Appendix - Environmental Evaluation





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. W7748 COUNTY HIGHWAY V LAKE MILLS, WI 53551

TABLE OF CONTENTS

INTRODUCTION/SURVEY RATIONALE

SECTION I		EXECUTIVE SUMMARIES
		Electric Sub-Stations Farmers Market Fire Department Administration Building Fire Station No. 1 Fire Station No. 2 Fire Station No. 3 Health Department Historical Society Klenz Park Liberty Heights Library Municipal Yards Police Headquarters Building Reservoir Park Senior Center Storm Water Pumping Station West Allis City Hall
SECTION II		ASBESTOS
2.1		Bulk Charts and Lab Results
SECTION III		<u>LEAD</u>
3.1 3.2		Lead Paint Chip Analysis XRF Data Summaries
SECTION IV		WATER SAMPLING
4.1 4.2		Results Summary Chart Lab Reports
SECTION V		AIR MONITORING/IAQ
5.1	5.1.1	Carbon Monoxide (CO) Table 1
5.2	5.2.1	Carbon Dioxide (CO ₂) Table 2
5.3	J. 2. 1	Temperature & Relative Humidity (RH)

5.3.1 Table 3

5.3.2 Table 4

5.3.3 Table 5

5.4 Recommendations

APPENDICES

Methods

-PLM

-XRF

-Water

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

Mut/ House

MM MI

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
 - o None
- Long-Term Planning for Hazardous Materials

o Liberty Heights: \$1,914-\$3,190

o Honey Creek: \$7,116-\$11,860

o 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)
 - o Drop Ceiling Tiles (Office)
 - o Ceramics (Restrooms)
 - o Flooring & Mastic
 - o 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.

- 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
 - o \$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)
 - o Plaster (Some original may exist in inaccessible areas.)
 - o Ceramics (2003)
 - o Drywall & Joint Compound (2003)
 - o Drop Ceiling Tiles (2003)
 - o 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.

- Imminent Hazards
 - o None
- Long-Term Planning for Hazardous Materials
 - 0 \$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)
 - o Drywall & Joint Compound (2003)
 - o Drop Ceiling Tiles (2003)
 - o Floor Tile & Mastic (2003)
 - o Carpet Mastic (2003)
 - o 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.

- Imminent Hazards
 - o None
- Long-Term Planning for Hazardous Materials
 - o \$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)
 - o Ceramics (2000/2005)
 - o Drywall & Joint Compound (2000/2005)
 - o Flooring & Mastic (2000/2005)
 - o Drop Ceiling Tiles (2000/2005)
 - o 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.

- Imminent Hazards
 - o None
- Long-Term Planning for Hazardous Materials
 - o \$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)
 - o 1x1 Ceiling Tile and Mastic
 - o Drywall & Joint Compound (2003)
 - o Flooring & Mastic (2003)
 - o Drop Ceiling Tiles (2003)
 - o 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.

- Imminent Hazards
 - o None
- Long-Term Planning for Hazardous Materials
 - 0 \$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)
 - o 12" Floor Tile & Mastic (Entire 1st Floor) (See sample results Section 1.)
- Possible ACM (Must be sampled to be proven negative)
 - o Drywall & Joint Compound
 - o Thermal System Insulation Fittings (Sampled negative see Section 1, additional sampling recommended before removal).
- Non-ACM
 - o 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%.

- Imminent Hazards
 - o None
- Long-Term Planning for Hazardous Materials
 - o \$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)
 - o 9" Floor Tile & Mastic (Main level northeast & northwest rooms)
 - o 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)
 - o Drywall & Joint Compound
 - o Ceramics
 - o 2x4 Ceiling Tile
 - o 12" Floor Tile & Mastic
- Non-ACM (See samples results in Section 1.)
 - o Plaster (All over)
 - Window Glaze
 - o 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.

- Imminent Hazards
 - o None
- Long-Term Planning for Hazardous Materials
 - o \$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)
 - o Ceramics
 - o 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.

- Imminent Hazards
 - o None
- Long-Term Planning for Hazardous Materials
 - o \$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)
 - o Drywall & Joint Compound
 - o Terrazzo
- Non-ACM
 - o 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.

