



CITY OF SAINT PAUL
Christopher B. Coleman, Mayor

Code Compliance Report

December 04, 2014

*** * This Report must be Posted
on the Job Site * ***

Housing & Redev Authority
25 Fourth St W #1100
St Paul MN 55102-1634

Re: 898 Wilson Ave
File#: 10 311103 VB2

Dear Property Owner:

The following is the Code Compliance report you requested on November 04, 2014.

Please be advised that this report is accurate and correct as of the date December 04, 2014. All deficiencies identified by the City after this date must also be corrected and all codes and ordinances must be complied with. This report is valid for 365 days from December 04, 2014. This report may be used in lieu of a Truth in Housing Report required in St Paul Legislative Code 189. This building must be properly secured and the property maintained at all times.

In order to sell or reoccupy this property the following deficiencies must be corrected:

ZONING

1. This property is in a(n) RT1 zoning district.
2. This property was inspected as a Single Family Dwelling.

BUILDING Inspector: Jim Seeger

Phone: 651-266-9046

1. Insure basement cellar floor is even, is cleanable, and all holes are filled. SPLC 34.10 (1)
2. Install floor covering in bathroom and kitchen that is impervious to water. SPLC 34.10 (4)
3. Repair walls, ceiling and floors throughout, as necessary. SPLC 34.34 (6)
4. Prepare and paint interior and exterior as necessary. Observe necessary abatement procedures (EPA, MPCA and St. Paul Legislative Code, Chapter 34 for additional information) if lead base paint is present. SPLC 34.33 (1)

5. Air-seal and insulate attic/access door. MN Energy Code Ch 1322.1102.4
6. Install Smoke Detectors/Carbon Monoxide Detectors per MN Conservation Code and the MN Dept. of Labor and Industry: Install per code where feasible. MNRC Ch 1309 Sect 313.2.1
7. Provide major clean-up of premises. SPLC 34.34 (4)
8. Repair siding, soffit, fascia, trim, etc. as necessary. SPLC 34.09 (1)
9. Provide proper drainage around house to direct water away from foundation of house. SPLC 34.08 (2)
10. Provide proper drainage around house to direct water away from foundation of garage. SPLC 34.08 (2)
11. Install downspouts and a complete gutter system. SPLC 34.33 (1d)
12. Permanently secure top and bottom of support posts in an approved manner. MNRC Ch 1309 Sect. 407.3
13. Install rain leaders to direct drainage away from foundation. SPLC 34.33 (1d)
14. Provide durable, dustless parking surface as specified in the zoning code. SPLC 34.08 (7)
15. Remove trees which are against foundation of home and garage. SPLC 34.09 (1b)
16. Grade must drain away from foundation of dwelling. Maintain 6 inch clearance between wood and soil. MNRC Ch 1309-Sect. 404.1.6
17. Repair 2nd. floor bath walls.
18. Remove soil stack from middle of basement stairs.
19. Install guardrail and handrail on basement stairs.
20. Install handrail to code on rear landing steps.
21. Rear basement entry insure water stays out and drains properly.
22. Install handrails (34 inches - 38 inches above each nosing) and guardrails (36 inch minimum) at all stairways, and return hand rail ends into a newel post or wall per attachment. MNRC Ch 1309 Sect. 311 & 312
23. Repair or Replace any deteriorated window sash, broken glass, sash holders, re-putty, etc as necessary. SPLC 34.09 (3)
24. Provide complete storms and screens, in good repair for all door and window openings. SPLC 34.09 (3e)
25. Provide functional hardware at all doors and windows. SPLC 34.09 (3f)
26. Exit doors shall be capable of being opened from the inside, easily and without the use of a key. Remove all surface bolts. SPLC 34.09 (3h)
27. Repair or replace damaged doors and frames as necessary, including storm doors. SPLC 34.09 (3f)
28. Weather seal exterior doors, threshold and weather-stripping. SPLC 34.09 (3f)
29. A building permit is required to correct the above deficiencies. All work is to be done in a workmanship like manner. SPLC 33.03 (a)

ELECTRICAL Inspector: Joe Sobanski

Phone: 651-266-9034

1. No power at time of inspection. Test all electrical outlets and ensure all

- luminaires (light fixtures) are working properly when power is restored.
2. Install hard-wired, battery backup, Carbon Monoxide smoke detector as specified in Chapter 58 of the Saint Paul Legislative Code, and other smoke detectors and carbon monoxide detectors as required by the Minnesota State Building Code. SPLC 58, IRC
 3. Remove and/or rewire all illegal, improper or hazardous wiring to current NEC.
 4. Repair the electrical service grounding conductor to the metallic water piping system. Install a conductor sized to Table 250.66 (NEC) from the electrical service to within 5' of the entrance point of the water service, and bond around the water meter. Article 250, NEC
 5. Provide a complete circuit directory at service panel indicating location and use of all circuits. Article 408.4, NEC
 6. Install "S" type fuse adapters and proper size "S" type fuses due to overfusing. Article 240.51 (B), NEC
 7. Verify that fuse/circuit breaker amperage matches wire size in panel. Replace improperly sized overcurrent devices. Article 240.4, NEC
 8. Close openings in service panel/junction boxes with knockout seals, breaker blanks, proper cable clamps, and/or junction box covers. Article 110.12 (A), NEC
 9. Properly strap and support cables and/or conduits. Chapter 3, NEC
 10. Remove all cord wiring used as a substitute for fixed wiring. Article 400.8, NEC
 11. Repair or replace all broken, painted over, corroded, missing or loose receptacles, luminaires (light fixtures), switches, covers and plates to current code. Article 406.4(D) & Article 410, NEC
 12. All added receptacles must be grounded, tamper-resistant and be on an Arc-Fault Circuit Interrupter-protected circuit.
 13. Any open walls or walls that are opened as part of this project must be wired to the standards of the current NEC.
 14. All electrical work must be done by a Minnesota-licensed electrical contractor under an electrical permit.

PLUMBING Inspector: Steve Fernlund

Phone: 651-266-9052

1. Basement -Gas Piping -(MFGC 411) Install an approved shut off; connector and gas piping for the dryer.
2. Basement -Gas Piping -(MFGC 614.1-614.7) Vent clothes dryer to code.
3. Basement -Laundry Tub -(MPC 0200 P) Repair/replace the faucet that is missing, broken or has parts missing.
4. Basement -Soil and Waste Piping -(MPC 1000) Install a clean out at the base of all stacks.
5. Basement -Water Heater -(MPC 2210 Subp.4) Correct the pressure and temperature relief valve discharge.
6. Basement -Water Heater -(MFGC 402.1) Install the gas shut off and the gas piping to code.
7. Basement -Water Heater -(MFGC 503) Install the water heater gas venting to code.

8. Basement -Water Heater -(MFGC 501.12) The water heater venting requires a chimney liner.
9. Basement -Water Heater -(MPC 1730 Subp.1) Install the water piping for the water heater to code.
10. Basement -Water Heater -(MPC 2180) The water heater must be fired and in service.
11. Basement -Water Meter -(MPC MPC1700-SPRWS, Sec.88.10) The water meter must be installed and in service.
12. Basement -Water Meter -(MPC 0.200 O) Repair the corroded or incorrect water meter piping.
13. Basement -Water Piping -(MPC 2100) Install a proper backflow assembly or device for the boiler fill water line.
14. Basement -Water Piping -(SPRWS Water Code) Provide a one (1) inch water line to the first major take off.
15. Basement -Water Piping -(MPC 1720) Repair or replace all the corroded, broken, or leaking water piping.
16. Exterior -Lawn Hydrants -(MPC 2000) The lawn hydrant(s) require a backflow assembly or device.
17. First Floor -Gas Piping -(MFGC 411) Install an approved shut off; connector and gas piping for the range.
18. Second Floor -Tub and Shower -(MPC 1380 Subp.5) Install an anti-scald control device, ASSE Standard 1016.
19. Second Floor -Tub and Shower -(MPC 1240) Replace the waste and overflow.
20. All the above corrections to waste, vent, water, and gas piping shall be per the Minnesota Plumbing Code Chapter 4715 & Chapter 326, the Minnesota Mechanical Code, the Minnesota Fuel Gas Code, and the Saint Paul Regional Water Code. All plumbing must be done by a plumbing contractor licensed in the State of Minnesota and the City of St. Paul under an approved permit.

Heating Inspector: Maureen Hanson

Phone: 651-266-9043

1. Clean and Orsat test boiler burner. Check all controls for proper operation. Check furnace heat exchanger for leak; provide documentation from a licensed contractor that the heating unit is safe
2. Install approved metal chimney liner
3. Replace boiler flue venting to code
4. Connect boiler and water heater venting into chimney liner
5. Vent clothes dryer to code and provide approved gas piping and valve.
6. Provide support for gas lines to code
7. Plug, cap and/or remove all disconnected gas lines and unapproved valves
8. The bathroom requires a means to ventilate the space. Provide a window with an aggregate glazing area of not less than 3 square feet, one half of which must be operable. Alternative is a bath fan properly vented to the outside. A mechanical ventilation permit will be required for the bath fan.
9. Provide heat in every habitable room and bathrooms

10. Support supply and return piping from heating system according to code
11. Conduct witnessed pressure test on hot water heating system and check for leaks
12. Install back flow preventer on city water fill line to hot water heating system and pipe vent as required.
13. Repair or replace radiator valves as needed
14. Mechanical gas and hydronic permits are required for the above work.

