

Appendix - *Environmental Evaluation*



Environmental Management Consulting, Inc.

HAZARDOUS MATERIALS ASSESSMENT

FOR

CITY OF WEST ALLIS

INSPECTION DATES: MARCH/APRIL 2018

REPORT DATE: MAY 22, 2018

EMC PROJECT NUMBERS: 180559-01 & 180545-01

PREPARED FOR:

MCKINSTRY

ATTN: MR. ISAAC FONES

1460 AMERICAN EAGLE DRIVE

SLINGER, WI 53086

PREPARED BY:

ENVIRONMENTAL MANAGEMENT CONSULTING, INC.

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LAKE MILLS, WI 53551

Securing Safer Futures...

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INTRODUCTION/
SURVEY RATIONALE

INTRODUCTION/SURVEY RATIONALE

Environmental Management Consulting, Inc. (EMC) was contracted by McKinstry to perform an assessment and evaluation of all facilities owned by the City of West Allis. The intention of the assessment was to identify potential hazards that exist in regards to asbestos, lead paint, lead or copper in drinking water, and Indoor Air Quality (IAQ).

Building materials were evaluated for the potential to contain asbestos. Any materials that were determined to be a Presumed Asbestos Containing Material (PACM) were assessed for condition, quantity, and location within facility. Damaged and large quantity materials were noted and in some cases sampled. The intent was not to identify all Asbestos Containing Materials (ACM) or find all damaged materials.

Painted building surfaces were assessed for the potential to contain lead. The date of construction of the building, age of the paint, and the function of the space were all used to determine the potential hazard. Many (not all) painted or glazed (ceramics) building surfaces were tested by XRF method for the presence of lead. The intention was to provide a general idea as to where lead surfaces may exist for future planning purposes and to address any immediate hazards.

The inspection included identifying lead building service piping, which was not possible in most cases. Water samples were collected from the most likely drinking sources from the most heavily populated facilities. The intent was to determine if there is a hazard in any facility for lead or copper in the drinking water.

Air monitoring was conducted in the most heavily populated buildings owned by the City. The monitoring included testing for Carbon Monoxide (CO), Carbon Dioxide (CO₂), Temperature, and Relative Humidity (RH). The intent for this monitoring was two-fold to 1) identify immediately hazardous situations involving CO, and 2) evaluate the performance of the ventilation system in maintaining proper CO₂ and RH levels.



William A. Freeman, CHMM



Robert J. Haveman

SECTION I
EXECUTIVE SUMMARIES

Electric Sub-Stations

Liberty Heights

Date of Construction: 1949

Square Footage: 638

Honey Creek

Date of Construction: 1955

Square Footage: 2,372

Jefferson School

Date of Construction: 1954

Square Footage: 519

Asbestos:

- No suspect materials.

Lead Paint:

- No suspect materials.

Water Sampling: (Lead and Copper)

- No sources of drinking water.

Air Monitoring:

- No personnel regularly use or occupy this facility.

Corrective Actions:

- Imminent Hazards
 - None
- Long-Term Planning for Hazardous Materials
 - Liberty Heights: \$1,914-\$3,190
 - Honey Creek: \$7,116-\$11,860
 - Jefferson School: \$1,557-\$2,595

Farmers Market
6501 W. National Avenue
West Allis, WI 53214

Date of Construction: 1930

Renovated: 2000

Square Footage: 26,345

Asbestos:

- Presumed ACM (PACM) (Must be sampled to be proven NON-ACM)
 - Drop Ceiling Tiles (Office)
 - Ceramics (Restrooms)
 - Flooring & Mastic
 - Drywall & Joint Compound

Lead Paint: (Sampled by XRF Analysis)

- Lead Paint was found on the brick column support structures and on the wood frames for the entryways on the north and south ends of the grounds.
 - *The metal support structures did not test positive for lead by XRF or Chip Sampling.
 - *The paint on the underside of the roofing structure is peeling and in otherwise relatively poor condition.
 - *Sampling the ceiling deck was not possible due to its height during the initial assessment. EMC conducted follow-up Chip Sampling and subsequent lab analysis of the paint. The sample proved positive for lead (13%). The State of Wisconsin threshold for lead in paint is <0.5%.

Water Sampling: (Lead and Copper)

*No water samples were collected at this facility.

Air Monitoring:

*Air Monitoring was not conducted at this facility.

Corrective Actions:

- Imminent Hazards
- The paint on the underside of the roofing structure is peeling and flaking. Due to the nature of this structure (food sales), the potential for lead containing paint falling onto the products is a concern. This paint is positive for lead and should be removed properly.
- Long-Term Planning for Hazardous Materials
 - \$131,725-\$237,105

Fire Department Administration Building
7332 W. National Avenue
West Allis, WI 53214

Date of Construction: 1930

Renovated: 2003

Square Footage: 14,322

Asbestos:

- Presumed Asbestos Containing Material (PACM) (Must be sampled to be proven NON-ACM)
 - Plaster (Some original may exist in inaccessible areas.)
 - Ceramics (2003)
 - Drywall & Joint Compound (2003)
 - Drop Ceiling Tiles (2003)
 - Carpet Mastic (2003)

Lead Paint: (Sampled by XRF Analysis)

- Lead Paint may exist in base layers in inaccessible areas of the building.
 - *Most painted materials within this facility were painted or installed as new in 2003.
 - *No lead paint sampling was conducted due to the 2003 renovation.

Water Sampling: (Lead and Copper)

- All water samples collected were below the DNR Maximum Contaminant Levels (MCL) set for lead and copper.
 - *See water sample results summary in Section 2.

Air Monitoring:

- Air Monitoring was not conducted at this facility.

Corrective Actions:

- Imminent Hazards
 - None
- Long-Term Planning for Hazardous Materials
 - \$42,966-\$71,610

Fire Station No. 1
7300 W. National Avenue
West Allis, WI 53214

Date of Construction: 2003

Renovated: 2003

Square Footage: 13,201

Asbestos:

- Presumed Asbestos Containing Material (PACM) (Must be sampled to be proven NON-ACM)
 - Drywall & Joint Compound (2003)
 - Drop Ceiling Tiles (2003)
 - Floor Tile & Mastic (2003)
 - Carpet Mastic (2003)
 - Ceramics (2003)
- *This building was in essence completely replaced in 2003. Only aspects of the foundation remain from the original building (1928).

Lead Paint: (Sampled by XRF Analysis)

*All painted materials within this facility were painted or installed in 2003.

*No lead paint sampling was conducted due to the 2003 date of construction.

Water Sampling: (Lead and Copper)

*Due to the 24 hours a day, 7 days a week usage of this facility, water sampling was not conducted at this time.

Air Monitoring:

- Carbon Monoxide (CO) concentrations proved acceptable.
- Carbon Dioxide (CO₂) concentrations on average were acceptable. The maximum level did go above optimal levels.
- Temperature measurements proved acceptable.
- Relative Humidity measurements proved below the ASHARRE recommended level of 30% RH.

*See Air Monitoring results in Section 4.

Corrective Actions:

- Imminent Hazards
 - None
- Long-Term Planning for Hazardous Materials
 - \$13,200-\$26,400

Fire Station No. 2
2040 S. 67th Street
West Allis, WI 53214

Date of Construction: 1955

Renovated: 2000 & 2005

Square Footage: 17,039

Asbestos:

- Presumed Asbestos Containing Material (PACM) (Must be sampled to be proven NON-ACM)
 - Ceramics (2000/2005)
 - Drywall & Joint Compound (2000/2005)
 - Flooring & Mastic (2000/2005)
 - Drop Ceiling Tiles (2000/2005)
 - Carpet Mastic (2000/2005)

*This building underwent two major renovations (2000/2005) and all building materials were replaced.

Lead Paint: (Sampled by XRF Analysis)

*All painted materials within this facility were painted or newly installed in 2000 or 2005.

*No lead paint sampling was conducted due to the 2000 and 2005 renovations.

Water Sampling: (Lead and Copper)

*Due to the 24 hours a day, 7 days a week usage of this facility, water sampling was not conducted at this time.

Air Monitoring:

- Carbon Monoxide (CO) concentrations proved acceptable.
 - Carbon Dioxide (CO₂) concentrations proved acceptable on average. The maximum level in the 2nd Floor Day Room did exceed the optimal levels.
 - Temperature measurement proved acceptable.
 - Relative Humidity (RH) measurements on average proved below the ASHARRE recommended level of 30% RH.
- *See Air Monitoring results in Section 4.

Corrective Actions:

- Imminent Hazards
 - None
- Long-Term Planning for Hazardous Materials
 - \$34,078-\$68,156

Fire Station No. 3
10830 W. Lapham Avenue
West Allis, WI 53214

Date of Construction: 1956

Renovated: 2003

Square Footage: 8,661

Asbestos:

- Presumed Asbestos Containing Material (PACM) (Must be sampled to be proven NON-ACM)
 - 1x1 Ceiling Tile and Mastic
 - Drywall & Joint Compound (2003)
 - Flooring & Mastic (2003)
 - Drop Ceiling Tiles (2003)
 - Carpet Mastic (2003)

*The tunnels were not inspected at this time. According to the Maintenance Department personnel, the pipes in the tunnels are all uninsulated.

*This building underwent a major renovation (2002) and most building materials were replaced.

Lead Paint: (Sampled by XRF Analysis)

- Lead paint may exist in base layers in inaccessible areas of the building.

*Most painted materials within this facility were painted or installed as new in 2003.

*No lead paint sampling was conducted due to the 2003 renovation.

Water Sampling: (Lead and Copper)

*Due to the 24 hours a day, 7 days a week usage of this facility, water sampling was not conducted at this time.

Air Monitoring:

- Carbon Monoxide (CO) concentrations on average proved acceptable. The maximum levels did go above 9.0 ppm at both sampled locations.
- Carbon Dioxide (CO₂) concentrations on average proved acceptable. The maximum level in the Break Room did go above optimal levels.
- Temperature measurements proved acceptable.
- Relative Humidity (RH) measurements on average proved acceptable. The maximum level in the Day Room did go above 30%.

*See Air Monitoring results in Section 4.

Corrective Actions:

- Imminent Hazards
 - None
- Long-Term Planning for Hazardous Materials
 - \$17,322-\$34,644

**Health Department
7120 W. National Avenue
West Allis, WI 53214**

Date of Construction: 1977

Renovated: ---

Square Footage: 19,066

Asbestos:

- Asbestos Containing Materials (ACM)
 - 12" Floor Tile & Mastic (Entire 1st Floor) (See sample results Section 1.)
- Possible ACM (Must be sampled to be proven negative)
 - Drywall & Joint Compound
 - Thermal System Insulation Fittings (Sampled negative see Section 1, additional sampling recommended before removal).
- Non-ACM
 - 2x2 Ceiling Tile (See sample results Section 1.)

Lead Paint: (Sampled by XRF Analysis)

- No Lead Paint was found during this inspection.
- Lead was found in the glaze on the ceramic wall tile in the restrooms. (See XRF Data Summary in Section 2.)

Water Sampling: (Lead and Copper)

- All water samples collected were below the DNR Maximum Contaminant Levels (MCL) set for lead and copper.
*See water sample results summary in Section 3.

Air Monitoring:

- Carbon Monoxide (CO) concentrations proved acceptable.
- Carbon Dioxide (CO₂) concentrations proved acceptable.
- Temperature measurements proved acceptable.
- Relative Humidity (RH) measurements on average proved below ASHARRE recommended level at 30%. The maximum RH in the Office Area did go above 30%.

Corrective Actions:

- Imminent Hazards
 - None
- Long-Term Planning for Hazardous Materials
 - \$76,264-\$114,396

Historical Society
8405 W. National Avenue
West Allis, WI 53214

Date of Construction: 1880's

Renovated: 1980

Square Footage: 6,200

Asbestos:

- Likely Asbestos Containing Material (ACM) (Assumed to be ACM, Not Sampled)
 - 9" Floor Tile & Mastic (Main level northeast & northwest rooms)
 - Air Cell Pipe Insulation (Main level approx. 130 LF)
 - *There is some minor damage to areas of the pipe insulation.
 - *The pipe insulation in the lower level looks to have been abated at some point.
- Presumed ACM (PACM) (Must be sampled to be proven NON-ACM)
 - Drywall & Joint Compound
 - Ceramics
 - 2x4 Ceiling Tile
 - 12" Floor Tile & Mastic
- Non-ACM (See samples results in Section 1.)
 - Plaster (All over)
 - Window Glaze
 - Linoleum (Attic)

Lead Paint: (Sampled by XRF Analysis)

- Lead Paint was detected on many of the wood door/window frames (LL & UL) and plaster walls on the Upper Level.
 - *(See XRF Data Summary in Section 2.)

Water Sampling: (Lead and Copper)

- All water samples collected were below the DNR Maximum Contaminant Levels (MCL) set for lead and copper.
 - *See water sample results summary in Section 3.

Air Monitoring:

*No Air Monitoring was conducted at this facility.

Corrective Actions:

- Imminent Hazards
 - None
- Long-Term Planning for Hazardous Materials
 - \$31,000-\$55,800

Klenz Park
2601 S. 72nd Street
West Allis, WI 53214

Date of Construction: 1983

Renovated: ---

Square Footage: 3,404

Asbestos:

- Presumed Asbestos Containing Material (PACM) (must be sampled to be proven NON-ACM)
 - Ceramics
 - Drywall & Joint Compound

Lead Paint:

*Due to the Date of Construction, Lead Paint was not conducted.

Water Sampling: (Lead and Copper)

*At the time/date of this inspection, the water fountain has not been turned on for the season yet.

Air Monitoring:

*Air Monitoring was not conducted at this facility.

Corrective Actions:

- Imminent Hazards
 - None
- Long-Term Planning for Hazardous Materials
 - \$6,808-\$13,616

Liberty Heights
6101 W. Orchard Street
West Allis, WI 53214

Date of Construction: 1938

Renovated: ---

Square Footage: 1,600

Asbestos:

- Asbestos Containing Materials (ACM)
 - Air Cell Pipe Insulation (See sample results Section 1.) (Lower Level approx. 180 LF, Upper Level approx. 15 LF)
- Presumed ACM (PACM) (must be sampled to be proven NON-ACM)
 - Drywall & Joint Compound
 - Terrazzo
- Non-ACM
 - 1x1 Ceiling Tile and Mastic (See sample results Section 1.)