- Imminent Hazards
 - o None
- Long-Term Planning for Hazardous Materials
 - o \$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)
 - o Drywall & Joint Compound (1988)
 - o Carpet Mastic (1988)
 - o Drop Ceiling Tiles (1988)
 - o 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.

- Imminent Hazards
 - o None
- Long-Term Planning for Hazardous Materials
 - 0 \$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
 - *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.
 - o 9" Floor Tile & Mastic (Water Dept. Safe)
- Presumed ACM (PACM) (must be sampled to be proven NON-ACM)
 - o Window Caulk and Glaze (Garage skylights and side windows)
 - o 2x2 Ceiling Tile (Offices)
 - o Drywall & Joint Compound
 - o Ceramics
 - Carpet Mastic
- Non-ACM
 - o 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.

- Imminent Hazards
 - o None
- Long-Term Planning for Hazardous Materials
 - o \$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)
 - o Drywall & Joint Compound (1995 or 2008)
 - o Carpet Mastic (1995 or 2008)
 - o Drop Ceiling Tiles (1995 or 2008)
 - o 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.

- Imminent Hazards
 - o None
- Long-Term Planning for Hazardous Materials
 - 0 \$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)
 - o Ceramics
 - o 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.

- Imminent Hazards
 - o None
- Long-Term Planning for Hazardous Materials
 - o \$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)
 - o Pine Insulation (Lower Level and 1st Floor). (See Sample Results Section 1.)
- Likely ACM (assumed to be ACM, not sampled)
 - o 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)
 - o Drywall & Joint Compound
 - o 2x4 Ceiling Tile
 - o 12" Floor Tile & Mastic
 - o Ceramics
- Non-ACM
 - o 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.

- Imminent Hazards
 - o None
- Long-Term Planning for Hazardous Materials
 - o \$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.

- Imminent Hazards
 - o None
- Long-Term Planning for Hazardous Materials
 - o \$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)
 - o Thermal System Pipe Insulation Fittings (See sample results Section 1). (Penthouse approx. 150 TSI, Boiler Room approx. 350 TSI
 - *There is some <u>minor</u> 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)
 - o Drop Ceiling Tiles
 - o Terrazzo
 - o Drywall & Joint Compound
 - o Carpet Mastic
 - o 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.

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

SECTION II

ASBESTOS

2.1 BULK CHARTS AND LAB RESULTS

BULK SAMPLE CHART

Sampling Date: April 24, 2018 EMC Project Number: 180559-01 Sample Location: Health Department Inspector Number: AII-17115

Sampling Personnel: Robert Haveman

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



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	A	Fibrous	Non-Fibrous	Attributes
Lab Sample ID	Lab Notes	Asbestos	Components	Components	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 SAI. 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)

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

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 Lab Sample ID	Description Lab Notes	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes 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

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 SAI. 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)

Approved Signatory

Lab Order ID:

der ID:

Environmental Management Conceding, Inc.

E.M.C., Inc.

W7748 County Highway V Lake Mills, WI 53551 920-648-6343 1/8/06/5
Scientific Analytical Institute
4604 Dundas Drive

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



EMC Contact:	EMC Contact: Rob Havenas			ЭС	(Lur	naroun	d Lime	
Email: emc@emc-w		,	PLM	X	12 Hours		20 Hours	
Sample Location:	lea It	h Department	Point Count	口	24 Hours	<u> </u>	14 ⁺ Hours	
	24/15	2	PCM		48 Hours	X	-	
Sampling Personnel:	R	5 Havenal	TEM		72 Hours	i di	i	
Inspector Number:			Lead	П	96 Hours	П		
Project Name/#: Co		80559	-0	/				
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] jbushman@emc-wi.con		jschneider@emc-wi.com			: 1		emc-wi.co	
•		rhaveman@emc-wi.com	□ lwinslow@		: :	mc@emc-	1 .	
nbateson@emc-wi.com			-			-	1	

BULK SAMPLE CHART

Sampling Date: May 2, 2018 EMC Project Number: 180559-01 Sample Location: Historical Society Inspector Number: AII-17115