Notes:

1. Roof, sidewalks, etc. snow covered and could not be inspected. All must meet appropriate codes when completed.
2. Interior of garage not available for inspection. Repair per applicable codes.

This is a registered vacant building. In order to sell or reoccupy this building, all deficiencies listed on this code compliance report must be corrected in accordance with the Minimum Housing Standards of the St. Paul Legislative Code (Chapter 34) and all required permits must receive final approval within six (6) months of the date of this report. One (1) six-month time extension may be requested by the owner and will be considered if it can be shown that the code compliance work is proceeding and is more than fifty (50) percent complete in accordance with Legislative Code Section 33.03(f).

You may file an appeal to this notice by contacting the City Clerk's Office at 651-266-8688. Any appeal must be made in writing within 10 days of this notice. (You must submit a copy of this notice when you appeal, and pay a filing fee.)

If you have any questions regarding this inspection report, please contact Jim Seeger between 7:30 - 9:00 AM at 651-266-9046 or leave a voice mail message.

Sincerely,

James L. Seeger
Code Compliance Officer
Department of Safety and Inspections
City of Saint Paul
375 Jackson Street, Suite 220
Saint Paul MN 55101
Phone: 651-266-9046
Email: jim.seeger@ci.stpaul.mn.us

Attachments



Angstrom Analytical &
Environmental Services

5001 Cedar Lake Road * St. Louis Park, MN 55416
952-252-0405 952-252-0407 fax

October 1, 2013

Asbestos Abatement Associates
3125 Logan Ave N
Minneapolis, MN 55411
612-588-7755

Owner:
City of St. Paul
15 Kellogg Blvd.
St. Paul, MN 55102
651-266-8989

Lead-Based Paint Inspection
898 Wilson Ave. St. Paul, MN

This report provides the results of lead-based paint testing conducted on September 23, 2013 at 898 Wilson Ave. The property is a single-family residential property located in St. Paul, MN. The inspection was conducted by Kevin Hagen (MN Lic. No. LR 2036). Angstrom Analytical, Inc. was authorized by you to conduct an inspection for lead-based paint using a field portable x-ray fluorescence (XRF) analyzer. The purpose of this assessment was to determine if lead based paint exists at the above referenced property.

The property consists of a two story single family home with a full basement. The basement is finished. There was a garage on the property. According to Zillow.com the property was built in 1880. For sample location purposes, side A of the building is the side facing Wilson Ave and is lettered clockwise around the building. The exteriors consist of a wood siding with wood fascia, and metal gutters, all with factory applied finishes. Building foundation is concrete. Bare soil was observed around the property. No soil samples were collected. At a minimum, the Minnesota Dept. of Health recommends bare soils be made intact by covering them over with either sod, landscaping stone or mulch.

Results

Results of XRF analysis are summarized in the following report (see Appendix A), which utilize Department of Housing and Urban Development (HUD) thresholds (see remarks) for lead-based paint. Painted surfaces are rated on condition as Intact, Fair or Poor. Intact surfaces are free of visual damage/deterioration. Fair or poor rating indicates the paint is damaged and is deteriorated. Any condition listed as fair or poor is a deteriorated condition. The inspection was

conducted using HUD "Guidelines for the Evaluation and Control of Lead Based Paint in Housing" using the October 1997 revised Chapter 7 protocols. The sampling criteria used are found in the HUD Standards 24 CFR Part 35 et al.

Methodology

Testing was accomplished using a Niton XL 300 series. This instrument is a portable, non-destructive, in-site testing and measurement instrument that renders an average precision of +/- 0.3 milligrams per square centimeter (mg/cm^2) depending upon the length of time the sample point is tested. The XRF uses a source of Cd-109. Specific precision limits are established by the National Institute of Standards and Technology (NIST). The XRF instrument was checked using the NIST Standard Reference for calibration checks. The instrument's operational mode is standard paint mode. This instrument is operated by Minnesota Department of Health licensed lead inspectors. Where conclusive results were not obtained by XRF testing, confirmatory paint chip samples were or can be collected for laboratory analysis. The XRF instrument was calibrated, using a known lead paint film, at the beginning, every four hours and at the end of each day.

Remarks

The Lead-Based Paint Poisoning Prevention Act (LBPPA) has established an action level for public housing. Under the statute, lead-based paint hazards equal to or greater than $1.0 \text{ mg}/\text{cm}^2$ or 0.5 percent by weight must be abated. It is important to keep in mind that the testing results of a component also apply to any similar component not tested. For example, if a white, painted baseboard tests positive then the entire white painted baseboard in that room is also considered positive.

All sampling was conducted by representatives of Angstrom Analytical, Inc. Standards for private or commercial housing may vary by locality.

Results

The results of the portable x-ray fluorescence (XRF) analysis of the representative building components are listed in appendix A. All paint testing was conducted using the XRF unit. The XRF was calibrated and the beginning of each days inspection, during the inspection and at the end of each days inspection. Calibration was conducted on known lead paint films provided by the manufacturer. The results of the calibrations are within acceptable limits of the Performance Characteristic Sheet for the instrument. XRF results are expressed in units of milligrams per square centimeter (mg/cm^2) (see Remarks for action levels). XRF results are classified as positive or negative. A component that tests positive indicates leads is present at or above the standard (see Remarks).

Discussion

Painted building components were assessed visually for condition. Paint is rated on its condition as intact, fair and poor. Intact means good condition, Fair means less than two square feet of

damage to a large interior surface or less than 10 square feet to a large exterior surface or less than 10% damage to a small surface area. Poor condition means greater than 2 square feet of damage on large interior surface, more than 10 square feet on a large exterior surface or more than 10% damage to a small surface area. Painted surfaces listed as in fair or poor condition are considered deteriorated. Based on our inspection findings, lead based paint was identified on the following:

Lead Based Painted Components

2nd floor

1. The white painted wood baseboards in bedroom #3
2. The white painted wood baseboards in bedroom #2
3. The purple painted wood baseboards in bedroom #2
4. The yellow painted wood closet doors trim in bedroom #2
5. The purple painted wood window components in bedroom #2
6. The purple painted wood windows trim in bedroom #2
7. The white painted wood windows trim in the stairwell.

1st floor

8. The white painted door in the living room.
9. The white painted wood doors trim in the living room.
10. The green painted wood doors trim in bedroom #1
11. The white painted wood doors jamb in bedroom#1

Basement

12. The white painted wood stir treads.
13. The green painted wood window frames throughout.
14. The pink painted wood door frame in the laundry room.
15. The pink painted wood door in the laundry room.
16. The pink painted wood doors trim in the laundry room.

Exterior

17. The brown painted wood door jamb in the front door.
18. The green painted wood siding throughout.
19. The green painted wood soffits throughout.
20. The green painted wood basement cellar windows.
21. The green painted wood basement cellar windows trim.
22. The green painted soffit on the porch.
23. The brown painted wood trim on the porch.
24. The green painted wood screen door at the basement entrance.
25. The green painted wood doors trim at the basement entrance.
26. The green painted wood door at the basement entrance

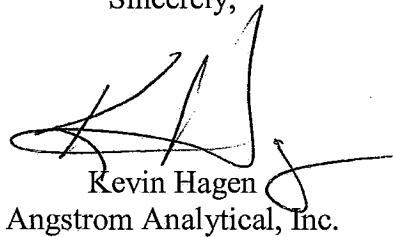
Please refer to the Lead Based Paint Testing Report (Appendix A) for specific locations and conditions. At a minimum, surfaces in fair to poor condition need to be stabilized. Intact lead based paint surfaces are not considered a hazard. However they do need to be maintained in an intact condition and periodically monitored. Specific surfaces not identified in this report should be treated as lead based unless testing proves otherwise.

Recommendations

Angstrom Analytical recommends that lead related work be performed by trained individuals and follow all applicable regulations regarding lead and lead hazards. If you are using federal funding you are required to use qualified firms, knowledgeable in hazards associated with lead and are certified / licensed to perform lead remediation services. A copy of this report must be provided to purchasers/lessees on this property under Federal law, 24 CFR part 35 and 40 CFR part 745.

If you have any questions or need further assistance, please call us at the number above.

Sincerely,

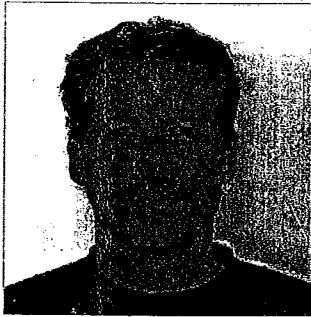
A handwritten signature in black ink, appearing to read 'KH', with a long horizontal flourish extending to the right.

Kevin Hagen
Angstrom Analytical, Inc.