Lead Paint: (Sampled by XRF Analysis)

- Lead was found on the following surfaces:
 - Wood Window frames (Upper), Boiler Room Door & Frame, Lockers, and Several Walls in the Lower Level
- *See XRF Data Summary in Section 2.

Water Sampling: (Lead and Copper)

- All water samples collected were below the DNR Maximum Contaminant Levels (MCL) set for lead and copper.
- *See water sample results summary in Section 3.

Air Monitoring:

*Air Monitoring was not conducted at this facility.

Corrective Actions:

- Imminent Hazards
 - None
- Long-Term Planning for Hazardous Materials
 - \$8,000-\$14,400

Library
7421 W. National Avenue
West Allis, WI 53214

Date of Construction: 1988

Renovated: ---

Square Footage: 50,864

Asbestos:

- Presumed Asbestos Containing Material (PACM) (Must be sampled to be proven NON-ACM)
 - Drywall & Joint Compound (1988)
 - Carpet Mastic (1988)
 - Drop Ceiling Tiles (1988)
 - Ceramics (1988)

Lead Paint: (Sampled by XRF Analysis)

*No Lead Paint sampling was conducted due to the 1988 date of construction.

Water Sampling: (Lead and Copper)

- All water samples collected were below the DNR Maximum Contaminant Levels (MCL) set for lead and copper.
*See water sample results summary in Section 3.

Air Monitoring:

- Carbon Monoxide (CO) and Carbon Dioxide (CO₂) concentrations proved acceptable.
- Temperature measurements proved acceptable.
- Relative Humidity measurements proved below the ASHARRE recommended level of 30% RH.
*See Air Monitoring results in Section 4.

Corrective Actions:

- Imminent Hazards
 - None
- Long-Term Planning for Hazardous Materials
 - \$101,728-\$203,456

Municipal Yards
6300 W. McGeoch Avenue
West Allis, WI 53214

Date of Construction: 1948
Renovated: 1958 and 1977
Square Footage: 96,390

Asbestos:

- Asbestos Containing Materials (ACM)
 - Thermal System Pipe Insulation (See sample results Section 1.) (Garage/Shop Area approx. 875 LF and 80 TSI Fittings)
*The bulk samples results for the pipe insulation in the Garage/Shop Area returned mixed results. Additional sampling is recommended to determine whether any of the pipe insulation is NON-ACM.
 - 9” Floor Tile & Mastic (Water Dept. – Safe)
- Presumed ACM (PACM) (must be sampled to be proven NON-ACM)
 - Window Caulk and Glaze (Garage skylights and side windows)
 - 2x2 Ceiling Tile (Offices)
 - Drywall & Joint Compound
 - Ceramics
 - Carpet Mastic
- Non-ACM
 - 12” Floor Tile & Mastic (Offices) (See samples results Section 1.)

Lead Paint: (Sampled by XRF Analysis)

- Lead Paint was detected in the paint found on the wood door frames (overhead and regular) located in the Garage Area leading into the adjacent shops, work areas, and offices.
- Lead Glaze was detected in the wall ceramics in the restrooms.
*(See XRF Data Summary in Section 2.)

Water Sampling: (Lead and Copper)

- All water samples collected were below the DNR Maximum Contaminant Levels (MCL) set for lead and copper.
*See water sample results summary in Section 3.

Air Monitoring:

- Carbon Monoxide (CO) concentrations on average proved acceptable. The maximum level in the Water Department did go above optimal levels.
- Carbon Dioxide (CO₂) concentrations proved acceptable.
- Temperature measurements proved acceptable.
- Relative Humidity (RH) measurements on average proved below the ASHARRE recommended level of 30%. At the maximum, the RH level in the Garage and Main Office did rise above 30% RH.
*See Air Monitoring results in Section 4.

Municipal Yards – Cont.

Corrective Actions:

- Imminent Hazards
 - None
- Long-Term Planning for Hazardous Materials
 - \$578,340-\$867,510

Police Headquarters Building
11301 W. Lincoln Avenue
West Allis, WI 53214

Date of Construction: 1995

Renovated: 2008

Square Footage: 57,272

Asbestos:

- Presumed ACM (PACM) (Must be sampled to be proven NON-ACM)
 - Drywall & Joint Compound (1995 or 2008)
 - Carpet Mastic (1995 or 2008)
 - Drop Ceiling Tiles (1995 or 2008)
 - Ceramics (1995 or 2008)

Lead Paint: (Sampled by XRF Analysis)

- No Lead Paint sampling was conducted due to the 1995 date of construction.

Water Sampling: (Lead and Copper)

- All water samples collected were below the DNR Maximum Contaminant Levels (MCL) set for lead and copper.
*See water sample results summary in Section 3.

Air Monitoring:

- Carbon Monoxide (CO) and Carbon Dioxide (CO₂) concentrations proved acceptable.
- Temperature and Relative Humidity (RH) measurements proved acceptable.

Corrective Actions:

- Imminent Hazards
 - None
- Long-Term Planning for Hazardous Materials
 - \$114,544-\$229,088

Reservoir Park
9621 W. Lapham Street
West Allis, WI 53214

Date of Construction: 1983

Renovated: ---

Square Footage: 3,468

Asbestos:

- Presumed Asbestos Containing Material (PACM) (must be sampled to be proven NON-ACM)
 - Ceramics
 - Drywall & Joint Compound

Lead Paint:

*Due to the Date of Construction, Lead Paint was not conducted.

Water Sampling: (Lead and Copper)

*At the time/date of this inspection, the water fountain has not been turned on for the season yet.

Air Monitoring:

*Air Monitoring was not conducted at this facility.

Corrective Actions:

- Imminent Hazards
 - None
- Long-Term Planning for Hazardous Materials
 - \$6,936-\$13,872

Senior Center
7001 W. National Avenue
West Allis, WI 53214

Date of Construction: 1955

Renovated: 1983

Square Footage: 18,278

Asbestos:

- Asbestos Containing Materials (ACM)
 - Pine Insulation (Lower Level and 1st Floor). (See Sample Results Section 1.)
- Likely ACM (assumed to be ACM, not sampled)
 - 9" Floor Tile/Mastic (2nd Floor)
 - *There is some damaged pipe insulation above the drop ceiling in the Main Office.
 - *Boiler Room appears to have been abated. New Boilers.
 - *Mechanical Room (2nd Floor) appears to have been abated.
- Presumed ACM (PACM) (must be sampled to be proven NON-ACM)
 - Drywall & Joint Compound
 - 2x4 Ceiling Tile
 - 12" Floor Tile & Mastic
 - Ceramics
- Non-ACM
 - 2x2 Ceiling Tile (See sample results Section 1.)

Lead Paint: (Sampled by XRF Analysis)

- No Lead Paint was found during this inspection.
- Lead was found in the glaze on the ceramic wall tile in the restrooms on the 1st and 2nd floor. (See XRF Data Summary in Section 2.)

Water Sampling: (Lead and Copper)

- All water samples collected were below the DNR Maximum Contaminant Levels (MCL) set for lead and copper.
 - *See water sample results summary in Section 3.

Air Monitoring:

- Carbon Monoxide (CO) and Carbon Dioxide (CO₂) concentrations proved acceptable.
- Temperature measurements proved acceptable.
- Relative Humidity (RH) measurements proved below the ASHARRE recommended level of 30% on average. Both samples did exceed 30% at their maximum.
 - *See Air Monitoring results in Section 4.

Corrective Actions:

- Imminent Hazards
 - None
- Long-Term Planning for Hazardous Materials
 - \$73,112-\$109,668

Storm Water Pumping Station
Date of Construction: 2001
Square Footage: 599

Asbestos:

- No suspect materials.

Lead Paint:

- No suspect materials.

Water Sampling: (Lead and Copper)

- No sources of drinking water.

Air Monitoring:

- No personnel regularly use or occupy this facility.

Corrective Actions:

- Imminent Hazards
 - None
- Long-Term Planning for Hazardous Materials
 - \$1,797-\$2,995

West Allis City Hall
7525 W. Greenfield Avenue
West Allis, WI 53214

Date of Construction: 1968

Renovated: 1983

Square Footage: 50,130

Asbestos:

- Asbestos Containing Materials (ACM)
 - Thermal System Pipe Insulation Fittings (See sample results Section 1).
(Penthouse approx. 150 TSI, Boiler Room approx. 350 TSI)
*There is some minor damage that has been repaired unprofessionally on the north side of the Penthouse.
*Overall, the pipe insulation in the Boiler Room is in good condition with some minor damage in a few places.
*Per the City of West Allis Maintenance Department personnel, most of the piping above the drop ceilings on the LL, 1st Level and 2nd Level was installed during the 1983 renovation and is unlikely asbestos containing.
- Possible ACM: (must be sampled to be proven NON-ACM)
 - Drop Ceiling Tiles
 - Terrazzo
 - Drywall & Joint Compound
 - Carpet Mastic
 - Plaster

Lead Paint: (Sampled by XRF Analysis)

- No Lead Paint or Glazes were found during this inspection. (See XRF Data Summary in Section 2).

Water Sampling: (Lead and Copper)

- All water samples collected were below the DNR Maximum Contaminant Levels (MCL) set for lead and copper.
*See water sample results summary in Section 3.

Air Monitoring:

- Carbon Monoxide (CO) concentrations proved acceptable.
- Carbon Dioxide (CO₂) concentrations on average proved acceptable. The maximum level in the Building Inspections Office on the 2nd floor did go above optimal levels.
- Temperature measurements proved acceptable.
- Relative Humidity (RH) measurements on average proved below the ASHARRE recommended level of 30% RH. The RH did go above 30% in all four locations at the maximum.
*See Air Monitoring results in Section 4.

West Allis City Hall – Cont.

Corrective Actions:

- Imminent Hazards
 - None
- Long-Term Planning for Hazardous Materials
 - \$200,520-\$300,780

SECTION II

ASBESTOS

2.1 BULK CHARTS AND LAB RESULTS

BULK SAMPLE CHART

Sampling Date: April 24, 2018
Sample Location: Health Department
Sampling Personnel: Robert Haveman

EMC Project Number: 180559-01
Inspector Number: AII-17115

SAMPLE NUMBER	HOMO CODE	MATERIAL DESCRIPTION	ROOM/ AREA	SPECIFIC SAMPLE LOCATION	LAB RESULTS
HD-01		12" Floor Tile/Mastic	Hallway	At 115	Tile: 2% Chrysotile Mastic: 4% Chrysotile
HD-02		12" Floor Tile/Mastic	Hallway	Near 111	Tile: 2% Chrysotile Mastic: 4% Chrysotile
HD-03		12" Floor Tile/Mastic	Hallway	At East Ext. Exit	Tile: 2% Chrysotile Mastic: 4% Chrysotile
HD-04		Pipe Insulation	Upper Mech Room	East	None Detected
HD-05		Pipe Insulation	Custodial Office	Above Doorway	None Detected
HD-06		2x2 Ceiling Tile	Hallway	At Cust. Office	None Detected
HD-07		2x2 Ceiling Tile	Hallway	At 113	None Detected

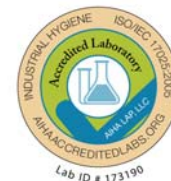


Environmental Management Consulting, Inc.



Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 600/M4-82-020



Customer: Environmental Management Consulting, Inc.
W7748 Cnty Hwy V
Lake Mills, WI 53551
Project: City of West Allis 180559-01

Attn: Rob Haveman

Lab Order ID: 11810665
Analysis ID: 11810665_PLM
Date Received: 5/1/2018
Date Reported: 5/3/2018

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
HD-01 - A	12" floor tile/mastic	2% Chrysotile		98% Other	Beige Non Fibrous Homogeneous
11810665PLM_1	tile				Dissolved
HD-01 - B	12" floor tile/mastic	4% Chrysotile		96% Other	Black Non Fibrous Homogeneous
11810665PLM_8	mastic				Dissolved
HD-02 - A	12" floor tile/mastic	2% Chrysotile		98% Other	Beige Non Fibrous Homogeneous
11810665PLM_2	tile				Dissolved
HD-02 - B	12" floor tile/mastic	4% Chrysotile		96% Other	Black Non Fibrous Homogeneous
11810665PLM_9	mastic				Dissolved
HD-03 - A	12" floor tile/mastic	2% Chrysotile		98% Other	Beige Non Fibrous Homogeneous
11810665PLM_3	tile				Dissolved
HD-03 - B	12" floor tile/mastic	4% Chrysotile		96% Other	Black Non Fibrous Homogeneous
11810665PLM_10	mastic				Dissolved
HD-04 - A	Pipe insulation	None Detected	80% Cellulose	20% Other	White Fibrous Homogeneous
11810665PLM_4	wrap				Teased, Dissolved
HD-04 - B	Pipe insulation	None Detected	25% Fiber Glass	75% Other	Grayish Non Fibrous Homogeneous
11810665PLM_11	insulation				Teased

Disclaimer: Due to the nature of the EPA 600 method, asbestos may not be detected in samples containing low levels of asbestos. We strongly recommend that analysis of floor tiles, vermiculite, and/or heterogeneous soil samples be conducted by TEM for confirmation of "None Detected" by PLM. This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAL. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. government. Analytical uncertainty available upon request. Scientific Analytical Institute participates in the NVLAP Proficiency Testing program. Unless otherwise noted blank sample correction was not performed. Estimated MDL is 0.1%.

William Howell (11)

Analyst

Approved Signatory



Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 600/M4-82-020



NVLAP Lab Code: 200664-0



Customer: Environmental Management Consulting, Inc.
W7748 Cnty Hwy V
Lake Mills, WI 53551

Attn: Rob Haveman

Lab Order ID: 11810665

Analysis ID: 11810665_PLM

Date Received: 5/1/2018

Date Reported: 5/3/2018

Project: City of West Allis 180559-01

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
HD-05	Pipe insulation	None Detected	25% Fiber Glass	75% Other	Grayish Non Fibrous Homogeneous
11810665PLM_5					Teased
HD-06	2x2 ceiling tile	None Detected	80% Fiber Glass	20% Other	Grayish Fibrous Homogeneous
11810665PLM_6					Teased
HD-07	2x2 ceiling tile	None Detected	80% Fiber Glass	20% Other	Grayish Fibrous Homogeneous
11810665PLM_7					Teased

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William Howell (11)

Analyst

Approved Signatory

BULK SAMPLE CHART

Sampling Date: May 2, 2018
Sample Location: Historical Society
Sampling Personnel: Robert Haveman

EMC Project Number: 180559-01
Inspector Number: AII-17115

SAMPLE NUMBER	HOMO CODE	MATERIAL DESCRIPTION	ROOM/ AREA	SPECIFIC SAMPLE LOCATION	LAB RESULTS
HS-01		Plaster	Upper Level - Southwest	East Wall	None Detected
HS-02		Plaster	Upper Level - Southwest	East Wall	None Detected
HS-03		Plaster	Upper Level - Attic Stairs	Attic Stairwell	None Detected
HS-04		Plaster	Upper Level - Attic Stairs	Attic Stairwell	None Detected
HS-05		Plaster	Upper Level - Attic Stairs	Attic Stairwell	None Detected
HS-06		Window Glaze	Upper Level - Northwest Office	West Windows	None Detected
HS-07		Linoleum	Attic	Southeast	None Detected



Environmental Management Consulting, Inc.



Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 600/M4-82-020



Customer: Environmental Management Consulting, Inc.
W7748 Cnty Hwy V
Lake Mills, WI 53551

Project: City of West Allis 180559-01

Attn: Rob Haveman

Lab Order ID: 11810976
Analysis ID: 11810976_PLM
Date Received: 5/4/2018
Date Reported: 5/5/2018

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
HS-01	Plaster	None Detected	3% Hair	97% Other	Gray Non Fibrous Heterogeneous
11810976PLM_1	single layer plaster				Crushed
HS-02	Plaster	None Detected	3% Hair	97% Other	Gray Non Fibrous Heterogeneous
11810976PLM_2	single layer plaster				Crushed
HS-03 - A	Plaster	None Detected		100% Other	White Non Fibrous Homogeneous
11810976PLM_3	compound				Crushed
HS-03 - B	Plaster	None Detected	3% Hair	97% Other	Gray Non Fibrous Heterogeneous
11810976PLM_8	base				Crushed
HS-04	Plaster	None Detected	3% Hair	97% Other	Gray Non Fibrous Heterogeneous
11810976PLM_4	single layer plaster				Crushed
HS-05	Plaster	None Detected	3% Hair	97% Other	Gray Non Fibrous Heterogeneous
11810976PLM_5	single layer plaster				Crushed
HS-06	Window glaze	None Detected		100% Other	Gray Non Fibrous Heterogeneous
11810976PLM_6					Crushed
HS-07	Linoleum	None Detected	60% Cellulose	40% Other	Blue, Black Fibrous Heterogeneous
11810976PLM_7	linoleum only				Teased

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Bobby Wheatley (8)

Analyst

Approved Signatory

BULK SAMPLE CHART

Sampling Date: May 2, 2018
Sample Location: Liberty Heights
Sampling Personnel: Robert Haveman

EMC Project Number: 180559-01
Inspector Number: AII-17115

SAMPLE NUMBER	HOMO CODE	MATERIAL DESCRIPTION	ROOM/ AREA	SPECIFIC SAMPLE LOCATION	LAB RESULTS
LH-01		1x1 Ceiling Tile & Mastic	Upper Level	Main Lobby at Pool Window	None Detected
LH-02		1x1 Ceiling Tile & Mastic	Upper Level	Main Lobby at Pool Doorway	None Detected
LH-03		1x1 Ceiling Tile & Mastic	Upper Level	Main Lobby at Kitchen	None Detected
LH-4		Aircell Pipe Insulation	Lower Level	Boiler Room	60% Chrysotile



Environmental Management Consulting, Inc.



Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 600/M4-82-020



Customer: Environmental Management Consulting, Inc.
W7748 Cnty Hwy V
Lake Mills, WI 53551

Project: City of West Allis 180559-01

Attn: Rob Haveman

Lab Order ID: 11810979
Analysis ID: 11810979_PLM
Date Received: 5/4/2018
Date Reported: 5/4/2018

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
LH-01 - A	1x1 ceiling tile & mastic	None Detected	80% Fiber Glass	20% Other	Gray Fibrous Heterogeneous
11810979PLM_1	ceiling tile				Teased
LH-01 - B	1x1 ceiling tile & mastic	None Detected		100% Other	Brown Non Fibrous Heterogeneous
11810979PLM_5	mastic				Crushed, Dissolved
LH-02 - A	1x1 ceiling tile & mastic	None Detected	80% Fiber Glass	20% Other	Gray Fibrous Heterogeneous
11810979PLM_2	ceiling tile				Teased
LH-02 - B	1x1 ceiling tile & mastic	None Detected		100% Other	Brown Non Fibrous Heterogeneous
11810979PLM_6	mastic				Crushed, Dissolved
LH-03 - A	1x1 ceiling tile & mastic	None Detected	80% Fiber Glass	20% Other	Gray Fibrous Heterogeneous
11810979PLM_3	ceiling tile				Teased
LH-03 - B	1x1 ceiling tile & mastic	None Detected		100% Other	Brown Non Fibrous Heterogeneous
11810979PLM_7	mastic				Crushed, Dissolved
LH-04	Air cell pipe insul	60% Chrysotile	20% Cellulose	20% Other	Brown, Gray Fibrous Heterogeneous
11810979PLM_4					Teased

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Bobby Wheatley (7)

Analyst

Approved Signatory

Lab Order ID:



Environmental Management Consulting, Inc.

E.M.C., Inc.
W7748 County Highway V
Lake Mills, WI 53551
920-648-6343

Scientific Analytical Institute
4604 Dundas Drive
Greensboro, NC 27407
877-292-3888



11810979

Table with 3 columns: EMC Contact, Test Type, Turnaround Time. Includes handwritten entries for contact name, location, date, and project name.

Main table with columns: Sample Number, Homo Code, SR/JC, Material Description, Room, Specific Location or Volume/Area, Lab Results. Includes handwritten entries for sample locations and a large 'Accepted' stamp.

Total # of Samples 4

Signature table with columns: Relinquished by, Date/Time, Received by, Date/Time. Includes handwritten signatures and dates.

Please Email To:

- List of email addresses: bfreeman@emc-wi.com, jrbushman@emc-wi.com, jjozwiakowski@emc-wi.com, nbateson@emc-wi.com, proche@emc-wi.com, jschneider@emc-wi.com, rhaveman@emc-wi.com, jnoegel@emc-wi.com, mfreeman@emc-wi.com, lwinslow@emc-wi.com, tbushman@emc-wi.com, cmertens@emc-wi.com, emc@emc-wi.com

BULK SAMPLE CHART

Sampling Date: April 25, 2018 & May 8, 2018

Sample Location: Municipal Yards

Sampling Personnel: Robert Haveman

EMC Project Number: 180559-01

Inspector Number: AII-17115

SAMPLE NUMBER	HOMO CODE	MATERIAL DESCRIPTION	ROOM/ AREA	SPECIFIC SAMPLE LOCATION	LAB RESULTS
MY-01		Pipe Insulation	Garage	Maint. Area	None Detected
MY-02		12" Floor Tile/Mastic	Water Dept. Office	Near Entry	None Detected
MY-03		12" Floor Tile/Mastic	Main Office	Near Entry	None Detected
MY-04		12" Floor Tile/Mastic	Sanitation Office	At Garage Door	None Detected
MY-05	PI1	Pipe Insulation	Garage	At Maintenance Shop	None Detected
MY-06	PI1	Pipe Insulation	Garage	At Water Department	None Detected
MY-07	PI1	Pipe Insulation	Garage	At Sanitation Department	15% Chrysotile 5% Amosite
MY-08	PI1	Pipe Insulation	Garage	At Forestry Department	15% Chrysotile 5% Amosite
MY-09	PI2	Pipe Fitting	Garage	Middle at Parking Spot 800	None Detected

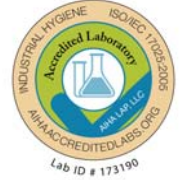


Environmental Management Consulting, Inc.



Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 600/M4-82-020



Customer: Environmental Management Consulting, Inc.
W7748 Cnty Hwy V
Lake Mills, WI 53551

Attn: Rob Haveman

Project: City of West Allis 180559-01

Lab Order ID: 11810666
Analysis ID: 11810666_PLM
Date Received: 5/1/2018
Date Reported: 5/2/2018

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
MY-01	Pipe insulation	None Detected	90% Cellulose	10% Other	White, Brown Fibrous Homogeneous
11810666PLM_1					Teased
MY-02 - A	12" Floor tile/mastic	None Detected		100% Other	Aqua, Grayish Non Fibrous Homogeneous
11810666PLM_2	tile				Dissolved
MY-02 - B	12" Floor tile/mastic	None Detected		100% Other	Yellow Non Fibrous Homogeneous
11810666PLM_6	mastic				Dissolved
MY-03 - A	12" Floor tile/mastic	None Detected		100% Other	Beige Non Fibrous Homogeneous
11810666PLM_3	tile				Dissolved
MY-03 - B	12" Floor tile/mastic	None Detected		100% Other	Yellow Non Fibrous Homogeneous
11810666PLM_7	mastic				Dissolved
MY-04 - A	12" Floor tile/mastic	None Detected		100% Other	Beige Non Fibrous Homogeneous
11810666PLM_4	tile				Dissolved
MY-04 - B	12" Floor tile/mastic	None Detected		100% Other	Yellow Non Fibrous Homogeneous
11810666PLM_8	mastic				Dissolved

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William Howell (7)

Analyst

Approved Signatory



Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 600/M4-82-020



Customer: Environmental Management Consulting, Inc.
W7748 Cnty Hwy V
Lake Mills, WI 53551

Attn: Rob Haveman

Lab Order ID: 11811674
Analysis ID: 11811674_PLM
Date Received: 5/11/2018
Date Reported: 5/11/2018

Project: City of West Allis 180559-01

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
MY-05	Pipe insulation	None Detected	80% Cellulose 5% Hair	15% Other	Tan Fibrous Homogeneous
11811674PLM_1					Teased
MY-06	Pipe insulation	None Detected	80% Cellulose 5% Hair	15% Other	Tan Fibrous Homogeneous
11811674PLM_2					Teased
MY-07 - A	Pipe insulation	15% Chrysotile 5% Amosite		80% Other	White Fibrous Homogeneous
11811674PLM_3	white insulation				Teased
MY-07 - B	Pipe insulation	None Detected	80% Cellulose 5% Hair	15% Other	Tan Fibrous Homogeneous
11811674PLM_6	tan insulation				Teased
MY-08	Pipe insulation	15% Chrysotile 5% Amosite		80% Other	White Fibrous Homogeneous
11811674PLM_4					Teased
MY-09	Pipe fitting	None Detected	25% Mineral Wool	75% Other	Gray Fibrous Homogeneous
11811674PLM_5					Teased

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Charmel Dozier (6)

Analyst

Approved Signatory

BULK SAMPLE CHART

Sampling Date: April 24, 2018
Sample Location: Senior Center
Sampling Personnel: Robert Haveman

EMC Project Number: 180559-01
Inspector Number: AII-17115

SAMPLE NUMBER	HOMO CODE	MATERIAL DESCRIPTION	ROOM/ AREA	SPECIFIC SAMPLE LOCATION	LAB RESULTS
SC-01		Aircell Pipe Insulation	LL Multi-Pupose	Near Kitchen	40% Chrysotile
SC-02		2x2 Ceiling Tile	1st Floor	Lobby - West	None Detected
SC-03		2x2 Ceiling Tile	2nd Floor	West	None Detected
SC-04		2x2 Ceiling Tile	Lower Level	At Elevator	None Detected



Environmental Management Consulting, Inc.



Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 600/M4-82-020



NVLAP Lab Code: 200664-0



Customer: Environmental Management Consulting, Inc.
W7748 Cnty Hwy V
Lake Mills, WI 53551

Attn: Rob Haveman

Lab Order ID: 11810669

Analysis ID: 11810669_PLM

Date Received: 5/1/2018

Date Reported: 5/3/2018

Project: City of West Allis 180559-01

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
SC-01	Air cell pipe insulation	40% Chrysotile		60% Other	White, Silver Non Fibrous Homogeneous
11810669PLM_1					Teased
SC-02	2x2 ceiling tile	None Detected	80% Fiber Glass	20% Other	Grayish Fibrous Homogeneous
11810669PLM_2					Teased
SC-03	2x2 ceiling tile	None Detected	80% Fiber Glass	20% Other	Grayish Fibrous Homogeneous
11810669PLM_3					Teased
SC-04	2x2 ceiling tile	None Detected	80% Fiber Glass	20% Other	Grayish Fibrous Homogeneous
11810669PLM_4					Teased

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William Howell (4)

Analyst

Approved Signatory

BULK SAMPLE CHART

Sampling Date: May 8, 2018
Sample Location: West Allis City Hall
Sampling Personnel: Robert J. Haveman

EMC Project Number: 180559-01
Inspector Number: AII-17115

SAMPLE NUMBER	HOMO CODE	MATERIAL DESCRIPTION	ROOM/ AREA	SPECIFIC SAMPLE LOCATION	LAB RESULTS
CH-01		Pipe Insulation Fitting (Light Blue)	Boiler Room	At Main Water Valve	3% Amosite 2% Chrysotile
CH-02		Pipe Insulation Fitting (Light Green)	Penthouse	North Wall	3% Amosite 2% Chrysotile

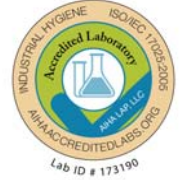


Environmental Management Consulting, Inc.



Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 600/M4-82-020



Customer: Environmental Management Consulting, Inc.
W7748 Cnty Hwy V
Lake Mills, WI 53551

Attn: Rob Haveman

Lab Order ID: 11811673
Analysis ID: 11811673_PLM
Date Received: 5/11/2018
Date Reported: 5/11/2018

Project: City of West Allis 180559-01

Sample ID	Description	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes
Lab Sample ID	Lab Notes				Treatment
CH-01 - A	Pipe insulation fitting	None Detected	80% Cellulose	20% Other	Gray, Tan Fibrous Heterogeneous
11811673PLM_1	wrap				Dissolved, Teased
CH-01 - B	Pipe insulation fitting	3% Amosite 2% Chrysotile	30% Fiber Glass	65% Other	Gray Fibrous Homogeneous
11811673PLM_3	insulation				Teased, Crushed
CH-02	Pipe insulation fitting	3% Amosite 2% Chrysotile	30% Fiber Glass	65% Other	Gray Fibrous Homogeneous
11811673PLM_2	insulation only				Teased, Crushed

Disclaimer: Due to the nature of the EPA 600 method, asbestos may not be detected in samples containing low levels of asbestos. We strongly recommend that analysis of floor tiles, vermiculite, and/or heterogeneous soil samples be conducted by TEM for confirmation of "None Detected" by PLM. This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAL. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. government. Analytical uncertainty available upon request. Scientific Analytical Institute participates in the NVLAP Proficiency Testing program. Unless otherwise noted blank sample correction was not performed. Estimated MDL is 0.1%.