Sampling Personnel: Robert Haveman

SAMPLE NUMBER	HOMO CODE	MATERIAL DESCRIPTION	ROOM/ AREA	SPECIFIC SAMPLE LOCATION	LAB RESULTS
TVETVIDEIC	CODE		Upper Level -	SHAIR EE EU CHITOI	TESCE15
HS-01		Plaster	Southwest	East Wall	None Detected
			Upper Level -		
HS-02		Plaster	Southwest	East Wall	None Detected
			Upper Level -		
HS-03		Plaster	Attic Stairs	Attic Stairwell	None Detected
			Upper Level -		
HS-04		Plaster	Attic Stairs	Attic Stairwell	None Detected
			Upper Level -		
HS-05		Plaster	Attic Stairs	Attic Stairwell	None Detected
			Upper Level -		
HS-06		Window Glaze	Northwest Office	West Windows	None Detected
HS-07		Linoleum	Attic	Southeast	None Detected



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	Non-Fibrous	Attributes
Lab Sample ID	Lab Notes	Aspestos	Components	Components	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
	· · · · · · · · · · · · · · · · · · ·	·			

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 SAI. 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%.

Bobby Wheatley (8)

Analyst

P-F-002 r15 1/16/2021

Approved Signatory



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



EMC Con	tact: Ro	5 Hav	emass	Test Ty	pe	Turnaro	und Time
Email: en	nc@emc-v	vi.com		PLM	W	12 Hours	120 Hours
Sample Lo	ocation: /	Istoria	cal Society	Point Count		24 Hours	144 ⁺ Hours
Sample Da	ate: 5/2	/18		PCM		48 Hours	
Sampling	Personnel:	Rob	Haveman	TEM		72 Hours	
			-17115	Lead		96 Hours	
Project Na	me/#: (ity o	of wost Allis 1	80559-0	/		
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Sample Number	Code	SR/ JC:	Material Description	Room	The second second	Specific Location or Volume/Area	Lab Results
H5-01			Plaster	Livel-SW	E	ast Wall	
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Please Email To:		,	,	Page /	of 1 103
☐ bfreeman@emc-wi.com	□ proche@e	mc-wi.com	☐ jnoegel@emc-wi.com	☐ tbushman	@emc-wi.com
☐ jbushman@emc-wi.com	□ jschneider	@emc-wi.com	☐ mfreeman@emc-wi.com	□ cmertens(@emc-wi.com
☐ jjozwiakowski@emc-wi.com	rhaveman	@emc-wi.com	☐ lwinslow@emc-wi.com	emc@em	c-wi.com
☐ nbateson@emc-wi.com	, ,			. 1	

BULK SAMPLE CHART

Sampling Date: May 2, 2018 EMC Project Number: 180559-01 Sample Location: Liberty Heights Inspector Number: AII-17115

Sampling Personnel: Robert Haveman

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



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	Non-Fibrous	Attributes
Lab Sample ID	Lab Notes	Asucstus	Components	Components	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

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 SAI. 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%.

Bobby Wheatley (7)

Approved Signatory

Please Email To:

☐ bfreeman@emc-wi.com

☐ jbushman@emc-wi.com

□ nbateson@emc-wi.com



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

Page

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☐ proche@emc-wi.com

of

☐ tbushman@emc-wi.com

emc@emc-wi.com



EMC Con	tact: Ro	b Ha	vena	1	Test Typ)e	Turi	narou	nd Time	
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Sample Lo	ocation: L	berty	Heig	175	Point Count		24 Hours	邓	144 ⁺ Hours	
Sample Da	ate: 5/2	118			PCM		48 Hours			
Sampling	Personnel:	Rob	Har	reman	TEM _		72 Hours			
Inspector 1	Number:	AII.	-171	15	Lead		96 Hours			
Project Na	me/#: (144	of W	ost Allis	18055	9-	01			
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Sample Number	Homo Code	SR/					Specific Locati	on or	Lab Resu	ilts
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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	НОМО	MATERIAL	ROOM/	SPECIFIC	LAB
NUMBER	CODE	DESCRIPTION	AREA	SAMPLE LOCATION	RESULTS
MY-01		Pipe Insulation	Garage	Maint. Area	None Detected
			Water Dept.		
MY-02		12" Floor Tile/Mastic	Office	Near Entry	None Detected
MY-03		12" Floor Tile/Mastic	Main Office	Near Entry	None Detected
			Sanitation		
MY-04		12" Floor Tile/Mastic	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
					15% Chrysotile
MY-07	PI1	Pipe Insulation	Garage	At Sanitation Department	5% Amosite
					15% Chrysotile
MY-08	PI1	Pipe Insulation	Garage	At Forestry Department	5% Amosite
MY-09	PI2	Pipe Fitting	Garage	Middle at Parking Spot 800	None Detected