34	9/23/2013	13:12	CABINET	WOOD	B	INTACT	TAN	898 SECOND	BATHROOM	Negative	< LOD	0.03
35	9/23/2013	13:12	RADIATOR	METAL	B	INTACT	GREEN	898 SECOND	BATHROOM	Negative	< LOD	0.14
36	9/23/2013	13:13	WINDOW	WOOD	B	INTACT	TAN	898 SECOND	BATHROOM	Negative	< LOD	0.24
37	9/23/2013	13:13	WINDOW	WOOD	D	INTACT	TAN	898 SECOND	STAIR	Negative	< LOD	0.03
38	9/23/2013	13:14	WINDOW trim	WOOD	D	INTACT	WHITE	898 SECOND	STAIR	Positive	< LOD	3
39	9/23/2013	13:14	WALL	PLASTER	D	INTACT	WHITE	898 SECOND	STAIR	Negative	< LOD	0.03
40	9/23/2013	13:15	stringer	PLASTER	D	INTACT	WHITE	898 SECOND	STAIR	Positive	7.4	4.2
41	9/23/2013	13:15	TREAD	WOOD	D	INTACT	TAN	898 SECOND	STAIR	Negative	< LOD	0.17
42	9/23/2013	13:15	RISER	WOOD	D	INTACT	TAN	898 SECOND	STAIR	Negative	< LOD	0.07
43	9/23/2013	13:16	WALL	WOOD	A	INTACT	BROWN	898 FIRST	LIVING ROOM	Negative	< LOD	0.04
44	9/23/2013	13:16	WALL	WOOD	A	INTACT	WHITE	898 FIRST	LIVING ROOM	Negative	< LOD	0.03
45	9/23/2013	13:16	DOOR	WOOD	A	INTACT	WHITE	898 FIRST	LIVING ROOM	Positive	6	3.7
46	9/23/2013	13:17	DOOR trim	WOOD	A	INTACT	WHITE	898 FIRST	LIVING ROOM	Positive	< LOD	4.5
47	9/23/2013	13:17	WINDOW	WOOD	A	INTACT	TAN	898 FIRST	LIVING ROOM	Negative	< LOD	0.06
48	9/23/2013	13:17	BASEBOARD	WOOD	A	INTACT	TAN	898 FIRST	LIVING ROOM	Negative	< LOD	0.05
49	9/23/2013	13:18	RADIATOR	METAL	A	INTACT	TAN	898 FIRST	LIVING ROOM	Negative	< LOD	0.29
50	9/23/2013	13:18	CEILING	WOOD tile	A	INTACT	WHITE	898 FIRST	LIVING ROOM	Negative	< LOD	0.08
51	9/23/2013	13:19	pipes	METAL	A	INTACT	TAN	898 FIRST	LIVING ROOM	Negative	< LOD	0.39
52	9/23/2013	13:19	WALL	WOOD	B	INTACT	BROWN	898 FIRST	dining	Negative	< LOD	0.06
53	9/23/2013	13:20	WALL	PLASTER	C	INTACT	WHITE	898 FIRST	dining	Negative	< LOD	0.14
54	9/23/2013	13:20	CEILING	WOOD tile	C	INTACT	WHITE	898 FIRST	dining	Negative	< LOD	0.03
55	9/23/2013	13:20	CABINET	WOOD	C	INTACT	TAN	898 FIRST	dining	Negative	< LOD	0.03
56	9/23/2013	13:21	WINDOW	WOOD	B	INTACT	TAN	898 FIRST	dining	Negative	< LOD	0.3
57	9/23/2013	13:21	RADIATOR	METAL	B	INTACT	BROWN	898 FIRST	dining	Negative	< LOD	0.14
58	9/23/2013	13:22	clos. door	WOOD	A	INTACT	TAN	898 FIRST	dining	Negative	0.7	0.3
59	9/23/2013	13:22	DOOR	WOOD	D	INTACT	TAN	898 FIRST	dining	Negative	< LOD	0.05
60	9/23/2013	13:22	DOOR trim	WOOD	D	INTACT	TAN	898 FIRST	dining	Negative	< LOD	0.08
61	9/23/2013	13:22	BASEBOARD	WOOD	D	INTACT	TAN	898 FIRST	dining	Negative	< LOD	0.13
62	9/23/2013	13:23	BASEBOARD	WOOD	D	INTACT	TAN	898 FIRST	BEDROOM 1	Negative	< LOD	0.14
63	9/23/2013	13:23	RADIATOR	METAL	D	INTACT	WHITE	898 FIRST	BEDROOM 1	Negative	< LOD	0.03
64	9/23/2013	13:23	WINDOW	WOOD	D	INTACT	WHITE	898 FIRST	BEDROOM 1	Negative	< LOD	0.16
65	9/23/2013	13:24	WINDOW trim	WOOD	D	INTACT	WHITE	898 FIRST	BEDROOM 1	Negative	< LOD	0.62
66	9/23/2013	13:25	WALL	PLASTER	D	INTACT	WHITE	898 FIRST	BEDROOM 1	Negative	< LOD	0.62
67	9/23/2013	13:25	WALL	PLASTER	D	INTACT	GREEN	898 FIRST	BEDROOM 1	Negative	< LOD	0.05

68	9/23/2013	13:25	BASEBOARD	WOOD	D	INTACT	WHITE	898 FIRST	BEDROOM 1	Negative	0.23	0.15
69	9/23/2013	13:26	DOOR trim	WOOD	A	INTACT	GREEN	898 FIRST	BEDROOM 1	Positive	6.6	3.9
70	9/23/2013	13:26	DOOR jamb	WOOD	A	INTACT	WHITE	898 FIRST	BEDROOM 1	Positive	< LOD	10.2
71	9/23/2013	13:27	DOOR frame	WOOD	A	INTACT	TAN	898 FIRST	KITCHEN	Negative	< LOD	0.03
72	9/23/2013	13:28	RADIATOR	METAL	A	INTACT	WHITE	898 FIRST	KITCHEN	Negative	< LOD	0.6
73	9/23/2013	13:28	CEILING	DRYWALL	A	INTACT	WHITE	898 FIRST	KITCHEN	Negative	< LOD	0.03
74	9/23/2013	13:28	WALL	PLASTER	B	INTACT	WHITE	898 FIRST	KITCHEN	Negative	< LOD	0.4
75	9/23/2013	13:29	WINDOW	WOOD	B	INTACT	TAN	898 FIRST	KITCHEN	Negative	< LOD	0.11
76	9/23/2013	13:29	CABINET	METAL	C	INTACT	WHITE	898 FIRST	KITCHEN	Negative	< LOD	0.03
77	9/23/2013	13:30	WINDOW	WOOD	D	INTACT	BLUE	898 BASEMENT	STAIR	Negative	< LOD	0.75
78	9/23/2013	13:31	WINDOW trim	WOOD	D	INTACT	BLUE	898 BASEMENT	STAIR	Negative	0.4	0.2
79	9/23/2013	13:31	WALL	WOOD	A	INTACT	BLUE	898 BASEMENT	STAIR	Negative	< LOD	0.03
80	9/23/2013	13:31	CEILING	WOOD	A	INTACT	BLUE	898 BASEMENT	STAIR	Negative	< LOD	0.03
81	9/23/2013	13:32	TREAD	WOOD	A	INTACT	RED	898 BASEMENT	STAIR	Negative	< LOD	0.19
82	9/23/2013	13:32	TREAD	WOOD	A	INTACT	WHITE	898 BASEMENT	STAIR	Positive	2.7	1.5
83	9/23/2013	13:32	joist	WOOD	A	INTACT	WHITE	898 BASEMENT	STAIR	Negative	< LOD	0.11
84	9/23/2013	13:33	WINDOW	WOOD	D	INTACT	pink	898 BASEMENT		Negative	< LOD	0.03
85	9/23/2013	13:34	WINDOW frame	WOOD	D	INTACT	GREEN	898 BASEMENT		Positive	2	0.8
86	9/23/2013	13:34	CABINET	WOOD	D	INTACT	WHITE	898 BASEMENT		Negative	< LOD	0.96
87	9/23/2013	13:35	DOOR frame	WOOD	A	INTACT	pink	898 BASEMENT		Positive	< LOD	11.1
88	9/23/2013	13:36	DOOR	WOOD	A	INTACT	pink	898 BASEMENT	laundry	Positive	< LOD	19.5
89	9/23/2013	13:36	DOOR trim	WOOD	A	INTACT	pink	898 BASEMENT	laundry	Positive	< LOD	20.85
90	9/23/2013	13:37	WALL	CONCRETE	C	INTACT	WHITE	898 BASEMENT	laundry	Positive	2.3	1.3
91	9/23/2013	13:38	DOOR	WOOD	A	INTACT	TAN	898	OUTSIDE	Negative	< LOD	0.03
92	9/23/2013	13:38	DOOR jamb	WOOD	A	INTACT	BROWN	898	OUTSIDE	Positive	5.8	3.5
93	9/23/2013	13:39	DOOR trim	WOOD	A	INTACT	BROWN	898	OUTSIDE	Negative	< LOD	0.03
94	9/23/2013	13:39	siding	WOOD	A	INTACT	GREEN	898	OUTSIDE	Positive	3.5	2.1
95	9/23/2013	13:40	soffit	WOOD	A	INTACT	GREEN	898	OUTSIDE	Positive	3	1.4
96	9/23/2013	13:40	TRIM	WOOD	A	INTACT	BROWN	898	OUTSIDE	Negative	< LOD	0.05
97	9/23/2013	13:40	shutter	WOOD	A	INTACT	BROWN	898	OUTSIDE	Negative	< LOD	0.09
98	9/23/2013	13:41	screen	WOOD	A	INTACT	BROWN	898	OUTSIDE	Negative	< LOD	0.28
99	9/23/2013	13:41	WINDOW trim	WOOD	A	INTACT	BROWN	898	OUTSIDE	Negative	< LOD	0.14
100	9/23/2013	13:42	bsmt. window	WOOD	D	PEELING	GREEN	898	OUTSIDE	Positive	< LOD	6.6
101	9/23/2013	13:43	bsmt. window tri	WOOD	D	PEELING	GREEN	898	OUTSIDE	Positive	< LOD	12.3