Bethany Nichols (3)

Analyst

Approved Signatory

SECTION III

LEAD

3.1 LEAD PAINT CHIP ANALYSIS



Analysis for Lead Concentration in Paint Chips



by Flame Atomic Absorption Spectroscopy
EPA SW-846 3050B/6010C/7000B

Customer: Environmental Management Consulting, Inc.
W7748 Cnty Hwy V
Lake Mills, WI 53551

Attn: Matt Freeman
Bill Freeman
Rob Haveman

Lab Order ID: 51814098
Analysis ID: 51814098_PBP
Date Received: 6/7/2018
Date Reported: 6/8/2018

Project: West Allis - 180559-01

Sample ID	Description	Mass (g)	Concentration (ppm)	Concentration (% by weight)
Lab Sample ID	Lab Notes			
W-1	Orange paint - on structural support	0.0766	< 52	< 0.0052%
51814098PBP_1				
W-2	White paint - on wood deck	0.0516	130000	13%
51814098PBP_2				

Unless otherwise noted blank sample correction was not performed on analytical results. Scientific Analytical Institute participates in the AIHA ELPAT program. ELPAT Laboratory ID: 173190. This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. Analytical uncertainty available upon request. The quality control samples run with the samples in this report have passed all EPA required specifications unless otherwise noted. RL: (Report Limit for an undiluted 50ml sample is 4µg Total Pb).

Melissa Ferrell (2)

Analyst

Scientific Analytical Institute, Inc. 4604 Dundas Dr. Greensboro, NC 27407 (336) 292-3888

Laboratory Director

3.2 XRF DATA SUMMARIES

PARTIAL LEAD INSPECTION EMC XRF DATA SUMMARY

Client: **City of West Allis**
 Building Name: **Farmers Market**
 Dates of Construction: 1930 (Renovated 2000)
 Date of Sampling: May 2, 2018
 XRF Serial Number: 1692

Environmental Management Consulting, Inc.
 W7748 County Highway V, Lake Mills, WI
 Phone: (920) 648-6343

ROOM/ AREA	LOCATION	PAINT/ VARNISH COLOR	SUBSTRATE	CURRENT CONDITION	A/B CLASS	COMMENTS
Exterior	West - Gutter	Orange	Metal	NA	B	
Exterior	West - Support I Beam	Orange	Metal	NA	B	
Exterior	West - Support I Beam Base	Tan	Concrete	NA	B	
Exterior	Middle - Support I Beam	Tan/Orange	Metal	NA	B	
Exterior	East - Support I Beam	Orange	Metal	NA	B	
Exterior	East - Women's RR Door	Brown	Metal	NA	B	
Exterior	East - Gutter	Orange	Metal	NA	B	
Exterior	East - Support Structure - N	Tan	Brick	NA	A	
Exterior	SE - Support Structure	Tan	Brick	NA	B	
Exterior	SE - Entryway - Frame	Orange	Wood	NA	A	
Exterior	SW - Entryway - Frame	Orange	Wood	NA	A	
Exterior	East - Support Structure - S	Tan	Brick	NA	A	
Exterior	Interior Office - South Wall	Tan	Drywall	NA	B	
Exterior	Exterior of Office - South Wall	Tan	Block	NA	B	
Exterior	NE Support Structure	Tan	Brick	NA	A	
Exterior	North Support Structure	Tan	Brick	NA	A	

Key

Calibration: Where calibration is indicated, the date and initial/final (I, F). Calibration is noted in this space

Substrate: Indicates substrate at sampling location - **B**=Block, **M**=Metal, **P**=Plaster, **D**=Drywall, **W**=Wood, **C**=Concrete, or other as described

Condition: Condition of paint at the time of sampling as established in assessment protocol - **I**=Intact, **P**=Poor, **F**=Fair

Classification: Indicates levels related to the 1.0 mg/cm² lead regulatory limit - **A**=Lead loading above 1.0 mg/cm² (lead paint), **B**=Lead loading below 1.0 mg/cm². Paint identified at <1.0 mg/cm² may still contain measurable quantities of lead.

Side Wall Identification (A-D) - Perimeter wall sides were identified with letters A, B, C and D. Side A is the entry door side. Side B, C and D are identified clockwise from side A as one faces the dwelling; if entry was unclear, directional indications were used (N, S, E, W).

Certified Lead Company
 Environmental Management Consulting
 W7748 County Highway V
 Lake Mills, WI 53551
 Cert #DHS-13160
 Phone: (920) 648-6343

EMC XRF DATA SUMMARY

Client: **City of West Allis**
 Building Name: **Farmers Market**
 Dates of Construction: 1930 (Renovated 2000)
 Date of Sampling: May 2, 2018
 XRF Serial Number: 1692

Environmental Management Consulting, Inc.
 W7748 County Highway V, Lake Mills, WI
 Phone: (920) 648-6343

ROOM/ AREA	LOCATION	PAINT/ VARNISH COLOR	SUBSTRATE	CURRENT CONDITION	A/B CLASS	COMMENTS
Exterior	NE - Entryway - Frame	Orange	Wood	NA	A	
Exterior	NW - Entryway - Frame	Orange	Wood	NA	A	

Key

Calibration: Where calibration is indicated, the date and initial/final (I, F). Calibration is noted in this space

Substrate: Indicates substrate at sampling location - **B**=Block, **M**=Metal, **P**=Plaster, **D**=Drywall, **W**=Wood, **C**=Concrete, or other as described

Condition: Condition of paint at the time of sampling as established in assessment protocol - **I**=Intact, **P**=Poor, **F**=Fair

Classification: Indicates levels related to the 1.0 mg/cm² lead regulatory limit - **A**=Lead loading above 1.0 mg/cm² (lead paint), **B**=Lead loading below 1.0 mg/cm². Paint identified at <1.0 mg/cm² may still contain measurable quantities of lead.

Side Wall Identification (A-D) - Perimeter wall sides were identified with letters A, B, C and D. Side A is the entry door side. Side B, C and D are identified clockwise from side A as one faces the dwelling; if entry was unclear, directional indications were used (N, S, E, W).

Certified Lead Company
 Environmental Management Consulting
 W7748 County Highway V
 Lake Mills, WI 53551
 Cert #DHS-13160
 Phone: (920) 648-6343

PARTIAL LEAD INSPECTION EMC XRF DATA SUMMARY

Client: **City of West Allis**
 Building Name: **Health Dept.**
 Dates of Construction: 1977
 Date of Sampling: April 24, 2018
 XRF Serial Number: 1692

Environmental Management Consulting, Inc.
 W7748 County Highway V, Lake Mills, WI
 Phone: (920) 648-6343

ROOM/ AREA	LOCATION	PAINT/ VARNISH COLOR	SUBSTRATE	CURRENT CONDITION	A/B CLASS	COMMENTS
114 Board Rm	North Wall	Tan	Drywall	NA	B	
Hallway	At East RR's	Tan	Drywall	NA	B	
100 Clinic	South Wall	Blue	Drywall	NA	B	
128 Main Office	East Wall	Tan	Drywall	NA	B	
Men's RR - East	West Wall	Tan	Ceramic	NA	A	
130 Exam Rm	North Wall	Tan	Drywall	NA	B	

Key

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Certified Lead Company
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 W7748 County Highway V
 Lake Mills, WI 53551
 Cert #DHS-13160
 Phone: (920) 648-6343

PARTIAL LEAD INSPECTION EMC XRF DATA SUMMARY

Client: **City of West Allis**
 Building Name: **Historical Society**
 Dates of Construction: 1880's (Renovated 1980)
 Date of Sampling: May 2, 2018
 XRF Serial Number: 1692

Environmental Management Consulting, Inc.
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 Phone: (920) 648-6343

ROOM/ AREA	LOCATION	PAINT/ VARNISH COLOR	SUBSTRATE	CURRENT CONDITION	A/B CLASS	COMMENTS
Lower Level	Wall at Restrooms	White	Drywall	NA	B	
Lower Level	Wall - In Display Rm - South	White	Brick	NA	B	
Lower Level	Door Frame - Local History Library	White	Wood	NA	A	
Lower Level	Door - Local History Library	White	Wood	NA	A	
Lower Level	Wall at North Stairs	White	Drywall	NA	B	
Lower Level	Door Frame - NE Shop	White	Wood	NA	B	
Lower Level	Wall - Dining Rm Display - East	Wood Color - Varnish	Wood	NA	B	
Lower Level	Wall at Entry - Dining Rm Display - East	White	Wood	NA	B	
Lower Level	Wall - East Hall	White	Brick	NA	B	
Lower Level	Door Frame - Store Display - NW	White	Wood	NA	B	
Lower Level	Wall Men's RR	White	Drywall	NA	B	
Lower Level	Floor Men's RR	White	Ceramic	NA	B	
Lower Level	Wall Tile Men's RR	White	Ceramic	NA	B	
Main Entrance - North	Door - Main Entrance	Light Blue	Wood	NA	B	
Main Entrance - North	Wall Frame at Stairs	Light Blue	Wood	NA	A	
Upper Level - SW	Wood Floor Varnish	Clear	Wood	NA	B	

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EMC XRF DATA SUMMARY

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 Dates of Construction: 1880's (Renovated 1980)
 Date of Sampling: May 2, 2018
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ROOM/ AREA	LOCATION	PAINT/ VARNISH COLOR	SUBSTRATE	CURRENT CONDITION	A/B CLASS	COMMENTS
Upper Level - Classroom	Door Frame - North	White	Wood	NA	A	
Upper Level - NW Office	Window Frame - West	White	Wood	NA	A	
Upper Level - Main Entrance	Wall at NW Office	White	Plaster	NA	A	
Upper Level - Attic Stairs	Wall at Stairs	Light Blue	Plaster	NA	B	
Upper Level - NE Office	Wall - West	White	Plaster	NA	A	
Upper Level - NE Office	Wall Molding - South	Gray	Wood	NA	A	
Upper Level - SE Display Room	Wall - South	White	Plaster	NA	A	
Upper Level - SE Display Room	Wall - East	White	Plaster	NA	A	
Upper Level - Main Entry	Floor	Clear Varnish	Wood	NA	B	
Attic Stairs	Stairs	Red	Wood	NA	B	
Upper Level - SW Classroom	Wall - West	White	Plaster	NA	A	

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PARTIAL LEAD INSPECTION EMC XRF DATA SUMMARY

Client: **City of West Allis**
 Building Name: **Liberty Heights**
 Dates of Construction: 1938
 Date of Sampling: May 2, 2018
 XRF Serial Number: 1692

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 Phone: (920) 648-6343

ROOM/ AREA	LOCATION	PAINT/ VARNISH COLOR	SUBSTRATE	CURRENT CONDITION	A/B CLASS	COMMENTS
Upper Level	Wall - Main Lobby at Doorway	White	Wood	NA	B	
Upper Level	Wall - Main Lobby at Men's RR	White	Drywall	NA	B	
Upper Level	Floor - Main Lobby	Multi	Terrazzo	NA	B	
Upper Level - Men's RR	Wall at Sinks	White	Drywall	NA	B	
Upper Level - Men's RR	Floor under Sinks	Gray	Concrete	NA	B	
Upper Level	Window Frame - Main Lobby - North	Gray	Wood	NA	A	
Upper Level	Window Frame - Main Lobby - West	Gray	Wood	NA	A	
Upper Level	Door Frame - Main Lobby - North	Gray	Wood	NA	B	
Upper Level	Door Frame - Main Lobby - South	Gray	Wood	NA	B	
Upper Level	Window Frame - Women's RR	Gray	Wood	NA	A	
Upper Level	Window Frame - Men's RR	Gray	Wood	NA	A	
Upper Level	Window Frame - Kitchen	Gray	Wood	NA	A	
Lower Level	Exterior Door - NW	Orange	Metal	NA	B	
Lower Level	Wall - NW	Tan	Glaze Block	NA	B	
Lower Level	Floor - NW	Gray	Concrete	NA	B	
Lower Level	Wall - North	Yellow	Concrete Block	NA	A	

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 Building Name: **Liberty Heights**
 Dates of Construction: 1938
 Date of Sampling: May 2, 2018
 XRF Serial Number: 1692

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ROOM/ AREA	LOCATION	PAINT/ VARNISH COLOR	SUBSTRATE	CURRENT CONDITION	A/B CLASS	COMMENTS
Lower Level	Floor - North	Blue	Concrete	NA	B	
Lower Level	Wall - East LR	Yellow	Concrete Block	NA	A	
Lower Level	Wall - South Mid Rm	Yellow	Concrete Block	NA	B	
Lower Level	Locker Door - East LR	Yellow	Metal	NA	A	
Lower Level	Door Frame - East LR	Orange/Tan	Wood	NA	A	
Lower Level	Door - East LR	Orange	Wood	NA	A	
Lower Level	Door - Boiler Rm	Tan	Metal	NA	A	
Lower Level	Boiler - Boiler Rm	Green	Metal	NA	B	
Lower Level	Wall - Boiler Rm	Orange	Concrete	NA	B	
Lower Level	Wall - East LR	Tan	Glaze Block	NA	B	
Lower Level	Floor - East LR	Gray	Conc	NA	B	

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PARTIAL LEAD INSPECTION EMC XRF DATA SUMMARY

Client: **City of West Allis**
 Building Name: **Municipal Yards**
 Dates of Construction: 1948 (Renovated 1958 & 1977)
 Date of Sampling: April 25 & 26, 2018
 XRF Serial Number: 1692

Environmental Management Consulting, Inc.
 W7748 County Highway V, Lake Mills, WI
 Phone: (920) 648-6343