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:** 11810666

> **Analysis ID:** 11810666_PLM

Date Received: 5/1/2018 Date Reported: 5/2/2018

Sample ID	Description	4.1.4	Fibrous	Non-Fibrous	Attributes
Lab Sample ID	Lab Notes	Asbestos	Components	Components	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

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 bestamine. For the Charles of the Line of the Line of the Charles of the Charles

William Howell (7)

Analyst

Approved Signatory

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Environmental Management Consulting, Inc.

□ nbateson@emc-wi.com

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



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EMC Con	tact: Ro	b H	aven	an	Test Ty	pe	Tur	narot	ınd Time	
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Project Na	me/#: C	740	f We	15 of Allis	18055	9-0	/			
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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:** 11811674

> **Analysis ID:** 11811674 PLM

Date Received: 5/11/2018 **Date Reported:** 5/11/2018

Sample ID Lab Sample ID	Description Lab Notes	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes 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	370 Minosite			Teased
MY-07 - B	Pipe insulation	None Detected	80% Cellulose 5% Hair	15% Other	Tan Fibrous Homogeneous
11811674PLM_6	tan insulation		370 11411		Teased
MY-08	Pipe insulation	15% Chrysotile 5% Amosite	·		White Fibrous Homogeneous
11811674PLM_4		- 370 Amoste			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)

Approved Signatory



Environmental Management Consulting, Inc.

Email: emc@emc-wi.com

Sample Location: Municipal Yards

EMC Contact: Rob

E.M.C., Inc.

Havenas

W7748 County Highway V Lake Mills, WI 53551 920-648-6343

Scientific Analytical Institute

12 Hours

24 Hours

Test Type

Point Count

PLM

120 Hours

144⁺ Hours

4604 Dundas Drive Greensboro, NC 27407 877-292-3888

Turnaround Time

Sample Date: 5/8	/18		PCM	□ 48	Hours		
Sampling Personnel:	Rok	Havenas	TEM		Hours		
Inspector Number:	AI	-17115	Lead	□ 96	Hours		
Project Name/#:	sty o	of West Allis	1805	59-0	/		
Sample Homo	1 3 3 5	Enter Into Labor	ratory "Sampl	le Descrip	otion" Field	1	
Number Code	SR/ JC:	Material Description	Room		eific Location		Lab Results
MY-05 PII		Pipe Insulation	Carage	@ Ma	cint. She tar De nitation extry D e @ spor	e P	
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-07				@ Sai	nitation	Dept	
-08 V		V		@ For	estry D	est.	
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lease Email To: ofreeman@emc-wi.com		proche@emc-wi.com	□ jnoegel@e	mc-wi co	Page		fO/2 emc-wi.com
bushman@emc-wi.com		jschneider@emc-wi.com					emc-wi.com
jozwiakowski@emc-w	i com b	who was a win som	☐ lwinslow@	S	~/	c@emc-	

BULK SAMPLE CHART

Sampling Date: April 24, 2018 EMC Project Number: 180559-01 Sample Location: Senior Center Inspector Number: AII-17115

Sampling Personnel: Robert Haveman

SAMPLE NUMBER	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



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:** 11810669

> **Analysis ID:** 11810669_PLM

Date Received: 5/1/2018 Date Reported: 5/3/2018

Sample ID Lab Sample ID	Description Lab Notes	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes 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	<u>-</u>				Teased
SC-04	2x2 ceiling tile	None Detected	80% Fiber Glass	20% Other	Grayish Fibrous Homogeneous
11810669PLM_4					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 SAI. 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 (4)