102	9/23/2013 13:43	siding	WOOD	C	INTACT	GREEN	898	PORCH	Negative	< LOD	0.09
103	9/23/2013 13:44	DOOR	METAL	C	INTACT	YELLOW	898	PORCH	Negative	< LOD	0.03
104	9/23/2013 13:44	DOOR trim	WOOD	C	INTACT	BROWN	898	PORCH	Negative	< LOD	0.03
105	9/23/2013 13:45	soffit	WOOD	C	PEELING	GREEN	898	PORCH	Positive	< LOD	6.6
106	9/23/2013 13:45	TRIM	WOOD	C	PEELING	BROWN	898	PORCH	Positive	2	0.8
107	9/23/2013 13:46	CEILING	WOOD	C	PEELING	WHITE	898	PORCH	Negative	< LOD	0.03
108	9/23/2013 13:46	WINDOW	WOOD	A	INTACT	WHITE	898	PORCH	Negative	< LOD	0.03
109	9/23/2013 13:46	decking	WOOD	C	INTACT	RED	898	PORCH	Negative	< LOD	0.03
110	9/23/2013 13:47	decking post	WOOD	C	PEELING	RED	898	PORCH	Negative	< LOD	0.03
111	9/23/2013 13:48	siding	WOOD	D	INTACT	GREEN	898	bsmt ent	Positive	< LOD	10.65
112	9/23/2013 13:49	screen door	WOOD	D	INTACT	GREEN	898	bsmt ent	Positive	6.3	4
113	9/23/2013 13:49	TRIM	WOOD	D	INTACT	GREEN	898	bsmt ent	Positive	< LOD	11.7
114	9/23/2013 13:49	DOOR	WOOD	D	INTACT	GREEN	898	bsmt ent	Positive	< LOD	11.7
115	9/23/2013 13:50	DOOR	METAL	A	INTACT	BEIGE	898	GARAGE	Null	< LOD	0.03
116	9/23/2013 13:50	DOOR	METAL	A	INTACT	BEIGE	898	GARAGE	Negative	< LOD	0.03
117	9/23/2013 13:50	DOOR trim	WOOD	A	INTACT	BEIGE	898	GARAGE	Negative	< LOD	0.03
118	9/23/2013 13:51	siding	WOOD	A	INTACT	GREEN	898	GARAGE	Negative	< LOD	0.03
119	9/23/2013 13:51	soffit	WOOD	A	INTACT	GREEN	898	GARAGE	Negative	< LOD	0.03
120	9/23/2013 13:52	lg. door	WOOD	A	INTACT	purple	898	GARAGE	Negative	< LOD	0.03
121	9/23/2013 13:52	lg. door trim	WOOD	A	INTACT	BROWN	898	GARAGE	Negative	< LOD	0.06
122	9/23/2013 13:53	cal-out					898		Positive	1.2	0.2
123	9/23/2013 13:54	cal-out					898		Positive	1.3	0.2
124	9/23/2013 13:54	cal-out					898		Positive	1.3	0.3



Frank S. Bremner
Director, Env. Health Div.



**LEAD
Risk Assessor**

Licensed by:
State of Minnesota
Department of Health

License No. LR2036
Expires 09/20/2013

Kevin P Hagen
7038 Upper 36th St N
Oakdale, MN 55128

Minnesota Department of Health

has authorized

Angstrom Analytical, Inc.
5001 Cedar Lake Rd S
St Louis Park, Minnesota 55416

in accordance with Minnesota Statutes, section 144.9505 and Minnesota Rules, part 4761.2200,
to practice in the State of Minnesota as a

Certified Lead Firm

License No: LF127
Expires 12/08/2013

This certificate is nontransferable.


Linda B. Bruemmer, Director
Division of Environmental Health

Certificate No: 5LM09191313PbRAR

Issue Date: September 19, 2013

This diploma is awarded to

Kevin P. Hagen

7038 Upper 36th St N Oakdale MN 55128

for successfully completing and passing the examination for the

**LEAD (Pb) RISK ASSESSOR
REFRESHER TRAINING COURSE**

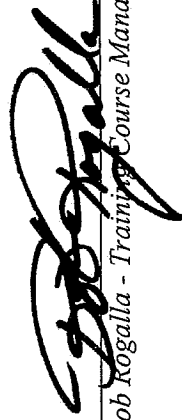
*This training course is Approved by the State of Minnesota
under Minnesota Rules, parts 4761.2000 to 4761.2700
and meets the requirements of 40 CFR 745.225,
and Title X of the Toxic Substances Control Act (TSCA)
conducted by*

Lake States Environmental, Ltd.

in

**White Bear Lake, MN on September 19, 2013
Examination Date: September 19, 2013**

Lake States Environmental, Ltd
P. O. Box 645, Rice Lake, WI 54868
(800) 254-9811



Bob Kogalla - Training Course Manager



Asbestos Abatement Associates

3125 Logan Ave. N., Minneapolis, MN 55411
www.asbestosabatementonline.com

**Asbestos/Hazardous Materials Survey
Residential Property
898 Wilson Ave.
St. Paul, MN 55106**

**Prepared by:
Asbestos Abatement Associates
3125 Logan Ave. N.
Mpls., MN 55411**

**Prepared for:
City of St. Paul
Cindy Carlson
25 West 4th St. #1100
St. Paul, MN 55102**

**Jacob Martin #9050
September 12, 2013**


(Signature)

9-12-13
(Date)

*North Metro: 612-588-7755
St. Paul: 651-633-4060*

*South Metro: 612-823-2955
Fax: 612-588-6780*

Email: abatenow@popp.net

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Asbestos Abatement Associates
3125 Logan Ave. N., Minneapolis, MN 55411

Project Description
898 Wilson Ave., St. Paul, MN

Asbestos Abatement Associates was retained by Cindy Carlson of the City of St. Paul to conduct an Asbestos/Hazardous Materials Survey for a residential home located at 898 Wilson Ave., St. Paul, MN. We were asked to prepare this report (the Survey) and report the findings of the Survey.

The reason for the visit is to identify friable and non-friable asbestos containing materials which may become friable during renovation or demolition.

The home is approximately 133 years old. It has 3 levels and is approximately 1,483 sq. ft. The structure is made of concrete footing and concrete block foundation with cement flooring throughout the basement. It is wood framed and sided. The walls and ceilings are plaster. The attic and walls have Rockwool for insulation. There are hardwood floors throughout. The garage is 26x24 and it is wood framed and sided and sits on a cement slab. Both structures have asphalt roofing.

This Survey represented by Jacob Martin on September 12, 2013. The Survey Area consisted of accessible portions of the Building at the time of the Survey.

Copies of Mr. Martin's Asbestos Inspector certificate and license are included.

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Scope of Services 898 Wilson Ave., St. Paul, MN

- A destructive assessment of accessible portions of the building was conducted Jacob Martin, Asbestos Building Inspector #9050. Suspect Asbestos containing building materials were identified per current Minnesota Department of Health (MDH) Asbestos Abatement Rules and Occupational Safety and Health Administration (OSHA) regulations.
- Samples of suspect ACM identified during the Survey were collected for laboratory analysis in accordance with MDH and OSHA regulations.
- The location, estimated quantity, and condition of suspect ACM were documented.
- The presence and/or quantity of other materials such as hazardous wastes or building materials that would be classified as special wastes for demolition were documented.
- The presence and/or quantity of equipment that could contain polychlorinated biphenyls (PCBs), ozone depleting chemicals (ODCs), and mercury or other regulated metals was documented.

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Sampling Methodology **898 Wilson Ave., St. Paul, MN**

- Asbestos Abatement Associates identified homogenous building materials in accordance with the Environmental Protection Agency (EPA) Asbestos Hazardous Emergency Response Act (AHERA) 40 CFR Part 763, Subpart E as specified in MDH and OSHA rules and regulations. Homogenous areas are defined as areas of surfacing materials, thermal system insulation materials or other miscellaneous materials which upon examination for properties such as age, color, size and texture appear to be composed of the same material.
- The building materials are collected from randomly selected locations throughout the building where the material is found to be present. Samples of these materials are assumed to be representative of that material wherever it is found throughout the building.
- Samples of potential ACMs were collected by Asbestos Abatement Associates and were analyzed using Polarized Light Microscopy (PLM) by Angstrom Analytical, Inc., in Saint Louis Park, Minnesota. Angstrom's National Voluntary Laboratory Accreditation Program code number is 101099. (Copy of Lab Qualification Included) The MDH, OSHA, and EPA define ACM as a material which contains greater than one percent asbestos by qualitative or quantitative analysis

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898 Wilson Ave., St. Paul, MN

techniques. The EPA's National Emission Standard for Hazardous Air Pollutants (NESHAP) requires quantitative analysis, commonly referred to as a "point count", for all qualitative analysis results when asbestos is detected in concentrations less than one to ten percent. However, under common practice, qualitative results greater than three and less than ten percent are often accepted to be ACM.

Testing Results

Asbestos Abatement Associates collected a total of twenty-four (24) samples of suspect (ACM) that were analyzed by Angstrom Analytical.

See Survey/Sample Results in table on the next pages with the sample results in the page following.