ROOM/ AREA	LOCATION	PAINT/ VARNISH COLOR	SUBSTRATE	CURRENT CONDITION	A/B CLASS	COMMENTS
Garage	SW - Floor Walkway	Gray	Concrete	NA	B	
Garage	SW - Floor Parking Lines	White	Concrete	NA	B	
Garage	SW - Door Frame	Brown	Metal	NA	B	
Garage	SW - Wall	Gray	Concrete Block	NA	B	
Garage	South Overhead Door at Water Dept.	Brown	Wood	NA	A	
Garage	South Store Rm Door Frame	Brown	Wood	NA	A	
Garage	South Store Rm Overhead Door	Brown	Wood	NA	A	
Garage	Conference Rm Door Frame	Brown	Wood	NA	B	
Garage	NW Wall	Gray	Concrete Block	NA	B	
Garage	NE - Floor Walkway	Gray	Concrete	NA	B	
Garage	NE - Overhead Door at Spray Booth	Brown	Wood	NA	A	
Garage	At Maint. Dept. Door Frame	Brown	Wood	NA	A	
Garage	At NE Men's RR Door Frame	Brown	Wood	NA	A	
Garage	At Wash Bay	Tan	Glaze Block	NA	A	
Garage	At Wash Bay	Yellow/White	Concrete Block	NA	B	
Garage	SE Wall	Gray	Concrete Block	NA	B	

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EMC XRF DATA SUMMARY

Client: **City of West Allis**
 Building Name: **Municipal Yards**
 Dates of Construction: 1948 (Renovated 1958 & 1977)
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 XRF Serial Number: 1692

Environmental Management Consulting, Inc.
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ROOM/ AREA	LOCATION	PAINT/ VARNISH COLOR	SUBSTRATE	CURRENT CONDITION	A/B CLASS	COMMENTS
Garage	South Floor Walkway	Gray	Concrete	NA	B	
Garage	South at MO Safety Barrier	Yellow	Metal	NA	B	
Garage	South at MO Safety Barrier	Orange	Metal	NA	B	
Water Dept.	South Wall	White	Concrete Block	NA	B	
Water Dept.	South Wall	Blue	Concrete Block	NA	B	
Water Dept.	Store Wall - East Wall	White	Drywall	NA	B	
Water Dept. Office Area	West Wall	Light Gray	Drywall	NA	B	
Water Dept. Office Area	East Wall	Dark Gray	Drywall	NA	B	
Water Dept. Office Area	Safe Door	Brown	Metal	NA	B	
Water Dept.	Floor - Break Rm	Gray	Concrete	NA	B	
Conference Room	At Doorway	White	Drywall	NA	B	
Men's Restroom - NW	Ceramic Wall Tile	Tan	Ceramics	NA	A	
Forestry Dept. - Break Rm	South Wall	Yellow	Concrete Block	NA	B	
Forestry Dept. - Break Rm	Door	Green	Wood	NA	B	
Buildings & Signs Dept.	West Wall	White	Concrete Block	NA	B	
Buildings & Signs Dept.	Door Frame - Store Room	Brown	Metal	NA	B	
Maint. Dept.	West Bend	White	Concrete Block	NA	B	

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EMC XRF DATA SUMMARY

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 Building Name: **Municipal Yards**
 Dates of Construction: 1948 (Renovated 1958 & 1977)
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ROOM/ AREA	LOCATION	PAINT/ VARNISH COLOR	SUBSTRATE	CURRENT CONDITION	A/B CLASS	COMMENTS
Maint. Dept.	Door Frame to Garage	Brown	Wood	NA	A	
Maint. Dept.	Security Cage	Green	Metal	NA	A	
Men's RR - Middle East	South Wall - Ceramics	Tan	Ceramic Tile	NA	A	
Small Engine Repair Shop	Overhead Door Frame	Brown	Metal	NA	A	
Large Engine Repair Shop	West Wall	Green	Concrete Block	NA	B	
Large Engine Repair Shop	Overhead Door Frame	Green	Metal	NA	A	
Inventory Dept.	West Wall	White	Concrete Block	NA	B	
Inventory Dept.	Security Cage	Green	Metal	NA	B	
Inventory Dept.	Floor at Gate Entrance	Gray	Concrete	NA	B	
Inventory Dept.	Door	Brown	Metal	NA	B	
Men's RR - Sanitation	Ceramic Wall	Tan	Ceramics	NA	A	
Sanitation Dept.	Lockers - SE	Gray	Metal	NA	B	
Sanitation Dept.	Breakroom - West Wall	Tan	Ceramics	NA	A	
Sanitation Dept.	Hallway	Tan	Drywall	NA	B	
Sanitation Dept.	South Wall	Tan	Drywall	NA	B	
Sanitation Dept.	North Wall	White	Drywall	NA	B	
Sanitation Dept. - RR	Door Frame	Brown	Wood	NA	A	

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EMC XRF DATA SUMMARY

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ROOM/ AREA	LOCATION	PAINT/ VARNISH COLOR	SUBSTRATE	CURRENT CONDITION	A/B CLASS	COMMENTS
Main Office	West Wall	Yellow	Drywall	NA	B	
Main Office - Men RR	Ceramic Wall	Yellow	Ceramics	NA	B	
Main Office	Open Room - South	Purple	Paneling	NA	B	

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PARTIAL LEAD INSPECTION EMC XRF DATA SUMMARY

Client: **City of West Allis**
 Building Name: **Senior Center**
 Dates of Construction: 1955 (Renovated 1983)
 Date of Sampling: April 24, 2018
 XRF Serial Number: 1692

Environmental Management Consulting, Inc.
 W7748 County Highway V, Lake Mills, WI
 Phone: (920) 648-6343

ROOM/ AREA	LOCATION	PAINT/ VARNISH COLOR	SUBSTRATE	CURRENT CONDITION	A/B CLASS	COMMENTS
Lower Level - Computer Lab	Near Door	White	Drywall	NA	B	
Lower Level - West Stairwell	At Stairs	White	Plaster	NA	B	
Lower Level - Kitchen	At Oven	White	Drywall	NA	B	
Lower Level - Men's RR	At Door	Green	Ceramics	NA	B	
1st Level - Main Lobby	Near Office	Blue	Drywall	NA	B	
1st Level - Cafeteria	East Wall	Green	Drywall	NA	B	
1st Level - Kitchen	North Wall	Yellow	Drywall	NA	B	
1st Level - Men's RR	East Wall	Tan/Yellow	Ceramics	NA	A	
1st Level - Men's RR	South Wall	Tan/Yellow	Ceramics	NA	A	
1st Level - Main Office	East Wall	Tan	Plaster	NA	B	
1st Level - Elevator	Elevator Frame	Brown	Metal	NA	B	
2nd Level - Men's RR	Near Door	Tan/Yellow	Ceramics	NA	A	
2nd Level - Middle Stairwell	Top Landing	White	Plaster	NA	B	
2nd Level - Middle Stairwell	Top Landing	Green	Ceramics	NA	B	
2nd Level - East Stairwell	At Door Frame	Brown	Metal	NA	B	

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PARTIAL LEAD INSPECTION EMC XRF DATA SUMMARY

Client: **City of West Allis**
 Building Name: **West Allis City Hall**
 Dates of Construction: 1968 (Renovated 1983)
 Date of Sampling: April 27, 2018 & May 8, 2018
 XRF Serial Number: 1692

Environmental Management Consulting, Inc.
 W7748 County Highway V, Lake Mills, WI
 Phone: (920) 648-6343

ROOM/ AREA	LOCATION	PAINT/ VARNISH COLOR	SUBSTRATE	CURRENT CONDITION	A/B CLASS	COMMENTS
1st Floor Hall	Terrazzo Floor at Rm 118	Gray-ish	Terrazzo	NA	B	
1st Floor Hall	Wallboard at Rm 113	Brown	Wood	NA	B	
1st Floor Hall	Wall at Clerk of Courts	Tan	Drywall	NA	B	
1st Floor Men's RR	West Wall	White	Ceramics	NA	B	
1st Floor Clerk of Courts	North Office Wall	White/Gray	Drywall	NA	B	
Lower Level Hall	Boiler Rm Door	Brown	Metal	NA	B	
Lower Level Hall	Boiler Rm Door Frame	Brown	Metal	NA	B	
Lower Level Hall	Wall at 614 Break Room	Tan	Drywall	NA	B	
Boiler Room	Floor (East)	Gray	Concrete	NA	B	
Boiler Room	Boiler #1	Gray	Metal	NA	B	
Boiler Room	Boiler #2	Gray	Metal	NA	B	
Boiler Room	Door (Elevator Equip.)	Brown	Metal	NA	B	
Boiler Room	Floor (West)	Gray	Concrete	NA	B	
Lower Level Hall	Terrazzo Floor at Boiler Rm	Gray-ish	Terrazzo	NA	B	
Penthouse	Floor at Stairs	Gray	Concrete	NA	B	
Penthouse	Door (Roof)	Brown	Metal	NA	B	

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EMC XRF DATA SUMMARY

Client: **City of West Allis**
 Building Name: **West Allis City Hall**
 Dates of Construction: 1968 (Renovated 1983)
 Date of Sampling: April 27, 2018 & May 8, 2018
 XRF Serial Number: 1692

Environmental Management Consulting, Inc.
 W7748 County Highway V, Lake Mills, WI
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ROOM/ AREA	LOCATION	PAINT/ VARNISH COLOR	SUBSTRATE	CURRENT CONDITION	A/B CLASS	COMMENTS
2nd Floor Hall	Wall at Rm 202	Tan	Drywall	NA	B	
2nd Floor Hall	Door Frame at Rm 202	Brown	Metal	NA	B	
2nd Floor Hall	Door at South Stairwell	Wood Varnish	Wood	NA	B	
Penthouse	Door at Stairs	Brown	Metal	NA	B	

Key

Calibration: Where calibration is indicated, the date and initial/final (I, F). Calibration is noted in this space

Substrate: Indicates substrate at sampling location - **B**=Block, **M**=Metal, **P**=Plaster, **D**=Drywall, **W**=Wood, **C**=Concrete, or other as described

Condition: Condition of paint at the time of sampling as established in assessment protocol - **I**=Intact, **P**=Poor, **F**=Fair

Classification: Indicates levels related to the 1.0 mg/cm² lead regulatory limit - **A**=Lead loading above 1.0 mg/cm² (lead paint), **B**=Lead loading below 1.0 mg/cm². Paint identified at <1.0 mg/cm² may still contain measurable quantities of lead.

Side Wall Identification (A-D) - Perimeter wall sides were identified with letters A, B, C and D. Side A is the entry door side. Side B, C and D are identified clockwise from side A as one faces the dwelling; if entry was unclear, directional indications were used (N, S, E, W).

Certified Lead Company
 Environmental Management Consulting
 W7748 County Highway V
 Lake Mills, WI 53551
 Cert #DHS-13160
 Phone: (920) 648-6343

SECTION IV
WATER SAMPLING

4.1 RESULTS SUMMARY CHART

**CITY OF WEST ALLIS
WATER SAMPLING**

SAMPLE DATE	SAMPLE TIME	SAMPLE NUMBER	SAMPLE BUILDING	SAMPLE LOCATION	LEAD ug/L	COPPER ug/L	NOTES
4/23/2018	8:55 AM	Pol-1	Police Dept.	Lower Level Break Room	ND	100	
4/23/2018	8:58 AM	Pol-2	Police Dept.	DF Maint. Garage	0.12	110	
4/23/2018	9:02 AM	Pol-3	Police Dept.	Ground Floor Det. Bureau - SE	0.35	190	
4/23/2018	9:05 AM	Pol-4	Senior Center	Ground Floor Det. Bureau - SE - Dispatch Kitchen	ND	120	
4/24/2018	8:51 AM	SC-1	Senior Center	Kitchen	1.2	47	
4/24/2018	10:27 AM	SC-2	Senior Center	DF 1st Floor - West	4.2	200	
4/24/2018	10:35 AM	SC-3	Senior Center	DF Lower Level	2.3	260	
4/24/2018	10:39 AM	SC-4	Senior Center	DF 2nd Floor	0.47	260	
4/24/2018	9:41 AM	HD-1	Health Dept.	DF East	0.12	42	
4/24/2018	9:44 AM	HD-2	Health Dept.	Staff Lounge	0.31	22	
4/26/2018	8:47 AM	CH-1	City Hall	DF 1st Floor at Clerks	0.16	59	
4/26/2018	8:51 AM	CH-2	City Hall	DF 2nd Floor Hallway	1.1	28	
4/26/2018	8:53 AM	CH-3	City Hall	2nd Floor Break Room - West	0.25	13	
4/26/2018	8:58 AM	CH-4	City Hall	DF Lower Level Hallway	0.16	56	
4/26/2018	9:02 AM	CH-5	City Hall	Lower Level Break Rm - East	0.39	59	
4/26/2018	9:30 AM	MY-1	Municipal Yards	DF at Elec. Shop	0.51	92	
4/26/2018	9:22 AM	MY-2	Municipal Yards	DF at Forestry Dept.	1.4	140	
4/26/2018	9:25 AM	MY-3	Municipal Yards	DF at Water Dept.	1.1	41	
4/26/2018	9:28 AM	MY-4	Municipal Yards	DF at Sanitation Dept.	0.46	160	
4/26/2018	9:19 AM	MY-5	Municipal Yards	Sink in Building & Sign	0.39	32	
4/27/2018	9:05 AM	FDA-1	Fire Dept. Admin.	2nd Floor Office Area	0.21	250	
4/27/2018	9:21 AM	FDA-2	Fire Dept. Admin.	1st Floor Break Rm	0.11	380	
4/27/2018	9:18 AM	FDA-3	Fire Dept. Admin.	LL Fitness Center	0.15	310	
4/27/2018	9:27 AM	Lib-1	Library	DF Main Lobby	ND	60	
4/27/2018	9:30 AM	Lib-2	Library	DF 1st Floor - East	ND	46	
4/27/2018	9:35 AM	Lib-3	Library	DF 2nd Floor	ND	41	
4/27/2018	9:39 AM	Lib-4	Library	Employee Break Rm	0.17	90	
5/2/2018	9:51 AM	HS-1	Historical Society	DF Lower Level	12	490	
5/2/2018	11:06 AM	LH-1	Liberty Heights	Kitchen	0.86	140	
5/2/2018	11:11 AM	LH-2	Liberty Heights	DF Upper Level	6.3	340	

*The Department of Natural Resources (DNR) Maximum Contaminate Level (MCL) for Lead is 15 ug/L.

*The Department of Natural Resources (DNR) Maximum Contaminate Level (MCL) for Copper is 1,300 ug/L.



Environmental Management Consulting, Inc.