Approved Signatory

11810669



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



EMC Contact: Ro	MC Contact: Rob Havenan		Test Ty	pe	Tur	naro	ınd Time	
Email: emc@emc-w			PLM	X	12 Hours		120 Hours	
Sample Location:	enor	r Center	Point Count		24 Hours		144 ⁺ Hours	
	4/1		PCM		48 Hours	JP/	i de la companya de l	
Sampling Personnel:			TEM	一一	72 Hours	古		
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Sample Homo	SR/	Enter Into Labor	ratory "Sampl				Lab Res	Ita
Number Code		Material Description	Room		Specific Locat Volume/A	on or rea	Laune	, unio
50-01		Material Description Air Cell Pipe Insul 2x2 Ceiling Tile	LL MUlti PUI POSE	Ne	ar kitel	hel		
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□ jbushman@emc-wi.com		jschneider@emc-wi.com	☐ mfreeman(s@emc-wi.co	
□ jjozwiakowski@emc-wi			□ lwinslow@	_			nc-wi.com	
☐ nbateson@emc-wi.com	y 1				1	<u></u>	1	

BULK SAMPLE CHART

Sampling Date: May 8, 2018 EMC Project Number: 180559-01

Sample Location: West Allis City Hall
Sampling Personnel: Robert J. Haveman

Inspector Number: AII-17115

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



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: 11811673

Analysis ID: 11811673_PLM

Date Received: 5/11/2018 **Date Reported:** 5/11/2018

Sample ID Lab Sample ID	Description Lab Notes	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes Treatment
СН-01 - А	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	270 Cmysothe			Teased, Crushed
CH-02	Pipe insulation fitting	3% Amosite 2% Chrysotile	30% Fiber Glass	65% Other	Gray Fibrous Homogeneous
11811673PLM_2	insulation only	276 Chrysothe			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 SAI. 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)

Approved Signatory

11811673



E.M.C., Inc. W7748 County Highway V Lake Mills WI 53551

Scientific Analytical Institute 4604 Dundas Drive Greenshoro, NC 27407



nvironmental Management Consulting, Inc.	920-648-6343		877-292-3888					
EMC Contact: Rob Ho	ivenal	Test Ty	pe	Tur	narou	nd Time		
Email: emc@emc-wi.com		PLM	Ø	12 Hours		120 Hours		
Comple Legations // / A	11 /01 11 11	Point Count		24 Hours	TO!	144 Hours		

Sample Location: West Allis City Hall Point Count 24 Hours 144 Hours Sample Date: **PCM** 48 Hours Sampling Personnel: TEM 72 Hours Rob Havenas Inspector Number: Lead 96 Hours Project Name/#: of West Allis 180559-01

Enter Into Laboratory "Sample Description" Field Sample Homo SR/ Lab Results Specific Location or Number Code JC: **Material Description** Volume/Area Room Boiler @ Main water valve Pipe Insulation Fitting CH-01 ROOM north wall CH-02 Perthose " Accepted Rejected Total # of Samples

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ally 110	111 5/10/18	Lawlin	5/11/18
Please Email To:	, ,		Page of 10:30km
☐ bfreeman@emc-wi.com	☐ proche@emc-wi.com	☐ jnoegel@emc-wi.com	☐ tbushman@emc-wi.com
☐ jbushman@emc-wi.com	☐ jschneider@emc-wi.co	m □ mfreeman@emc-wi.com	☐ cmertens@emc-wi.com
☐ jjozwiakowski@emc-wi.com	rhaveman@emc-wi.com	m □ lwinslow@emc-wi.com	emc@emc-wi.com
☐ nbateson@emc-wi.com	<i>/</i> ·		

SECTION III

LEAD

3.1 LEAD PAINT CHIP ANALYSIS



Project:

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

West Allis - 180559-01

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

Sample ID	Description	Mass	Concentration	Concentration
Lab Sample ID	Lab Notes	(g)	(ppm)	(% by weight)
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)



