FLOORS (OTHER)	STAIRS	WINDOW SILLS	WINDOW TROUGHS
MN 1-1	13.1 µg/SqFt	10.1 µg/SqFt	6.1 µg/SqFt	13.6 µg/SqFt	NA
MN 1-4	38.8 µg/SqFt	10.5 µg/SqFt	18.0 µg/SqFt	14.8 µg/SqFt	NA
MN 1-8	149.7 µg/SqFt	10.1 µg/SqFt	38.4 µg/SqFt	15.5 µg/SqFt	NA
COMMUNITY CENTER	NA	< 10 µg/SqFt	NA	<11.2 µg/SqFt	NA

NA = Not Applicable

The slider windows found at the subject property did not have a trough and therefore no trough samples were collected.

Forty-nine (49) of the individual dust wipe samples were found to contain lead dust above the respective regulatory standards.

MN 1-1

ADDRESS #	ROOM #	COMPONENT	LEAD
1493 KLEINERT	1 – BASEMENT	FLOOR	89 µg/SqFt
1505 KLEINERT	1 – BASEMENT	FLOOR	50 µg/SqFt

MN 1.4

ADDRESS #	ROOM #	COMPONENT	LEAD
123 ARLINGTON	1 – BASEMENT	FLOOR	180 ug/SqFt
135 ARLINGTON	1 – BASEMENT	FLOOR	420 µg/SqFt
149 ARLINGTON	1 – BASEMENT	STAIR	74 µg/SqFt
151 ARLINGTON	1 – BASEMENT	STAIR	150 ug/SqFt
173 ARLINGTON	1 – BASEMENT	FLOOR	92 µg/SqFt
179 ARLINGTON	1 – BASEMENT	FLOOR	84 µg/SqFt
183 ARLINGTON	1 – BASEMENT	FLOOR	69 µg/SqFt
	1 – BASEMENT	STAIR	79 µg/SqFt
197 ARLINGTON	1 – BASEMENT	STAIR	55 µg/SqFt

MN 1-8

ADDRESS #	ROOM #	COMPONENT	LEAD
1451 L'ORIENT	1 – BASEMENT	FLOOR	390 µg/SqFt
1455 L'ORIENT	1 – BASEMENT	FLOOR	420 µg/SqFt
	1 – BASEMENT	STAIR	52 µg/SqFt
1459 L'ORIENT	1 – BASEMENT	FLOOR	200 µg/SqFt
1481 L'ORIENT	1 – BASEMENT	FLOOR	68 µg/SqFt
1487 L'ORIENT	1 – BASEMENT	FLOOR	56 µg/SqFt
1491 L'ORIENT	1 – BASEMENT	FLOOR	78 µg/SqFt
	1 – BASEMENT	STAIR	76 ug/SqFt
1495 L'ORIENT	1 - BASEMENT	STAIR	63 ug/SqFt
	1 – BASEMENT	FLOOR	82 ug/SqFt
1499 L'ORIENT	1 – BASEMENT	STAIR	50 ug/SqFt
	1 - BASEMENT	FLOOR	110 ug/SqFt
1501 L'ORIENT	1 - BASEMENT	FLOOR	41 ug/SqFt
1503 L'ORIENT	1 - BASEMENT	STAIR	41 ug/SqFt
	1 - BASEMENT	FLOOR	49 ug/SqFt
1505 L'ORIENT	1 – BASEMENT	STAIR	170 ug/SqFt
	1 - BASEMENT	FLOOR	400 ug/SqFt
1509 L'ORIENT	1 – BASEMENT	FLOOR	110 µg/SqFt
	1 – BASEMENT	STAIR	98 µg/SqFt
1525 L'ORIENT	1 - BASEMENT	STAIR	48 ug/SqFt
	1 - BASEMENT	FLOOR	62 ug/SqFt
1527 L'ORIENT	1 - BASEMENT	STAIR	40 ug/SqFt
	1 - BASEMENT	FLOOR	240 ug/SqFt
1529 L'ORIENT	1 - BASEMENT	STAIR	84 ug/SqFt
	1 - BASEMENT	FLOOR	43 ug/SqFt
1531 L'ORIENT	1 - BASEMENT	STAIR	56 ug/SqFt
	1 - BASEMENT	FLOOR	410 ug/SqFt
1537 L'ORIENT	1 – BASEMENT	STAIR	48 ug/SqFt
	1 - BASEMENT	FLOOR	1,000 ug/SqFt
1539 L'ORIENT	1 - BASEMENT	FLOOR	75 ug/SqFt