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Sample Results **898 Wilson Ave., St. Paul, MN**

Sample #3 is the greens sheet flooring in the bathroom was found to contain 14% Chrysotile Asbestos containing material and must be removed by a State Licensed Asbestos Contractor with estimated cost for removal \$650.00.

Sample #8 is the brown floor tile in bedroom #2, bedroom #3, and the hallway and was found to contain 5% Chrysotile Asbestos containing material and must be removed by a State Licensed Asbestos Contractor with an estimated cost for removal \$1,850.00.

Sample #9 is the black mastic under the floor tile in bedroom #2, bedroom #3, and the hallway and was found to contain 2-3% Chrysotile Asbestos containing material and must be removed by a State Licensed Asbestos Contractor with an estimated cost for removal is included in the above pricing.

Sample #13 is the brown sheet flooring at the front entryway and was found to contain 17% Chrysotile Asbestos containing material and must be removed by a State Licensed Asbestos Contractor with an estimated cost for removal \$150.00.

Sample #17 is the brown floor tile bedroom #1 closet and was found to contain 4% Chrysotile Asbestos containing material and must be removed by a State Licensed Asbestos Contractor with an estimated cost for removal is \$350.00.

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Sample #18 is the black mastic under the floor tile in bedroom #1 closet and was found to contain 2% Chrysotile Asbestos containing material and must be removed by a State Licensed Asbestos Contractor with an estimated cost for removal is included in the above pricing.

Assumed to Contain Items are Listed as Follows:

- Asbestos mud on/in boiler with estimated cost for removal \$1,335.00
- Packing around the Drip-T with estimated cost for removal \$150.00

All other items tested were found to be non-asbestos containing listed as follows:

- Green window glazing basement 7 total
- Grey caulking gas inlet exterior 1 sq. ft.
- Brown sheet flooring bedroom #2 closet 6x5
- White wall plaster skim and base coats bedroom #3
- Mauve window glazing 2nd floor 7 total
- White ceiling texture bedroom #2 12x11
- Cream wall plaster skim and base coats bedroom #3
- White window glazing 1st floor 9 total
- Green wall plaster skim and base coats bedroom #1
- Cream floor tile and brown mastic bedroom #1 13x8
- Brown and black floor tile and black mastic dining room 13x10
- Black w/white flecks floor tile and black mastic kitchen 18x10

Hazardous Waste Items Found On Site

- 4 ballasts
- 3 carbon monoxide detectors
- 6 fluorescent bulbs
- 5 smoke detectors
- 1 thermostat
- 1 water heater

The estimated cost for removal of Hazardous Waste items \$567.00

Angstrom Analytical
5001 Cedar Lake Road
St. Louis Park, Mn 55416

Angstrom Analytical &
Environmental Services



3 DAY TURN AROUND

ASBESTOS (PLM) BULK SAMPLES:
REPORT OF MATERIALS ANALYSIS

Asbestos Abatement Associates

CLIENT City of St. Paul - Cindy	Project Location	Results Via Fax / E-mail	Date Entry 9/18/13	Approved By <i>[Signature]</i>
CLIENT ADDRESS 898 Wilson Ave. St. Paul 55106	Client/Receiving # 16-10	Assigned Lab # 13-09	Project # AA 28875	Analyst <i>[Signature]</i>
			Date Rec'd 9/13/13	Analyzed 9/15/13
			Paid	9/15/13

Sample Number	Material	Physical Description	Location	Asbestos Type	Approximate Percent
1	Window Glazing	Green	Basement 7 total	None	Detected
2	Caulking	Green	Gas Inlet Exterior 1 sp#	None	Detected
3	Sheet Flooring	Greens	Bathroom 9x7	CA	14%
4	Sheet Flooring	Brown	Bedrm #2 closet 6x5	None	Detected
5	Wall Plaster-skin	White	Bedrm #2	None	Detected
6	base	Cementitious	↓	None	Detected
7	Window Glazing	Mauee	2nd Floor 7 total	None	Detected
8	Floor Tile	Brown	Bedrm #2 12x11 Bedrm #3 12x11 Hallway 1x5	CA	5%
9	Plastic #8	Black	↓	CA	2 to 3%
10	Ceiling Texture	White	Bedrm #2 12x11	None	Detected

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ASBESTOS (PLM) BULK SAMPLES:
 REPORT OF MATERIALS ANALYSIS

Asbestos Abatement Associates

CLIENT City of St. Paul Ord. #	Project Location	Results Via Fax/E-Mail	Date Entry 9/13/13	Approved By <i>[Signature]</i>
CLIENT ADDRESS 898 Wilson Ave. St. Paul 55106 Fax #	Client/Receiving # 116-20		Project # AA 28875	Analyst <i>[Signature]</i>
	Assigned/Lab # 13-09		Date Rec'd 9/13/13	Analyzed 9/15/13
			PAID	9/15/13

Sample Number	Material	Physical Description	Location	Asbestos Type	Approximate Percent
11	Wall Plaster-skim	Cream	Bedrm # 3	None	Detected
12	↓ -base	Cementitious	↓	None	Detected
13	Sheet Flooring	Brown	Front Entryway 2gff.	CM	12%
14	Window Glazing	White	1st Floor 9 TOTAL	None	Detected
15	Wall Plaster-skim	Green	Bedrm # 1	None	Detected
16	↓ -base	Cementitious	↓	None	Detected
17	Floor Tile	Brown	Bedrm # 1 Closet 5x2	CM	4%
18	↓ Mastic to #17	Black	↓	CM	2%
19	Floor Tile	Cream	Bedrm # 1 13x8	None	Detected
20	↓ Mastic to #19	Brown	↓	None	Detected

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 St. Louis Park, Mn 55416

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ASBESTOS (PLM) BULK SAMPLES:
 PORT OF MATERIALS ANALYSIS

Asbestos Abatement Associates

CLIENT City of St. Paul - Cindy	Project Location	Results Via Fax / e-mail	Data Entry 9/13/13	Approved By <i>[Signature]</i>
CLIENT ADDRESS 898 Wilson Ave St. Paul 55106	Client/Receiving # 216-24	Assigned/Lab # 13-09	Project # AA 28875	Analyst <i>[Signature]</i>
			Date Rec'd 9/13/13	Analyzed 9/15/13
			Paid	9/15/13

Sample Number	Material	Physical Description	Location	Asbestos Type	Approximate Percent
21	Floor Tile	Brown Black	Dining Room 13x16	None	Detected
22	Mastic to #21	Black	↓	None	Detected
23	Floor Tile	Black w/ white flecks	Kitchen 18x16	None	Detected
24	Mastic to #23	Black	↓	None	Detected



Asbestos Abatement Associates

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www.asbestosabatementonline.com

The structure is ready to be demolished only after the Friable Asbestos containing items are removed by an Asbestos contractor. The non-friable Asbestos can remain in place for demolition but you must make the landfill aware the debris has non-friable class nine materials mixed in. Non Friable Asbestos containing materials are subject to the MPCA rules and notifications.

All hazardous materials need to be managed properly and removed prior to demolition. The following is a sample of hazardous building materials:

- Polychlorinated Biphenyls (PCBS) found in light ballasts, capacitors, HVAC systems, and transformers.
- Mercury found in fluorescent lamps, switches, vapor lamps, thermostats, metal halide lamps, high pressure sodium lamps, neon lamps, manometers, and gauges. Many mercury containing materials were used in appliances, HVAC systems, or industrial switches or controls, thermocouples, temperature sensors, and other electrical equipment.
- Pb based paint that is not adhering to the substrate.
- Refrigerants/CFCs/HCFCs are found in refrigerators, AC systems, drinking fountains, dehumidifiers, vending machines, heat pumps, chillers, freezers, ice machines, food display cases.
- Appliances including stoves, refrigerators, furnaces, air exchangers, water heaters, etc.
- Chemicals, oils, batteries, paint cans, agricultural chemicals, other hazardous building materials.
- Trash, furniture, mattresses, engine parts, construction waste, etc.