Scientific Analytical Institute

4604 Dundas Dr. Greensboro, NC 27407 Phone: 336.292.3888 Fax: 336.292.3313 lab@sailab.com www.sailab.com



5 1814098

Contect linform	8ifon	Billing/liny	jice/I	noinamanion	
	ironmental Management Consulting	Company: SA			
Address: W7748 Co	ounty Highway V	Address:			
	s, WI 53551				
		Contact:			
Contact: Moth	Freeman	Phone :			
Phone □: 920-648-		Fax :			
Fax □: 920-648-4		Email :			
Email □: emc@em	nc-wi.com				
PO Number:		agnol and	mal Tit	inves	
Project Name/Number:	West Alli: 180559-01	3 Hours		72 Hours	
		6 Hours		96 Hours	
Level Reed Types		12 Hours		120 Hours	
Paint Chips by Flame AA		24 Hours	X	144+ Hours	
Wipe by Flame AA	Air by Flame AA	48 Hours			
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Sample III)#	Description/Leastin	with a marked		Commens	ند حد سد
w-1	Orange Paint - On Structual Support	1 -			-
m-9	white Pant - on wood Dack				
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6/6/18 Please Email To:

☐ rvidekovich@emc-wi.com

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	В	
Exterior	West - Support I Beam	Orange	Metal	NA	В	
Exterior	West - Support I Beam Base	Tan	Concrete	NA	В	
Exterior	Middle - Support I Beam	Tan/Orange	Metal	NA	В	
Exterior	East - Support I Beam	Orange	Metal	NA	В	
Exterior	East - Women's RR Door	Brown	Metal	NA	В	
Exterior	East - Gutter	Orange	Metal	NA	В	
Exterior	East - Support Structure - N	Tan	Brick	NA	Α	
Exterior	SE - Support Structure	Tan	Brick	NA	В	
Exterior	SE - Entryway - Frame	Orange	Wood	NA	Α	
Exterior	SW - Entryway - Frame	Orange	Wood	NA	Α	
Exterior	East - Support Structure - S	Tan	Brick	NA	Α	
Exterior	Interior Office - South Wall	Tan	Drywall	NA	В	
Exterior	Exterior of Office - South Wall	Tan	Block	NA	В	
Exterior	NE Support Structure	Tan	Brick	NA	Α	
Exterior	North Support Structure	Tan	Brick	NA	Α	

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).

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	Α	
Exterior	NW - Entryway - Frame	Orange	Wood	NA	Α	

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

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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).

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	В	
Hallway	At East RR's	Tan	Drywall	NA	В	
100 Clinic	South Wall	Blue	Drywall	NA	В	
128 Main Office	East Wall	Tan	Drywall	NA	В	
Men's RR - East	West Wall	Tan	Ceramic	NA	Α	
130 Exam Rm	North Wall	Tan	Drywall	NA	В	

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).

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. 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	Wall at Restrooms	White	Drywall	NA	В	
Lower Level	Wall - In Display Rm - South	White	Brick	NA	В	
Lower Level	Door Frame - Local History Library	White	Wood	NA	Α	
Lower Level	Door - Local History Library	White	Wood	NA	Α	
Lower Level	Wall at North Stairs	White	Drywall	NA	В	
Lower Level	Door Frame - NE Shop	White	Wood	NA	В	
Lower Level	Wall - Dining Rm Display - East	Wood Color - Varnish	Wood	NA	В	
Lower Level	Wall at Entry - Dining Rm Display - East	White	Wood	NA	В	
Lower Level	Wall - East Hall	White	Brick	NA	В	
Lower Level	Door Frame - Store Display - NW	White	Wood	NA	В	
Lower Level	Wall Men's RR	White	Drywall	NA	В	
Lower Level	Floor Men's RR	White	Ceramic	NA	В	
Lower Level	Wall Tile Men's RR	White	Ceramic	NA	В	
Main Entrance - North	Door - Main Entrance	Light Blue	Wood	NA	В	
Main Entrance - North	Wall Frame at Stairs	Light Blue	Wood	NA	Α	
Upper Level - SW	Wood Floor Varnish	Clear	Wood	NA	В	