4.2 LAB REPORTS

ANALYTICAL REPORT

Client: Environmental Management Consulting Inc
 Attn: Rob Haveman
 W7748 County Highway V
 Lake Mills, WI 53551 9643

NLS Project: 298646

NLS Customer: 10525

Fax: 920 648 4370 **Phone:** 920 648 6343

Project: City of West Allis-Fire Dept Admin Building-180559-01

FDA-1 NLS ID: 1052610

COC: 217855:1 Matrix: DW
 Collected: 04/27/18 09:05 Received: 05/01/18

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Copper, tot. recoverable as Cu by ICP-MS	250	ug/L	1	1.0*	2.0 / 1300*	05/04/18	EPA 200.8, Rev 5.4	721026460
Lead, tot. recoverable as Pb by ICP-MS	0.21	ug/L	1	0.10*	0.20 / 15*	05/04/18	EPA 200.8, Rev 5.4	721026460
Turbidity, screening - SDWA	ND	NTU	1	1.0*	1.0*	05/01/18	EPA 180.1	721026460

FDA-2 NLS ID: 1052611

COC: 217855:2 Matrix: DW
 Collected: 04/27/18 09:21 Received: 05/01/18

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Copper, tot. recoverable as Cu by ICP-MS	380	ug/L	1	1.0*	2.0 / 1300*	05/04/18	EPA 200.8, Rev 5.4	721026460
Lead, tot. recoverable as Pb by ICP-MS	[0.11]	ug/L	1	0.10*	0.20 / 15*	05/04/18	EPA 200.8, Rev 5.4	721026460
Turbidity, screening - SDWA	ND	NTU	1	1.0*	1.0*	05/01/18	EPA 180.1	721026460

FDA-3 NLS ID: 1052612

COC: 217855:3 Matrix: DW
 Collected: 04/27/18 09:18 Received: 05/01/18

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Copper, tot. recoverable as Cu by ICP-MS	310	ug/L	1	1.0*	2.0 / 1300*	05/04/18	EPA 200.8, Rev 5.4	721026460
Lead, tot. recoverable as Pb by ICP-MS	[0.15]	ug/L	1	0.10*	0.20 / 15*	05/04/18	EPA 200.8, Rev 5.4	721026460
Turbidity, screening - SDWA	ND	NTU	1	1.0*	1.0*	05/01/18	EPA 180.1	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and/or LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dilution and/or solids content.

ND = Not Detected (< LOD) LOD = Limit of Detection LOQ = Limit of Quantitation NA = Not Applicable
 DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L
 MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:



Authorized by:
 R. T. Krueger
 President

NORTHERN LAKE SERVICE, INC.
 Analytical Laboratory and Environmental Services
 400 North Lake Avenue - Crandon, WI 54520
 Ph: (715)-478-2777 Fax: (715)-478-3060

ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460
 WDATCP Laboratory Certification No. 105-330
 EPA Laboratory ID No. WI00034

Printed: 05/10/18 Page 1 of 1

Client: Environmental Management Consulting Inc
 Attn: Rob Haveman
 W7748 County Highway V
 Lake Mills, WI 53551 9643

NLS Project: 298645

NLS Customer: 10525

Fax: 920 648 4370 **Phone:** 920 648 6343

Project: City of West Allis-Health Department-180559-01

HD-1 NLS ID: 1052608

COC: 217851:1 Matrix: DW

Collected: 04/24/18 09:41 Received: 05/01/18

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Copper, tot. recoverable as Cu by ICP-MS	42	ug/L	1	1.0*	2.0 / 1300*	05/04/18	EPA 200.8, Rev 5.4	721026460
Lead, tot. recoverable as Pb by ICP-MS	[0.12]	ug/L	1	0.10*	0.20 / 15*	05/04/18	EPA 200.8, Rev 5.4	721026460
Turbidity, screening - SDWA	ND	NTU	1	1.0*	1.0*	05/01/18	EPA 180.1	721026460

HD-2 NLS ID: 1052609

COC: 217851:2 Matrix: DW

Collected: 04/24/18 09:44 Received: 05/01/18

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Copper, tot. recoverable as Cu by ICP-MS	22	ug/L	1	1.0*	2.0 / 1300*	05/04/18	EPA 200.8, Rev 5.4	721026460
Lead, tot. recoverable as Pb by ICP-MS	0.31	ug/L	1	0.10*	0.20 / 15*	05/04/18	EPA 200.8, Rev 5.4	721026460
Turbidity, screening - SDWA	ND	NTU	1	1.0*	1.0*	05/01/18	EPA 180.1	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and/or LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dilution and/or solids content.

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DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L

MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:



Authorized by:
 R. T. Krueger
 President

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ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460
 WDATCP Laboratory Certification No. 105-330
 EPA Laboratory ID No. WI00034

Printed: 05/10/18 Page 1 of 1

Client: Environmental Management Consulting Inc
 Attn: Rob Haveman
 W7748 County Highway V
 Lake Mills, WI 53551 9643

NLS Project: 298793

NLS Customer: 10525

Fax: 920 648 4370 **Phone:** 920 648 6343

Project: City of West Allis Historical Society 180559-01

HS-1 NLS ID: 1053405

COC: 214877:1 Matrix: DW

Collected: 05/02/18 09:51 Received: 05/03/18

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Copper, tot. recoverable as Cu by ICP-MS	490	ug/L	1	1.0*	2.0 / 1300*	05/04/18	EPA 200.8, Rev 5.4	721026460
Lead, tot. recoverable as Pb by ICP-MS	12	ug/L	1	0.10*	0.20 / 15*	05/04/18	EPA 200.8, Rev 5.4	721026460
Turbidity, screening - SDWA	ND	NTU	1	1.0*	1.0*	05/04/18	EPA 180.1	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and/or LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dilution and/or solids content.

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Reviewed by:



Authorized by:
 R. T. Krueger
 President

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ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460
 WDATCP Laboratory Certification No. 105-330
 EPA Laboratory ID No. WI00034

Printed: 05/10/18 Page 1 of 1

Client: Environmental Management Consulting Inc
 Attn: Rob Haveman
 W7748 County Highway V
 Lake Mills, WI 53551 9643

NLS Project: 298855

NLS Customer: 10525

Fax: 920 648 4370 **Phone:** 920 648 6343

Project: City of West Allis - Liberty Heights 170559-01

LH-1 NLS ID: 1053592

COC: 215101:1 Matrix: DW
 Collected: 05/02/18 11:06 Received: 05/03/18

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Copper, tot. recoverable as Cu by ICP-MS	140	ug/L	1	1.0*	2.0 / 1300*	05/04/18	EPA 200.8, Rev 5.4	721026460
Lead, tot. recoverable as Pb by ICP-MS	0.86	ug/L	1	0.10*	0.20 / 15*	05/04/18	EPA 200.8, Rev 5.4	721026460
Turbidity, screening - SDWA	ND	NTU	1	1.0*	1.0*	05/04/18	EPA 180.1	721026460

LH-2 NLS ID: 1053593

COC: 215101:2 Matrix: DW
 Collected: 05/02/18 11:11 Received: 05/03/18

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Copper, tot. recoverable as Cu by ICP-MS	340	ug/L	1	1.0*	2.0 / 1300*	05/04/18	EPA 200.8, Rev 5.4	721026460
Lead, tot. recoverable as Pb by ICP-MS	6.3	ug/L	1	0.10*	0.20 / 15*	05/04/18	EPA 200.8, Rev 5.4	721026460
Turbidity, screening - SDWA	ND	NTU	1	1.0*	1.0*	05/04/18	EPA 180.1	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and/or LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dilution and/or solids content.

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 MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:



Authorized by:
 R. T. Krueger
 President

ANALYTICAL REPORT

Client: Environmental Management Consulting Inc
 Attn: Rob Haveman
 W7748 County Highway V
 Lake Mills, WI 53551 9643

NLS Project: 298651

NLS Customer: 10525

Fax: 920 648 4370 **Phone:** 920 648 6343

Project: City of West Allis-Public Library-180559-01

Lib-1 NLS ID: 1052638

COC: 217856:1 Matrix: DW
 Collected: 04/27/18 09:27 Received: 05/01/18

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Copper, tot. recoverable as Cu by ICP-MS	60	ug/L	1	1.0*	2.0 / 1300*	05/04/18	EPA 200.8, Rev 5.4	721026460
Lead, tot. recoverable as Pb by ICP-MS	ND	ug/L	1	0.10*	0.20 / 15*	05/04/18	EPA 200.8, Rev 5.4	721026460
Turbidity, screening - SDWA	ND	NTU	1	1.0*	1.0*	05/01/18	EPA 180.1	721026460

Lib-2 NLS ID: 1052639

COC: 217856:2 Matrix: DW
 Collected: 04/27/18 09:30 Received: 05/01/18

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Copper, tot. recoverable as Cu by ICP-MS	46	ug/L	1	1.0*	2.0 / 1300*	05/04/18	EPA 200.8, Rev 5.4	721026460
Lead, tot. recoverable as Pb by ICP-MS	ND	ug/L	1	0.10*	0.20 / 15*	05/04/18	EPA 200.8, Rev 5.4	721026460
Turbidity, screening - SDWA	ND	NTU	1	1.0*	1.0*	05/01/18	EPA 180.1	721026460

Lib-3 NLS ID: 1052640

COC: 217856:3 Matrix: DW
 Collected: 04/27/18 09:35 Received: 05/01/18

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Copper, tot. recoverable as Cu by ICP-MS	41	ug/L	1	1.0*	2.0 / 1300*	05/04/18	EPA 200.8, Rev 5.4	721026460
Lead, tot. recoverable as Pb by ICP-MS	ND	ug/L	1	0.10*	0.20 / 15*	05/04/18	EPA 200.8, Rev 5.4	721026460
Turbidity, screening - SDWA	ND	NTU	1	1.0*	1.0*	05/01/18	EPA 180.1	721026460

Lib-4 NLS ID: 1052641

COC: 217856:4 Matrix: DW
 Collected: 04/27/18 09:39 Received: 05/01/18

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Copper, tot. recoverable as Cu by ICP-MS	90	ug/L	1	1.0*	2.0 / 1300*	05/04/18	EPA 200.8, Rev 5.4	721026460
Lead, tot. recoverable as Pb by ICP-MS	[0.17]	ug/L	1	0.10*	0.20 / 15*	05/04/18	EPA 200.8, Rev 5.4	721026460
Turbidity, screening - SDWA	ND	NTU	1	1.0*	1.0*	05/01/18	EPA 180.1	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and/or LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dilution and/or solids content.

ND = Not Detected (< LOD) LOD = Limit of Detection LOQ = Limit of Quantitation NA = Not Applicable
 DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L
 MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:



Authorized by:
 R. T. Krueger
 President

ANALYTICAL REPORT

Client: Environmental Management Consulting Inc
 Attn: Rob Haveman
 W7748 County Highway V
 Lake Mills, WI 53551 9643

NLS Project: 298650

NLS Customer: 10525

Fax: 920 648 4370 **Phone:** 920 648 6343

Project: City of West Allis-Municipal Yards-180559-01

MY-1 NLS ID: 1052633

COC: 217853:1 Matrix: DW
 Collected: 04/26/18 09:30 Received: 05/01/18

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Copper, tot. recoverable as Cu by ICP-MS	92	ug/L	1	1.0*	2.0 / 1300*	05/04/18	EPA 200.8, Rev 5.4	721026460
Lead, tot. recoverable as Pb by ICP-MS	0.51	ug/L	1	0.10*	0.20 / 15*	05/04/18	EPA 200.8, Rev 5.4	721026460
Turbidity, screening - SDWA	ND	NTU	1	1.0*	1.0*	05/01/18	EPA 180.1	721026460

MY-2 NLS ID: 1052634

COC: 217853:2 Matrix: DW
 Collected: 04/26/18 09:22 Received: 05/01/18

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Copper, tot. recoverable as Cu by ICP-MS	140	ug/L	1	1.0*	2.0 / 1300*	05/04/18	EPA 200.8, Rev 5.4	721026460
Lead, tot. recoverable as Pb by ICP-MS	1.4	ug/L	1	0.10*	0.20 / 15*	05/04/18	EPA 200.8, Rev 5.4	721026460
Turbidity, screening - SDWA	ND	NTU	1	1.0*	1.0*	05/01/18	EPA 180.1	721026460

MY-3 NLS ID: 1052635

COC: 217853:3 Matrix: DW
 Collected: 04/26/18 09:25 Received: 05/01/18

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Copper, tot. recoverable as Cu by ICP-MS	41	ug/L	1	1.0*	2.0 / 1300*	05/04/18	EPA 200.8, Rev 5.4	721026460
Lead, tot. recoverable as Pb by ICP-MS	1.1	ug/L	1	0.10*	0.20 / 15*	05/04/18	EPA 200.8, Rev 5.4	721026460
Turbidity, screening - SDWA	ND	NTU	1	1.0*	1.0*	05/01/18	EPA 180.1	721026460

MY-4 NLS ID: 1052636

COC: 217853:4 Matrix: DW
 Collected: 04/26/18 09:28 Received: 05/01/18

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Copper, tot. recoverable as Cu by ICP-MS	160	ug/L	1	1.0*	2.0 / 1300*	05/04/18	EPA 200.8, Rev 5.4	721026460
Lead, tot. recoverable as Pb by ICP-MS	0.46	ug/L	1	0.10*	0.20 / 15*	05/04/18	EPA 200.8, Rev 5.4	721026460
Turbidity, screening - SDWA	ND	NTU	1	1.0*	1.0*	05/01/18	EPA 180.1	721026460

MY-5 NLS ID: 1052637

COC: 217853:5 Matrix: DW
 Collected: 04/26/18 09:19 Received: 05/01/18

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Copper, tot. recoverable as Cu by ICP-MS	32	ug/L	1	1.0*	2.0 / 1300*	05/04/18	EPA 200.8, Rev 5.4	721026460
Lead, tot. recoverable as Pb by ICP-MS	0.39	ug/L	1	0.10*	0.20 / 15*	05/04/18	EPA 200.8, Rev 5.4	721026460
Turbidity, screening - SDWA	ND	NTU	1	1.0*	1.0*	05/01/18	EPA 180.1	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and/or LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dilution and/or solids content.