Sincerely,
Jacob Martin

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*South Metro: 612-823-2955
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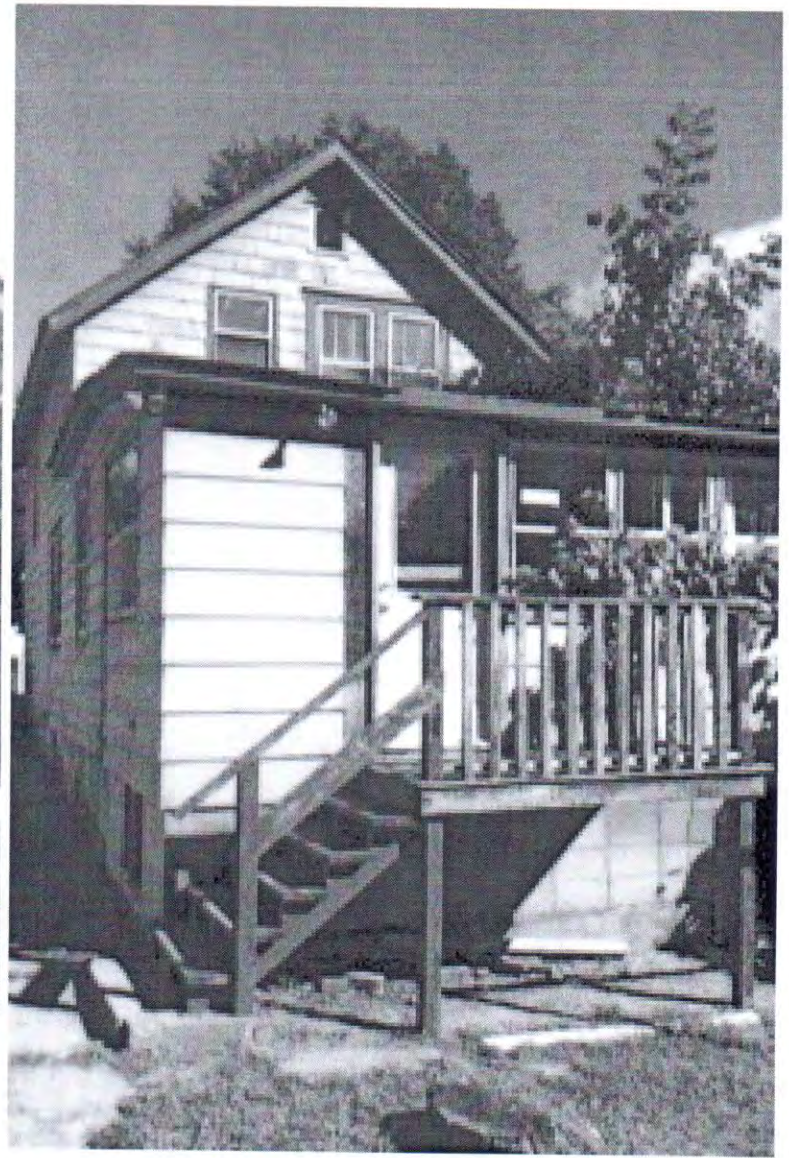
Sampling Area Measurements for Abatement 898 Wilson Ave., St. Paul, MN

Sample #3 greens sheet flooring bathroom	9x7
Sample #8 brown floor tile bedroom #2- 12x11, bedroom #3- 12x11, hallway 11x5	
Sample #9 black mastic bedroom #2- 12x11, bedroom #3- 12x11, hallway 11x5	
Sample #13 brown sheet flooring front entryway	2 sq. ft.
Sample #17 brown floor tile bedroom #1 closet	5x2
Sample #18 black mastic bedroom #1 closet	5x2
Assumed: Boiler mud	40 sq. ft.
Assumed: packing around the Drip-T	1 sq. ft.

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NOT

Text of the "Final Report to Laboratories" (PDF)

**American Industrial Hygiene Association
Bulk Asbestos Analytical Testing Program
Results of Round A69-406
1/15/2007**

Charles Tye
Angstrom Analytical, Inc.
5001 Cedar Lake Road South
St. Louis Park, MN 55416

Laboratory ID Number
101099

Total Penalty Points
Round Status
Program Status
0
P
P

Lot Designation/Sample ID Numbers	A) 4995	B) 2942	C) 3637	D) 2594
Analysis Results from Laboratory Number 101099				
Asbestos (%)	AMOS (10) CHRY (8) NONE (0)	CHRY (35) NONE (0) NONE (0)	NONE (0) NONE (0) NONE (0)	ANTH (80) NONE (0) NONE (0)
Other Fibrous Materials (%)	NONE (0) NONE (0)	NONE (0) NONE (0)	NONE (0) SYNT (40)	NONE (0) NONE (0)
Nonfibrous Material (%)	NONE (0)	NONE (0)	NONE (0)	NONE (0)
Penalty Points Assessed	OTHR (82) 0	OTHR (65) 0	OTHR (40) 0	OTHR (20) 0
Analysis Results from Reference Laboratory One				
Asbestos (%)	AMOS (8) CHRY (6)	CHRY (25) ACTN (TRA)		ANTH (70)
Other Fibrous Materials (%)		FBGL (5)	CELL (15)	
Nonfibrous Material (%)	ACID (86)	ACID (70)	MICA (40) ACID (45)	OTHR (30)
Analysis Results from Reference Laboratory Two				
Asbestos (%)	AMOS (15) CHRY (3)	CHRY (11) AMOS (TRA)		ANTH (85)
Other Fibrous Materials (%)		FBGL (81)	CELL (25)	
Nonfibrous Material (%)	OTHR (82)	OTHR (8)	OTHR (75)	OTHR (15)
Acceptable Quantitation Range (%)				
	AMOS (1-25) CHRY (TRA-15)	CHRY (5-50)		ANTH (35-100)
Summary of Results from all Laboratories				
Type One Asbestos	AMOS	CHRY		ANTH
Type One Mean	11.5	22.0		53.7
Type Two Asbestos	CHRY			
Type Two Mean	14.8			
Type Three Asbestos				
Type Three Mean				
Other Asbestos Types Reported in Sample	ACTN, ANTH, CROC	AMOS, ANTH, CROC, TREM		ACTN, AMOS, CHRY, TREM
ACTN=Actinolite CHRY=Chrysotile CELL=Cellulose ACID = acid-soluble fraction, including but not limited to, calcite, gypsum, dolomite, magnesite, hydromagnesite, anhydrite, and bassanite AMOS=Amosite CROC=Crocidolite FBGL=Fiberglass/Mineral Wool MICA=Micaceous Material ANTH=Anthophyllite TREM=Tremolite SYNT=Synthetic OTHR=Other				
Round Status: P=Pass F=Fail TE = Temporarily Excused Program Status: P=Proficient NP=Nonproficient NA = Not Applicable				

Certificate No: 5LM08071320IR

Expiration Date: August 7, 2014

This is to certify that
Jacob M. Martin Sr.
has attended and successfully completed an

**ASBESTOS INSPECTOR
REFRESHER TRAINING COURSE**

permitted by
the State of Minnesota under Minnesota Rules 4620.3702 to 4620.3722
and meets the requirements of
Section 206 of Title II of the Toxic Substances Control Act (TSCA)
conducted by

Lake States Environmental, Ltd.

**White Bear Lake, MN on August 7, 2013
Examination Date: August 7, 2013**

Lake States Environmental, Ltd
P. O. Box 645, Rice Lake, WI 54868
(800) 254-9811


Training Instructor



Certified by:
State of Minnesota
Department of Health
Expires: 08/07/2014
Jacob M Martin, Sr.
PO Box 11996
Minneapolis, MN 55411

Franklin E. Blomquist
Director, Env. Health Div.

No A19050 Issued 08/12/2013

Radon Test Result: 2.9 ±0.3 pCi/L

Test Started 09/27/13 at 3:00 pm

Test Ended 09/30/13 at 3:00 pm

Closed house conditions maintained during test.

Location Basement



TCHU YAJH
898 WILSON AVE
SAINT PAUL, MN 55106

INTERPRETING YOUR TEST RESULT

The US EPA action level for indoor radon is 4.0 pCi/L. The EPA recommendation for results in this range (2.0 to 3.9 pCi/L) is to conduct further tests to determine the true annual average, ideally with a long-term test kit. If the result remains between 2 and 4 there is little short-term risk, but you should consider fixing your home. Additionally, if you make any structural changes or start to use a lower level of the building more frequently, you should test again.

You may be able to obtain additional information about radon related subjects by contacting your state radon office at "www.health.mn.gov/radonkit" or by calling the "Radon Fix-It Line" at 800-644-6999 Monday thru Friday between NOON and 8PM EST.

This test result reflects the amount of radon measured in this sample AFTER it arrived at our laboratory. All analysis computations are automatically adjusted to reflect the length of test, the amount of moisture in the sample, time from the end of test, and the amount of radiation measured. If ALL the test instructions were carefully followed, then it is reasonable to assume this is an accurate assessment of the average level of the radon this sample was exposed to during the time indicated on the test packet.

READ THIS FIRST

This result has been rounded to one-tenth (0.1) of a pCi/L (picoCurie per liter), the most common method of reporting radon in air.

NEXT...PLEASE...READ

everything under the heading

INTERPRETING YOUR TEST RESULT

Your health risk

The primary health risk from long-term exposure to radon is lung cancer. The risk of developing a lung cancer from radon exposure depends both on how much radon is present and how long you are exposed to radon. The higher the radon level or the longer the time of exposure, even if the levels are relatively low, the greater the risk. Exposures up to 4 pCi/L may present some risk of contracting lung cancer to more sensitive occupants, especially children. Recently the US Congress set as a goal the lowering of radon levels in buildings to equal the levels of outside air.

What is a picoCurie

For those interested in the numbers, a picoCurie is 0.000,000,000,001 (one-trillionth) of a Curie, an international measurement unit of radioactivity. One pCi/L means that in one liter of air there will be 2.2 radioactive disintegrations each minute. For example, at 4 pCi/L there will be approximately 12,672 radioactive disintegrations in one liter of air, during a 24-hour period.

Conducting Follow-up Measurements

USEPA protocol describes two general types of radon measurements: short-term tests conducted from 48 hours up to 90 days, and long-term tests that last from 90 to 365 days. Your first test (initial/screening) should be a short-term 'worst-case' screening to see if there is a potential for high exposure to radon. Screening tests should be conducted under closed-building conditions, in the lowest lived-in area in the house, because the highest concentrations of radon will usually be found in a room closest to the underlying soil. Tests made under these conditions are less likely to miss a house with a potential for high concentrations. On the other hand, if the results of worst-case screening tests are very low, there is a high probability that the average annual concentrations in the house are also low.