1541 L'ORIENT	1 - BASEMENT	STAIR	51 ug/SqFt
	1 - BASEMENT	FLOOR	53 ug/SqFt
1549 L'ORIENT	1 - BASEMENT	STAIR	67 ug/SqFt
	1 - BASEMENT	FLOOR	860 ug/SqFt
1551 L'ORIENT	1 – BASEMENT	STAIR	61 ug/SqFt
1555 L'ORIENT	1 - BASEMENT	FLOOR	110 ug/SqFt

These areas should be cleaned using lead-safe practices and retested. All basement stairs and basement floors should also be cleaned or additional wipe testing conducted to determine where dust hazards exist.

Were Lead Soil Hazards discovered at this residence? ☒ **Yes** ☐ **No**

A soil-lead hazard is bare soil containing 100 µg/g (micrograms per gram) in composited samples collected from the bare soil areas around the drip-line of the house or in the rest of the yard. Soil sample results are located in Section A-2 of this report. Hazard information and recommendations are located in Section A-3.

One (1) of the soil samples collected for this assessment exceeded the soil-lead hazard standard.

SAMPLE NO.	ADDRESS	LOCATION	BARE/COVERED	RESULT (µg/g)
161-A-DS	161 ARLINGTON	DRIP LINE	BARE	600

None of the soil samples for each individual play area were above the soil-lead hazard of 100 µg/g.

The average lead soil level for each category within the apartment complex was determined to be:

DRIP LINE	BARE SOIL	PLAY AREA
52 µg/g	37 µg/g	21 ug/g

The simplest way to reduce lead exposures is through regular washing of hands, toys, and horizontal surfaces in the home with a liquid hand soap or dish soap and water. It is highly recommended that disposable cleaning materials be used to wash surfaces, so as not to re-contaminate them with a used mop or cloth. A guide to reducing lead hazards in the home is included in Section C of this report. Other ways of reducing lead hazards within the home include taking shoes off before entering living areas, letting water run prior to drinking or cooking, covering exposed soil with plant materials, and vacuuming with a High Efficiency Particulate Air (HEPA) filtered vacuum.

For more information regarding lead poisoning and prevention, contact your local health department or the National Lead Information Center (800-424-LEAD (5323)). Contact the Minnesota Department of Health Lead Program at (651) 201-4620 for information regarding lead hazard remediation or selection of qualified lead professionals. Additional Information is also available on the internet at
www.health.state.mn.us/topics/lead/index.html

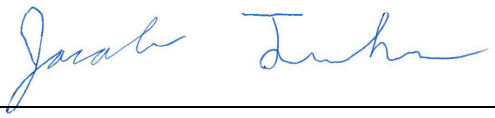
The purpose of this lead-based paint investigation was to identify painted and varnished surfaces for the presence of lead exceeding the regulatory level and to evaluate the property for the location, type and severity of existing or potential health hazards associated with lead-based paint in tenant and public accessible areas, and then develop recommendations for remediation of those hazards. The following report details the results of the assessment.

The findings of this report must be provided to each new lessee (tenant) or purchaser of this property under Federal law (24 CFR part 35 and 40 CFR part 745) before they become obligated under a lease or sales contract. The complete report must also be provided to purchasers and made available to tenants. Landlords (lessors) and sellers are also required to distribute an educational pamphlet approved by the U.S. Environmental Protection Agency (EPA), entitled *Protect Your Family from Lead in Your Home*, and include standard warning language in their leases or sales contracts to ensure that parents have the information they need to protect their children from lead-based paint hazards.

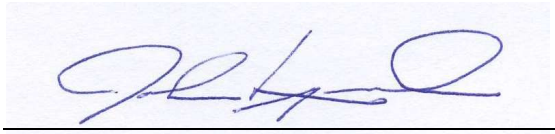
For more information regarding your obligations under federal lead-based paint regulations, contact the Minnesota Department of Health Lead Program at 651-201-4620.

We share your concern for the safety and well-being of your family or tenants and you are invited to call us at 651-646-8148 with any questions you may have concerning this report or your needs for additional guidance.

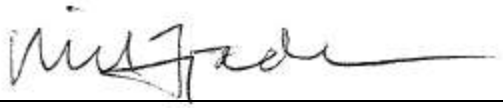
Sincerely,
Professional Service Industries, Inc.



Jacob Frahm, MDH Risk Assessor No. LR3835



John Lynch, MDH Risk Assessor No. LR4182



Michael Tjaden
Principal Consultant