ND = Not Detected (< LOD) LOD = Limit of Detection LOQ = Limit of Quantitation NA = Not Applicable

DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L
 MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:



Authorized by:
 R. T. Krueger
 President

ANALYTICAL REPORT

Client: Environmental Management Consulting Inc
 Attn: Rob Haveman
 W7748 County Highway V
 Lake Mills, WI 53551 9643

NLS Project: 298606

NLS Customer: 10525

Fax: 920 648 4370 **Phone:** 920 648 6343

Project: City of West Allis-Police Municipal Building-180559-01

PoI-1 NLS ID: 1052435

COC: 217848:1 Matrix: DW
 Collected: 04/23/18 08:55 Received: 05/01/18

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Copper, tot. recoverable as Cu by ICP-MS	100	ug/L	1	1.0*	2.0 / 1300*	05/04/18	EPA 200.8, Rev 5.4	721026460
Lead, tot. recoverable as Pb by ICP-MS	ND	ug/L	1	0.10*	0.20 / 15*	05/04/18	EPA 200.8, Rev 5.4	721026460
Turbidity, screening - SDWA	ND	NTU	1	1.0*	1.0*	05/01/18	EPA 180.1	721026460

PoI-2 NLS ID: 1052436

COC: 217848:2 Matrix: DW
 Collected: 04/23/18 08:58 Received: 05/01/18

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Copper, tot. recoverable as Cu by ICP-MS	110	ug/L	1	1.0*	2.0 / 1300*	05/04/18	EPA 200.8, Rev 5.4	721026460
Lead, tot. recoverable as Pb by ICP-MS	[0.12]	ug/L	1	0.10*	0.20 / 15*	05/04/18	EPA 200.8, Rev 5.4	721026460
Turbidity, screening - SDWA	ND	NTU	1	1.0*	1.0*	05/01/18	EPA 180.1	721026460

PoI-3 NLS ID: 1052437

COC: 217848:3 Matrix: DW
 Collected: 04/23/18 09:02 Received: 05/01/18

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Copper, tot. recoverable as Cu by ICP-MS	190	ug/L	1	1.0*	2.0 / 1300*	05/04/18	EPA 200.8, Rev 5.4	721026460
Lead, tot. recoverable as Pb by ICP-MS	0.35	ug/L	1	0.10*	0.20 / 15*	05/04/18	EPA 200.8, Rev 5.4	721026460
Turbidity, screening - SDWA	ND	NTU	1	1.0*	1.0*	05/01/18	EPA 180.1	721026460

PoI-4 NLS ID: 1052438

COC: 217848:4 Matrix: DW
 Collected: 04/23/18 09:05 Received: 05/01/18

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Copper, tot. recoverable as Cu by ICP-MS	120	ug/L	1	1.0*	2.0 / 1300*	05/04/18	EPA 200.8, Rev 5.4	721026460
Lead, tot. recoverable as Pb by ICP-MS	ND	ug/L	1	0.10*	0.20 / 15*	05/04/18	EPA 200.8, Rev 5.4	721026460
Turbidity, screening - SDWA	ND	NTU	1	1.0*	1.0*	05/01/18	EPA 180.1	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and/or LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dilution and/or solids content.

ND = Not Detected (< LOD) LOD = Limit of Detection LOQ = Limit of Quantitation NA = Not Applicable
 DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L
 MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:



Authorized by:
 R. T. Krueger
 President

ANALYTICAL REPORT

Client: Environmental Management Consulting Inc
 Attn: Rob Haveman
 W7748 County Highway V
 Lake Mills, WI 53551 9643

NLS Project: 298620

NLS Customer: 10525

Fax: 920 648 4370 **Phone:** 920 648 6343

Project: City of West Allis-Senior Center 180559-01

SC-1 NLS ID: 1052471

COC: 217849:1 Matrix: DW

Collected: 04/24/18 08:51 Received: 05/01/18

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Copper, tot. recoverable as Cu by ICP-MS	47	ug/L	1	1.0*	2.0 / 1300*	05/04/18	EPA 200.8, Rev 5.4	721026460
Lead, tot. recoverable as Pb by ICP-MS	1.2	ug/L	1	0.10*	0.20 / 15*	05/04/18	EPA 200.8, Rev 5.4	721026460
Turbidity, screening - SDWA	ND	NTU	1	1.0*	1.0*	05/01/18	EPA 180.1	721026460

SC-2 NLS ID: 1052472

COC: 217849:2 Matrix: DW

Collected: 04/24/18 10:27 Received: 05/01/18

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Copper, tot. recoverable as Cu by ICP-MS	200	ug/L	1	1.0*	2.0 / 1300*	05/04/18	EPA 200.8, Rev 5.4	721026460
Lead, tot. recoverable as Pb by ICP-MS	4.2	ug/L	1	0.10*	0.20 / 15*	05/04/18	EPA 200.8, Rev 5.4	721026460
Turbidity, screening - SDWA	ND	NTU	1	1.0*	1.0*	05/01/18	EPA 180.1	721026460

SC-3 NLS ID: 1052473

COC: 217849:3 Matrix: DW

Collected: 04/24/18 10:35 Received: 05/01/18

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Copper, tot. recoverable as Cu by ICP-MS	260	ug/L	1	1.0*	2.0 / 1300*	05/04/18	EPA 200.8, Rev 5.4	721026460
Lead, tot. recoverable as Pb by ICP-MS	2.3	ug/L	1	0.10*	0.20 / 15*	05/04/18	EPA 200.8, Rev 5.4	721026460
Turbidity, screening - SDWA	ND	NTU	1	1.0*	1.0*	05/01/18	EPA 180.1	721026460

SC-4 NLS ID: 1052474

COC: 217849:4 Matrix: DW

Collected: 04/24/18 10:39 Received: 05/01/18

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Copper, tot. recoverable as Cu by ICP-MS	260	ug/L	1	1.0*	2.0 / 1300*	05/04/18	EPA 200.8, Rev 5.4	721026460
Lead, tot. recoverable as Pb by ICP-MS	0.47	ug/L	1	0.10*	0.20 / 15*	05/04/18	EPA 200.8, Rev 5.4	721026460
Turbidity, screening - SDWA	ND	NTU	1	1.0*	1.0*	05/01/18	EPA 180.1	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and/or LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dilution and/or solids content.

ND = Not Detected (< LOD) LOD = Limit of Detection LOQ = Limit of Quantitation NA = Not Applicable

DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L

MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:



Authorized by:
 R. T. Krueger
 President

ANALYTICAL REPORT

Client: Environmental Management Consulting Inc
 Attn: Rob Haveman
 W7748 County Highway V
 Lake Mills, WI 53551 9643

NLS Project: 298648

NLS Customer: 10525

Fax: 920 648 4370 Phone: 920 648 6343

Project: City of West Allis-City Hall-180559-01

CH-1 NLS ID: 1052619

COC: 217852:1 Matrix: DW

Collected: 04/26/18 08:47 Received: 05/01/18

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Copper, tot. recoverable as Cu by ICP-MS	59	ug/L	1	1.0*	2.0 / 1300*	05/04/18	EPA 200.8, Rev 5.4	721026460
Lead, tot. recoverable as Pb by ICP-MS	[0.16]	ug/L	1	0.10*	0.20 / 15*	05/04/18	EPA 200.8, Rev 5.4	721026460
Turbidity, screening - SDWA	ND	NTU	1	1.0*	1.0*	05/01/18	EPA 180.1	721026460

CH-2 NLS ID: 1052620

COC: 217852:2 Matrix: DW

Collected: 04/26/18 08:51 Received: 05/01/18

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Copper, tot. recoverable as Cu by ICP-MS	28	ug/L	1	1.0*	2.0 / 1300*	05/04/18	EPA 200.8, Rev 5.4	721026460
Lead, tot. recoverable as Pb by ICP-MS	1.1	ug/L	1	0.10*	0.20 / 15*	05/04/18	EPA 200.8, Rev 5.4	721026460
Turbidity, screening - SDWA	ND	NTU	1	1.0*	1.0*	05/01/18	EPA 180.1	721026460

CH-3 NLS ID: 1052621

COC: 217852:3 Matrix: DW

Collected: 04/26/18 08:53 Received: 05/01/18

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Copper, tot. recoverable as Cu by ICP-MS	13	ug/L	1	1.0*	2.0 / 1300*	05/04/18	EPA 200.8, Rev 5.4	721026460
Lead, tot. recoverable as Pb by ICP-MS	0.25	ug/L	1	0.10*	0.20 / 15*	05/04/18	EPA 200.8, Rev 5.4	721026460
Turbidity, screening - SDWA	ND	NTU	1	1.0*	1.0*	05/01/18	EPA 180.1	721026460

CH-4 NLS ID: 1052622

COC: 217852:4 Matrix: DW

Collected: 04/26/18 08:58 Received: 05/01/18

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Copper, tot. recoverable as Cu by ICP-MS	56	ug/L	1	1.0*	2.0 / 1300*	05/04/18	EPA 200.8, Rev 5.4	721026460
Lead, tot. recoverable as Pb by ICP-MS	[0.16]	ug/L	1	0.10*	0.20 / 15*	05/04/18	EPA 200.8, Rev 5.4	721026460
Turbidity, screening - SDWA	ND	NTU	1	1.0*	1.0*	05/01/18	EPA 180.1	721026460

CH-5 NLS ID: 1052623

COC: 217852:5 Matrix: DW

Collected: 04/26/18 09:02 Received: 05/01/18

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Copper, tot. recoverable as Cu by ICP-MS	59	ug/L	1	1.0*	2.0 / 1300*	05/04/18	EPA 200.8, Rev 5.4	721026460
Lead, tot. recoverable as Pb by ICP-MS	0.39	ug/L	1	0.10*	0.20 / 15*	05/04/18	EPA 200.8, Rev 5.4	721026460
Turbidity, screening - SDWA	ND	NTU	1	1.0*	1.0*	05/01/18	EPA 180.1	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and/or LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dilution and/or solids content.

ND = Not Detected (< LOD) LOD = Limit of Detection LOQ = Limit of Quantitation NA = Not Applicable

DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L

MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:



Authorized by:
 R. T. Krueger
 President

SAMPLE COLLECTION AND CHAIN OF CUSTODY RECORD

NORTHERN LAKE SERVICE, INC.

Analytical Laboratory and Environmental Services

400 North Lake Avenue • Crandon, WI 54520-1298

Tel: (715) 478-2777 • Fax: (715) 478-3060

CLIENT EMC	
ADDRESS W9948 Cty Hwy V	
CITY Lake Mills	STATE WI
ZIP 53551	
PROJECT DESCRIPTION / NO. City of West Allis	QUOTATION NO. 170559-01
DNR FID # Liberty Heights	DNR LICENSE #
CONTACT	PHONE
PURCHASE ORDER NO.	FAX

Wisconsin DNR cert ID
721026460 (Cran) / 268533760 (Wauk)
Wisconsin DATCP ID
105-000330 (Cran) / 105-000479 (Wauk)

MATRIX:
SW = surface water
WW = waste water
GW = groundwater
DW = drinking water
TIS = tissue
AIR = air
SOIL = soil
SED = sediment
PROD = product
SL = sludge
OTHER

USE BOXES BELOW: Indicate Y or N if GW Sample is field filtered.
Indicate G or C if WW Sample is Grab or Composite.

ANALYZE PER ORDER OF ANALYSIS X Lead/COPPER																				
---	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--



NO. **215101**

ITEM NO.	NLS LAB. NO.	SAMPLE ID	COLLECTION		MATRIX (See above)	ANALYZE PER ORDER OF ANALYSIS	PARAMETER										COLLECTION REMARKS (i.e. DNR Well ID #)							
			DATE	TIME																				
1.	1053592	LH-1	5/2/18	1106am	DW	X																		
2.	593	LH-2	"	1111 am	"	X																		
3.																								
4.																								
5.																								
6.																								
7.																								
8.																								
9.																								
10.																								

ONE SAMPLE PER LINE

COLLECTED BY (signature) <i>[Signature]</i>	CUSTODY SEAL NO. (IF ANY)	DATE/TIME 5/2/18
RELINQUISHED BY (signature) <i>[Signature]</i>	RECEIVED BY (signature) <i>[Signature]</i>	DATE/TIME 5/2/18
DISPATCHED BY (signature)	METHOD OF TRANSPORT	DATE/TIME

REPORT TO

RECEIVED AT NLS BY (signature) <i>[Signature]</i>	DATE/TIME 5-3-18 9:30	CONDITION on ice	TEMP.
REMARKS & OTHER INFORMATION			
COOLER #	WDNR FACILITY NUMBER	E-MAIL ADDRESS	

INVOICE TO

IMPORTANT:

1. TO MEET REGULATORY REQUIREMENTS, THIS FORM **MUST** BE COMPLETED IN DETAIL AND INCLUDED IN THE COOLER CONTAINING THE SAMPLES DESCRIBED.
2. PLEASE USE ONE LINE PER SAMPLE, **NOT** PER BOTTLE.
3. RETURN THIS FORM WITH SAMPLES - CLIENT MAY KEEP YELLOW COPY.
4. PARTIES COLLECTING SAMPLE, LISTED AS **REPORT TO** AND LISTED AS **INVOICE TO** AGREE TO STANDARD TERMS & CONDITIONS ON REVERSE.

SAMPLE COLLECTION AND CHAIN OF CUSTODY RECORD

NORTHERN LAKE SERVICE, INC.

Analytical Laboratory and Environmental Services

400 North Lake Avenue • Crandon, WI 54520-1298

Tel: (715) 478-2777 • Fax: (715) 478-3060

CLIENT EMC	
ADDRESS W-148 Hwy V	
CITY Lake Mills WI	STATE WI
ZIP 53551	
PROJECT DESCRIPTION / NO. City of West Allis	QUOTATION NO. 180559-01
DNR PID # West Allis City Hall	DNR LICENSE #
CONTACT	PHONE
PURCHASE ORDER NO.	FAX

Wisconsin DNR cert ID
721026460 (Cran) / 268533760 (Wauk)

Wisconsin DATCP ID
105-000330 (Cran) / 105-000479 (Wauk)

MATRIX:
 SW = surface water
 WW = waste water
 GW = groundwater
 DW = drinking water
 TIS = tissue
 AIR = air
 SOIL = soil
 SED = sediment
 PROD = product
 SL = sludge
 OTHER

USE BOXES BELOW: Indicate Y or N if GW Sample is field filtered.
Indicate G or C if WW Sample is Grab or Composite.