* Your state has designated a radon officer to assist citizens with questions on radon. Most offer free information on radon and radon reduction techniques, and most keep a list of qualified radon testing and mitigation businesses. Your radon officer can also provide the phone number of your regional USEPA office.

Conducting Follow-up Measurements

The higher your initial (screening) tests, the sooner you should conduct follow-up measurements. The EPA states that you should retest the same location that was tested initially. **For additional or follow-up testing,** make sure at least one test is conducted in the **lowest lived-in level** of the home. Also choose regularly used rooms, such as family rooms, dens, playrooms, or bedrooms. A bedroom on the lower level may be a good choice, because people generally spend the most time in their bedrooms (approximately one-third of the year). If there are children, it may be appropriate to test their rooms or other areas where they spend a lot of time, especially at the lower levels. All short-term follow-up tests **must** be conducted under closed-building conditions. If closed-building conditions cannot be maintained, a long-term measurement conducted under normal living conditions could be used to help estimate average annual exposures.

Tests **should not be conducted** in a kitchen or a bathroom because high humidity, exhaust fans, and other factors can adversely affect the test results. Tests **should not be conducted** in storage areas or laundry rooms, because relatively little time is spent there. Although radon in water may be a contributor to the concentration of airborne radon, radon in air should be **confirmed** before a test for radon in water is performed.

It is recommended that before spending any time or money on radon mitigation, one should conduct multiple (three or more) tests to be certain there is a need. A few more tests will most certainly cost considerably less than any mitigation work.

If follow-up measurements have **confirmed** that the average annual level of radon is equal to or greater than 4 pCi/L, the USEPA recommends that the building or home be mitigated for radon. Consider also that a future buyer is likely to demand that the building pass a radon test before purchasing.

Variations in Radon Levels: what can affect your test results and why it may be important to conduct confirmation tests.

When tests are performed in different seasons or under different weather conditions, the initial screening and follow-up tests may vary considerably. Radon levels can vary significantly between seasons, so different values **are to be expected**. Even during normal

weather, indoor radon levels may rise and fall by a factor of two on a daily cycle; for example, from 5 pCi/L to 10 pCi/L in 24 hours. During rapidly changing or stormy weather, the levels may change more dramatically. Because continual changes in radon levels are considered the norm, expose the testing device for as long as is practical, while following the manufacturer's recommendations. This, of course, provides a better overall average of the measurement.

If you are comparing tests, or are averaging a series of tests, bear in mind that any radon test returns only the average of the levels present during a **specific period of time** at the **precise location** of the test. Conditions during a different test period or at a different location in the building are **expected to be different**.

Test results can also vary if the radon test instructions were not carefully followed. A laboratory measuring radon in samples taken outside the lab **must rely on the person conducting the test**. For example, the wrong starting or ending date of a test will significantly affect the calculated result. The location of each radon test can also influence the result. For example, a test placed in the blowing air stream of a fan is likely to collect more radon than it would under normal conditions. Also, three tests conducted in one home, but in three different rooms, **would be expected to have at least slightly different test results**.

Test results from a properly used activated charcoal test will more closely reflect the average radon concentrations over the last three to five days of the test period. This happens because the radon collected by the activated charcoal has a radioactive half-life of only four days. This means, for example, over one-half of the radon collected during the first three days of a seven day test 'died' before the test ended. Seven day exposures of activated charcoal test devices are suggested because this allows the charcoal to equilibrate with its environment, averaging out the peaks and valleys that normally occur in real-life radon levels. Also the aspect of user convenience is considered, because most find it easier to remember to end a test on the same day of the week it was started.

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Limitation of Liability: While we at Air Chek, Inc. make every effort to maintain the highest possible quality control and include several checks and verification steps in our procedures, we make **NO WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS** with respect to any item furnished, information supplied or services rendered you by Air Chek, Inc. Before any action is taken on the basis of test results given to you by Air Chek, Inc. we recommend that further testing be done. Neither Air Chek, Inc., nor any of our employees or agents, shall be liable under any claim, charge, or demand, whether in contract, tort or otherwise, for any and all losses, costs, charges, claims, demands, fees, expenses, injuries or damages (including without limitation **INCIDENTAL OR CONSEQUENTIAL DAMAGES WHICH ARE EXCLUDED**) of any nature or kind arising out of, connected with, resulting from, or sustained as a result of any item furnished, information supplied, or service rendered to you by Air Chek, Inc.

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For technical information, call (828) 684-0893. Office hours are Mon-Fri 8:30 to 5:30 EASTERN
You can reach us by Fax at (828) 684-8498 or write to Air Chek, Inc., Box 2000, Naples, NC 28760
Web Site: <http://www.radon.com> **Email to:** info@radon.com

Radon Test Result: 1.2 ±0.2 pCi/L

Test Started 09/27/13 at 3:00 pm

Test Ended 09/30/13 at 3:00 pm

Closed house conditions maintained during test.

Location Basement



TCHU YAJH
898 WILSON AVE
SAINT PAUL, MN 55106

INTERPRETING YOUR TEST RESULT

The US EPA action level for indoor radon is 4.0 pCi/L. The EPA indicates that there is little short-term risk with test results in this range (0.6 to 1.9 pCi/L). However, because radon levels fluctuate daily, as well as seasonally, you may want to retest during another season. Additionally, if you make any structural changes or start to use a lower level of the building more frequently, you should test again.

You may be able to obtain additional information about radon related subjects by contacting your state radon office at "www.health.mn.gov/radonkit" or by calling the "Radon Fix-It Line" at 800-644-6999 Monday thru Friday between NOON and 8PM EST.

This test result reflects the amount of radon measured in this sample AFTER it arrived at our laboratory. All analysis computations are automatically adjusted to reflect the length of test, the amount of moisture in the sample, time from the end of test, and the amount of radiation measured. If ALL the test instructions were carefully followed, then it is reasonable to assume this is an accurate assessment of the average level of the radon this sample was exposed to during the time indicated on the test packet.

READ THIS FIRST

This result has been rounded to one-tenth (0.1) of a pCi/L (picoCurie per liter), the most common method of reporting radon in air.

NEXT...PLEASE...READ

everything under the heading

INTERPRETING YOUR TEST RESULT

Your health risk

The primary health risk from long-term exposure to radon is lung cancer. The risk of developing a lung cancer from radon exposure depends both on how much radon is present and how long you are exposed to radon. The higher the radon level or the longer the time of exposure, even if the levels are relatively low, the greater the risk. Exposures up to 4 pCi/L may present some risk of contracting lung cancer to more sensitive occupants, especially children. Recently the US Congress set as a goal the lowering of radon levels in buildings to equal the levels of outside air.

What is a picoCurie

For those interested in the numbers, a picoCurie is 0.000,000,000,001 (one-trillionth) of a Curie, an international measurement unit of radioactivity. One pCi/L means that in one liter of air there will be 2.2 radioactive disintegrations each minute. For example, at 4 pCi/L there will be approximately 12,672 radioactive disintegrations in one liter of air, during a 24-hour period.

Conducting Follow-up Measurements

USEPA protocol describes two general types of radon measurements: short-term tests conducted from 48 hours up to 90 days, and long-term tests that last from 90 to 365 days. Your first test (initial/screening) should be a short-term 'worst-case' screening to see if there is a potential for high exposure to radon. Screening tests should be conducted under closed-building conditions, in the lowest lived-in area in the house, because the highest concentrations of radon will usually be found in a room closest to the underlying soil. Tests made under these conditions are less likely to miss a house with a potential for high concentrations. On the other hand, if the results of worst-case screening tests are very low, there is a high probability that the average annual concentrations in the house are also low.

* Your state has designated a radon officer to assist citizens with questions on radon. Most offer free information on radon and radon reduction techniques, and most keep a list of qualified radon testing and mitigation businesses. Your radon officer can also provide the phone number of your regional USEPA office.

Conducting Follow-up Measurements

The higher your initial (screening) tests, the sooner you should conduct follow-up measurements. The EPA states that you should retest the same location that was tested initially. **For additional or follow-up testing,** make sure at least one test is conducted in the **lowest lived-in level** of the home. Also choose regularly used rooms, such as family rooms, dens, playrooms, or bedrooms. A bedroom on the lower level may be a good choice, because people generally spend the most time in their bedrooms (approximately one-third of the year). If there are children, it may be appropriate to test their rooms or other areas where they spend a lot of time, especially at the lower levels. All short-term follow-up tests **must** be conducted under closed-building conditions. If closed-building conditions cannot be maintained, a long-term measurement conducted under normal living conditions could be used to help estimate average annual exposures.

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Web Site: <http://www.radon.com> **Email to:** info@radon.com

Home Energy Rating Certificate

898 Wilson Ave
St Paul, MN 55106



**2 Stars Plus
Confirmed**

Uniform Energy Rating System

1 Star	1 Star Plus	2 Stars	2 Stars Plus	3 Stars	3 Stars Plus	4 Stars	4 Stars Plus	5 Stars	5 Stars Plus
500-401	400-301	300-251	250-201	200-151	150-101	100-91	90-86	85-71	70 or Less

Energy Efficient

HERS Index: **243**

General Information

Conditioned Area: 1764 sq. ft.
Conditioned Volume: 13500 cubic ft.
Bedrooms: 4

House Type: Single-family detached
Foundation: Slab

Mechanical Systems Features

Heating: Fuel-fired hydronic distribution, Natural gas, 60.0 % EFF.
Water Heating: Conventional, Natural gas, 0.59 EF, 40.0 Gal.

Duct Leakage to Outside: NA
Ventilation System: None
Programmable Thermostat: Heating: No Cooling: No

Building Shell Features

Ceiling Flat: R-8
Vaulted Ceiling: R-3
Above Grade Walls: R-6
Foundation Walls: R-0.0
Slab: R-0.0 Edge, R-0.0 Under

Exposed Floor: NA
Window Type: S W Op (w/St)

Infiltration:
Rate: Htg: 7350 Clg: 7350 CFM50
Method: Blower door test

Lights and Appliance Features

Percent Interior Lighting: 10.00
Percent Garage Lighting: 0.00
Refrigerator (kWh/yr): 691.00
Dishwasher Energy Factor: 0.46

Range/Oven Fuel: Natural gas
Clothes Dryer Fuel: Natural gas
Clothes Dryer EF: 2.67
Ceiling Fan (cfm/Watt): 0.00

The Home Energy Rating Standard Disclosure for this home is available from the rating provider.

REM/Rate - Residential Energy Analysis and Rating Software v12.99

This information does not constitute any warranty of energy cost or savings.
© 1985-2012 Architectural Energy Corporation, Boulder, Colorado.

Registry ID:

Rating Number:

Certified Energy Rater: Michael Childs

Rating Date: 12/10/2013

Rating Ordered For: City of Saint Paul

Estimated Annual Energy Cost

Use	Confirmed		
	MMBtu	Cost	Percent
Heating	337.2	\$2699	78%
Cooling	0	\$0	0%
Hot Water	23.6	\$189	5%
Lights/Appliances	26.3	\$447	13%
Photovoltaics	-0.0	\$-0	-0%
Service Charges		\$132	4%
Total		\$3467	100%

**This home meets or exceeds the minimum
criteria for all of the following:**

TITLE

Company

Address

City, State, Zip

Phone #

Fax #

Home Energy Rating Certificate

898 Wilson Ave
St Paul, MN 55106



**3 Stars Plus
Projected Rating**

Uniform Energy Rating System

1 Star	1 Star Plus	2 Stars	2 Stars Plus	3 Stars	3 Stars Plus	4 Stars	4 Stars Plus	5 Stars	5 Stars Plus
500-401	400-301	300-251	250-201	200-151	150-101	100-91	90-86	85-71	70 or Less

Energy Efficient

HERS Index: 103

General Information

Conditioned Area: 1764 sq. ft.
Conditioned Volume: 13500 cubic ft.
Bedrooms: 4

House Type: Single-family detached
Foundation: Slab

Mechanical Systems Features

Heating: Fuel-fired hydronic distribution, Natural gas, 84.0 AFUE.
Water Heating: Conventional, Natural gas, 0.67 EF, 40.0 Gal.

Duct Leakage to Outside: NA
Ventilation System: None
Programmable Thermostat: Heating: Yes Cooling: Yes

Building Shell Features

Ceiling Flat: R-50
Vaulted Ceiling: R-13
Above Grade Walls: R-13
Foundation Walls: R-0.0
Slab: R-0.0 Edge, R-0.0 Under

Exposed Floor: NA
Window Type: NFRC .34 / .30

Infiltration:
Rate: Htg: 2745 Clg: 2745 CFM50
Method: Blower door test

Lights and Appliance Features

Percent Interior Lighting: 90.00
Percent Garage Lighting: 0.00
Refrigerator (kWh/yr): 691.00
Dishwasher Energy Factor: 0.46

Range/Oven Fuel: Natural gas
Clothes Dryer Fuel: Natural gas
Clothes Dryer EF: 2.67
Ceiling Fan (cfm/Watt): 0.00

The Home Energy Rating Standard Disclosure for this home is available from the rating provider.

REM/Rate - Residential Energy Analysis and Rating Software v12.99

This information does not constitute any warranty of energy cost or savings.
© 1985-2012 Architectural Energy Corporation, Boulder, Colorado.

Registry ID:

Rating Number:

Certified Energy Rater: Michael Childs

Rating Date: 12/10/2013

Rating Ordered For: City of Saint Paul

Estimated Annual Energy Cost

Projected Rating

Use	MMBtu	Cost	Percent
Heating	131.1	\$1052	61%
Cooling	0	\$0	0%
Hot Water	21.2	\$170	10%
Lights/Appliances	23.0	\$379	22%
Photovoltaics	-0.0	\$-0	-0%
Service Charges		\$132	8%
Total		\$1733	100%

**This home meets or exceeds the minimum
criteria for all of the following:**

TITLE

Company

Address

City, State, Zip

Phone #

Fax #

Neighborhood Energy Connection

Residential Energy Specification

Customer: City of Saint Paul

Auditor: Michael Childs

Address: 898 Wilson Avenue 12/17/2013

Phone: 651-221-4462 x 145

Spec ID#	Spec Title	Specification	Location / Notes
206	Replace Boiler with 84% AFUE Hot Water Boiler or above	Replace existing boiler with a gas fired, 84% AFUE+ hot water boiler. Installation to include all power & control wiring, a setback thermostat, expansion tank, one circulation pump, water & gas supply & flue piping. The installation is required to maintain a minimum 70 F indoor temperature evenly throughout the conditioned space when outdoor temperature is - 10 F. Remove existing boiler, recycle all metal components and dispose of all other materials in a code legal dump.	
302	Replace Water Heater with Power Vented .62 EF or higher	Replace water heater with a power-vented water heater with an EF of .62 or greater. Include pressure & temperature release valve, discharge tube to within 6" of floor and PVC flue to power vent to exterior.	
500	Seal Attic Bypasses	Contractor shall seal all attic bypasses. Bypasses shall be defined as any break in the envelope of a house between a heated living space and an unheated area or exterior. Bypass locations include, but are not limited to, the following areas: chimneys, soil stacks, end walls, dropped ceilings, open plumbing walls, beneath knee walls and around duct work, electrical work and attic access points. Bypasses shall be sealed in such a manner that the movement of air through the bypass is essentially stopped. "Essentially stopped" means that air leakage will not be	

		detected by an infrared scan when the house is pressurized to 30 Pascals. Materials to be used for sealing bypasses depend on the size and location of the bypass and meet code requirements. These materials include high quality caulks (20-year life span), polyethylene rod stock, foam, sheetrock, sheet metal, extruded polystyrene and densely packed insulation.	
510	Blow Open Attic to R-50	All bypasses shall be sealed before insulating in such a manner that the movement of air through the bypass is essentially stopped. "Essentially stopped" means that air leakage will not be detected by an infrared scan when the house is pressurized to 30 Pascals. Blow insulation to depth indicated on manufacturer's coverage chart, consistently and evenly to R-50. Insulation in the peak attic must be marked with a ruler to measure depth and a sign with the number of bags used and the date of the installation.	Insulate peak, first floor rear and front entry attics.
512	Dense Pack Slants to capacity with cellulose	Determine cavities are free of hazards and can support dense packing pressures, locate drilling hazards, control dust when drilling from interior. Blow Slant walls with cellulose to capacity using the Dense Pack Method to a minimum density 3.5 lbs./ft ³ .	
532	Build Dam, insulate and weather strip attic hatch	Access hatch door to attic shall be insulated to R-44 and insulation dam constructed around opening. Opening shall be weather stripped to provide a tight seal.	
604	Wall insulation - Exterior Application: Remove Wood Shakes, Drill, Dense Pack, Plug and Replace Shakes	Shakes shall be removed before drilling access holes. Determine cavities are free of hazards and can support dense packing pressures, locate drilling hazards, control dust when drilling from interior. Completely fill each cavity to a consistent density. Dense pack cellulose to a minimum density of 3.5 lbs/ft ³ or dense pack spider fiberglass per manufacturer's instructions. Shakes must be replaced without damage and nailed back with appropriate galvanized nails. Follow all applicable Lead Safe Work Practices as per the EPA's RRP Rules.	Loose wood shavings throughout house.

616	Wall insulation - Interior Application: Dense Pack Cellulose	Exterior walls insulated from inside the house shall be drilled through to provide access. Determine cavities are free of hazards and can support dense packing pressures, locate drilling hazards, control dust when drilling from interior. Completely fill each cavity to a consistent density. Dense pack cellulose to a minimum density of 3.5 lbs./ft ³ or dense pack spider fiberglass per manufacturer's instructions. Follow all applicable Lead Safe Work Practices as per the EPA's RRP Rules.	Loose wood shavings throughout house.
802	Air Seal and Insulate Rim Joist	Seal cracks and holes in rim joist before insulating. Caulk or foam 3 inches of rigid insulation in place. Or, apply two-part foam evenly and consistently according to manufacturer's instructions to insulate to R-10 around basement rim joist.	
1010	Install ENERGY STAR Rated 2-stage Bathroom Fan	Install an ENERGY STAR rated two-speed bathroom fan .8 sones or less, with a pre-set low-speed of 10-30 CFM and a high-speed boost capability of 70-110 CFM initiated by a wall switch or motion detector. Vent bathroom fan using rigid duct and insulated with fiberglass and vented out with dampered roof vent.	
1200	Replace incandescents with CFLs	Replace incandescent bulbs with ENERGY STAR rated compact fluorescent lights. Install fixtures that meet the lighting needs of the particular area.	