ANALYZE PER ORDER OF ANALYSIS Lead/Copper																				



NO. **217852**

ITEM NO.	NLS LAB. NO.	SAMPLE ID	COLLECTION		MATRIX (See above)	ANALYZE PER ORDER OF ANALYSIS	PARAMETER										COLLECTION REMARKS (i.e. DNR Well ID #)				
			DATE	TIME																	
1.	1052619	CH-1	4/26/18	847 am	DW	X															
2.	620	CH-2	↓	851	↓	X															
3.	621	CH-3	↓	853	↓	X															
4.	622	CH-4	↓	858	↓	X															
5.	623	CH-5	↓	902	↓	X															
6.																					
7.																					
8.																					
9.																					
10.																					

COLLECTED BY (signature) <i>[Signature]</i>	CUSTODY SEAL NO. (IF ANY)	DATE/TIME 4/26/18
RELINQUISHED BY (signature) <i>[Signature]</i>	RECEIVED BY (signature) <i>[Signature]</i>	DATE/TIME 4/30/18
DISPATCHED BY (signature) <i>[Signature]</i>	METHOD OF TRANSPORT	DATE/TIME

REPORT TO

RECEIVED AT NLS BY (signature) <i>Karla Blume</i>	DATE/TIME 5-1-18 10:00	CONDITION OK	TEMP.
COOLER #	REMARKS & OTHER INFORMATION		
PRESERVATIVE: NP = no preservative S = sulfuric acid	N = nitric acid Z = zinc acetate M = methanol	OH = sodium hydroxide HA = hydrochloric & ascorbic acid H = hydrochloric acid	WDNR FACILITY NUMBER
		E-MAIL ADDRESS	

INVOICE TO

1. TO MEET REGULATORY REQUIREMENTS, THIS FORM **MUST** BE COMPLETED IN DETAIL AND INCLUDED IN THE COOLER CONTAINING THE SAMPLES DESCRIBED.
2. PLEASE USE ONE LINE PER SAMPLE, **NOT** PER BOTTLE.
3. RETURN THIS FORM WITH SAMPLES - CLIENT MAY KEEP YELLOW COPY.
4. PARTIES COLLECTING SAMPLE, LISTED AS **REPORT TO** AND LISTED AS **INVOICE TO** AGREE TO STANDARD TERMS & CONDITIONS ON REVERSE.

IMPORTANT:

SECTION V
AIR MONITORING/IAQ

5.1 CARBON MONOXIDE (CO)

Carbon Monoxide (CO): Carbon Monoxide (CO) is usually present from the source of incomplete combustion from a boiler, hot water heater, or production activities. The Canadian exposure guidelines for residential IAQ recommends levels of CO be maintained at <11 ppm and ASHRAE recommends indoor CO concentrations be maintained at <9 ppm. The World Health Organization (WHO) recommends levels of CO to be maintained between 2 – 5 ppm. The results of the CO monitoring indicated the following:

5.1.1 **TABLE 1: CARBON MONOXIDE SAMPLE ANALYSIS**

TSI#	Log #	Location	CO Max	CO Min	CO Avg.
1	1	PD 1	0.0 ppm	0.0 ppm	0.0 ppm
1	2	HD 1	0.0 ppm	0.0 ppm	0.0 ppm
1	3	MY 1	4.6 ppm	0.0 ppm	1.2 ppm
1	4	CH 1	0.0 ppm	0.0 ppm	0.0 ppm
1	5	LB 1	0.0 ppm	0.0 ppm	0.0 ppm
1	6	FS 21	0.0 ppm	0.0 ppm	0.0 ppm
2	1	PD 2	0.0 ppm	0.0 ppm	0.0 ppm
2	2	HD 2	0.0 ppm	0.0 ppm	0.0 ppm
2	3	MY 2	0.0 ppm	0.0 ppm	0.6 ppm
2	4	CH 2	0.0 ppm	0.0 ppm	0.0 ppm
2	5	LB 2	0.0 ppm	0.0 ppm	0.0 ppm
2	6	FS 22	0.0 ppm	0.0 ppm	0.0 ppm
3	1	PD 3	0.3 ppm	0.0 ppm	0.1 ppm
3	2	SC 1	0.2 ppm	0.0 ppm	0.0 ppm
3	3	MY 3	4.4 ppm	0.0 ppm	0 ppm
3	4	CH 3	0.1 ppm	0.0 ppm	0.0 ppm
3	5	LB 3	0.1 ppm	0.0 ppm	0.0 ppm
3	6	FS 31	7.5 ppm	0.0 ppm	0.0 ppm
4	1	PD 4	4.8 ppm	3.3 ppm	3.7 ppm
4	2	SC 2	4.5 ppm	2.9 ppm	3.2 ppm
4	3	MY 4	7.3 ppm	2.8 ppm	3.1 ppm
4	4	CH 4	3.7 ppm	2.7 ppm	2.9 ppm
4	5	FS 1t	3.2 ppm	2.6 ppm	2.7 ppm
4	6	FS 32	8.9 ppm	3.8 ppm	4.9 ppm

5.2 CARBON MONOXIDE (CO₂)

Carbon Dioxide (CO₂): All CO concentrations were well below all regulatory and recommended standards. Carbon dioxide measurements are used as method of “seeing” the air exchange rate and ventilation effectiveness of a building. Carbon dioxide is generated by the occupants, who exhale at approximately 40,000 parts per million (ppm). Outside levels of carbon dioxide in Wisconsin range from 300 ppm to 500 ppm with an average of approximately 400 ppm.

One of the changes made by ANSI/ ASHRAE was to remove the carbon dioxide maximum limit of 1,000 ppm because people were misusing the carbon dioxide limit as a contaminant rather than as a surrogate for checking ventilation. The carbon dioxide level that now indicates generally acceptable ventilation is a delta value (difference) between indoors and outdoors and this difference is 707 ppm, which equates to 15 cubic feet/minute of outside air/person (CFM/p).

If carbon dioxide were considered a contaminant, rather than a tracer gas used for ventilation checks, federal regulations under OSHA would limit exposure to 10,000 ppm averaged over eight hours or 30,000 ppm for any one 15-minute period. NIOSH would recommend limiting exposure to 5,000 ppm averaged over eight hours or 30,000 ppm for any one 15-minute period. Based on the outside concentration of 390 ppm, an acceptable indoor concentration of 1,097 ppm or less would be considered generally acceptable. The results of the CO₂ monitoring indicated the following:

5.2.1 **TABLE 2: CARBON DIOXIDE SAMPLE ANALYSIS**

TSI#	Log #	Location	CO ₂ Max	CO ₂ Min	CO ₂ Avg.
1	1	PD 1	646 ppm	382 ppm	433 ppm
1	2	HD 1	996 ppm	402 ppm	580 ppm
1	3	MY 1	1188 ppm	340 ppm	418 ppm
1	4	CH 1	774 ppm	340 ppm	418 ppm
1	5	LB 1	774 ppm	340 ppm	418 ppm
1	6	FS 21	774 ppm	340 ppm	418 ppm
2	1	PD 2	630 ppm	170 ppm	228 ppm
2	2	HD 2	808 ppm	200 ppm	567 ppm
2	3	MY 2	949 ppm	199 ppm	414 ppm
2	4	CH 2	2,195 ppm	145 ppm	183 ppm
2	5	LB 2	385 ppm	187 ppm	255 ppm
2	6	FS 22	1,335 ppm	156 ppm	238 ppm
3	1	PD 3	821ppm	512 ppm	545 ppm
3	2	SC 1	1,003 ppm	402 ppm	559 ppm
3	3	MY 3	1,097 ppm	399 ppm	462 ppm
3	4	CH 3	515 ppm	404 ppm	437 ppm
3	5	LB 3	745 ppm	448 ppm	572 ppm
3	6	FS 31	2,208 ppm	635 ppm	747 ppm
4	1	PD 4	751 ppm	506 ppm	580 ppm
4	2	SC 2	809 ppm	462 ppm	562 ppm
4	3	MY 4	916 ppm	457 ppm	516 ppm
4	4	CH 4	650 ppm	452 ppm	497 ppm
4	5	FS 1t	1,142 ppm	447 ppm	494 ppm
4	6	FS 32	976 ppm	633 ppm	742 ppm

5.3 TEMPERATURE & RELATIVE HUMIDITY (RH)

Temperature & Relative Humidity (RH): The American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) thermal comfort guideline 55-1992, describes the temperature and relative humidity ranges that are comfortable to 80% of workers engaged in largely sedentary activities, e.g., office workers. The following table contains the recommended comfort guidelines.

5.3.1 **TABLE 3: RECOMMENDED RANGES OF TEMPERATURE AND RELATIVE HUMIDITY**

Source: Adapted from ASHRAE Standard 55-1992, Thermal Environmental Conditions For Human Occupancy

Relative Humidity	Winter Temperature	Summer Temperature
30%	68.5 ⁰ F – 75.5 ⁰ F	74.0 ⁰ F – 80.0 ⁰ F
40%	68.0 ⁰ F – 75.0 ⁰ F	73.5 ⁰ F – 80.0 ⁰ F
50%	68.0 ⁰ F – 74.5 ⁰ F	73.0 ⁰ F – 79.0 ⁰ F
60%	67.5 ⁰ F – 74.0 ⁰ F	73.0 ⁰ F – 78.5 ⁰ F

5.3.2 **TABLE 4: TEMPERATURE SAMPLE ANALYSIS**

TSI#	Log #	Location	Temp Max	Temp Min	Temp Avg
1	1	PD 1	75.5 ^o f	70.6 ^o f	74.4 ^o f
1	2	HD 1	75.7 ^o f	72.6 ^o f	74.0 ^o f
1	3	MY 1	77.7 ^o f	66.4 ^o f	72.8 ^o f
1	4	CH 1	74.5 ^o f	70.6 ^o f	72.9 ^o f
1	5	LB 1	73.7 ^o f	71.3 ^o f	72.5 ^o f
1	6	FS 21	72.8 ^o f	68.2 ^o f	70.5 ^o f
2	1	PD 2	72.4 ^o f	70.7 ^o f	71.3 ^o f
2	2	HD 2	74.5 ^o f	72.4 ^o f	73.2 ^o f
2	3	MY 2	77.4 ^o f	70.4 ^o f	73.1 ^o f
2	4	CH 2	74.3 ^o f	70.5 ^o f	71.6 ^o f
2	5	LB 2	76.0 ^o f	72.6 ^o f	74.0 ^o f
2	6	FS 22	73.5 ^o f	68.5 ^o f	71.6 ^o f
3	1	PD 3	74.3 ^o f	70.6 ^o f	73.9 ^o f
3	2	SC 1	78.1 ^o f	74.5 ^o f	77.1 ^o f
3	3	MY 3	76.1 ^o f	72.0 ^o f	73.9 ^o f
3	4	CH 3	73.4 ^o f	68.3 ^o f	70.9 ^o f
3	5	LB 3	74.1 ^o f	69.8 ^o f	71.8 ^o f
3	6	FS 31	79.7 ^o f	72.7 ^o f	76.3 ^o f
4	1	PD 4	73.2 ^o f	71.6 ^o f	72.5 ^o f
4	2	SC 2	76.5 ^o f	71.6 ^o f	73.8 ^o f
4	3	MY 4	73.6 ^o f	70.2 ^o f	72.0 ^o f
4	4	CH 4	72.7 ^o f	69.6 ^o f	71.1 ^o f
4	5	FS 1t	74.1 ^o f	68.7 ^o f	70.7 ^o f
4	6	FS 32	75.2 ^o f	65.1 ^o f	72.0 ^o f

5.3.3 **TABLE 5: RELATIVE HUMIDITY SAMPLE ANALYSIS**

TSI#	Log #	Location	%rH Max	%rH Min	%rh Avg
1	1	PD 1	19.7%	7.3%	9.7%
1	2	HD 1	29.2%	15.7%	23.9%
1	3	MY 1	32.7%	19.4%	23.6%
1	4	CH 1	31.5%	12.3%	18.2%
1	5	LB 1	22.5%	11.9%	16.4%
1	6	FS 21	30.7%	9.0%	12.1%
2	1	PD 2	23.9%	16.9%	19.4%
2	2	HD 2	40.3%	25.7%	32.7%
2	3	MY 2	33.7%	26.5%	28.6%
2	4	CH 2	41.0%	23.2%	26.3%
2	5	LB 2	24.5%	21.4%	23.3%
2	6	FS 22	23.7%	14.9%	17.8%
3	1	PD 3	26.4%	1.2%	17.1%
3	2	SC 1	31.2%	21.1%	25.8%
3	3	MY 3	27.8%	16.6%	19.7%
3	4	CH 3	35.6%	20.9%	25.1%
3	5	LB 3	26.3%	22.0%	24.1%
3	6	FS 31	27.5%	18.1%	20.9%
4	1	PD 4	21.2%	14.7%	16.3%
4	2	SC 2	32.0%	20.0%	27.8%
4	3	MY 4	26.8%	18.0%	19.7%
4	4	CH 4	34.8%	19.3%	25.3%
4	5	FS 1t	25.6%	14.0%	20.3%
4	6	FS 32	31.1%	18.9%	22.0%

5.4 RECOMMENDATIONS

Based on the visual inspection and sampling conducted, EMC would recommend the following:

AIR MONITORING**LOCATION KEY**

PD1	Police Headquarters - Break Room - LL
PD2	Police Headquarters - Assembly Room West
PD3	Police Headquarters - Records Bureau
PD4	Police Headquarters - Detective Bureau - Southeast
HD1	Health Department - Clinic
HD2	Health Department - East Office Area
SC1	Senior Center - Main Office
SC2	Senior Center - Cafeteria
MY1	Municipal Yards - Garage Area
MY2	Municipal Yards - Main Office
MY3	Municipal Yards - Sanitation Office
MY4	Municipal Yards - Water Department
CH1	City Hall - Engineering - 2nd Floor
CH2	City Hall - Building Inspection - 2nd Floor
CH3	City Hall - Clerk of Courts - 1st Floor
CH4	City Hall - Break Room - LL
LB1	Library - Upper Level
LB2	Library - Lower Level at Main Desk
LB3	Library - Lower Level East
FS1t	Fire Station No. 1 - Break/Day Room 2nd Floor
FS21	Fire Station No. 2 - Break Room - 1st Floor
FS22	Fire Station No. 2 - Day Room - 2nd Floor
FS31	Fire Station No. 3 - Break Room
FS32	Fire Station No. 3 - Day Room

APPENDICES

METHODS

PLM

XRF

WATER