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

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. W7748 County Highway V, Lake Mills, WI

Phone: (920) 648-6343

ROOM/ AREA	LOCATION	PAINT/ VARNISH COLOR	SUBSTRATE	CURRENT CONDITION	A/B CLASS	COMMENTS
Upper Level - Classroom	Door Frame - North	White	Wood	NA	Α	
Upper Level - NW Office	Window Frame - West	White	Wood	NA	Α	
Upper Level - Main Entrance	Wall at NW Office	White	Plaster	NA	Α	
Upper Level - Attic Stairs	Wall at Stairs	Light Blue	Plaster	NA	В	
Upper Level - NE Office	Wall - West	White	Plaster	NA	Α	
Upper Level - NE Office	Wall Molding - South	Gray	Wood	NA	Α	
Upper Level - SE Display Room	Wall - South	White	Plaster	NA	Α	
Upper Level - SE Display Room	Wall - East	White	Plaster	NA	Α	
Upper Level - Main Entry	Floor	Clear Varnish	Wood	NA	В	
Attic Stairs	Stairs	Red	Wood	NA	В	
Upper Level - SW Classroom	Wall - West	White	Plaster	NA	Α	

Key

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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).

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

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
Upper Level	Wall - Main Lobby at Doorway	White	Wood	NA	В	
Upper Level	Wall - Main Lobby at Men's RR	White	Drywall	NA	В	
Upper Level	Floor - Main Lobby	Multi	Terrazzo	NA	В	
Upper Level - Men's RR	Wall at Sinks	White	Drywall	NA	В	
Upper Level - Men's RR	Floor under Sinks	Gray	Concrete	NA	В	
Upper Level	Window Frame - Main Lobby - North	Gray	Wood	NA	Α	
Upper Level	Window Frame - Main Lobby - West	Gray	Wood	NA	А	
Upper Level	Door Frame - Main Lobby - North	Gray	Wood	NA	В	
Upper Level	Door Frame - Main Lobby - South	Gray	Wood	NA	В	
Upper Level	Window Frame - Women's RR	Gray	Wood	NA	Α	
Upper Level	Window Frame - Men's RR	Gray	Wood	NA	Α	
Upper Level	Window Frame - Kitchen	Gray	Wood	NA	Α	
Lower Level	Exterior Door - NW	Orange	Metal	NA	В	
Lower Level	Wall - NW	Tan	Glaze Block	NA	В	
Lower Level	Floor - NW	Gray	Concrete	NA	В	
Lower Level	Wall - North	Yellow	Concrete Block	NA	Α	

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).

Client: City of West Allis
Building Name: Liberty Heights
Dates of Construction: 1938
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
Lower Level	Floor - North	Blue	Concrete	NA	В	
Lower Level	Wall - East LR	Yellow	Concrete Block	NA	Α	
Lower Level	Wall - South Mid Rm	Yellow	Concrete Block	NA	В	
Lower Level	Locker Door - East LR	Yellow	Metal	NA	Α	
Lower Level	Door Frame - East LR	Orange/Tan	Wood	NA	Α	
Lower Level	Door - East LR	Orange	Wood	NA	Α	
Lower Level	Door - Boiler Rm	Tan	Metal	NA	Α	
Lower Level	Boiler - Boiler Rm	Green	Metal	NA	В	
Lower Level	Wall - Boiler Rm	Orange	Concrete	NA	В	
Lower Level	Wall - East LR	Tan	Glaze Block	NA	В	
Lower Level	Floor - East LR	Gray	Conc	NA	В	

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

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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).

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	В	
Garage	SW - Floor Parking Lines	White	Concrete	NA	В	
Garage	SW - Door Frame	Brown	Metal	NA	В	
Garage	SW - Wall	Gray	Concrete Block	NA	В	
Garage	South Overhead Door at Water Dept.	Brown	Wood	NA	Α	
Garage	South Store Rm Door Frame	Brown	Wood	NA	Α	
Garage	South Store Rm Overhead Door	Brown	Wood	NA	Α	
Garage	Conference Rm Door Frame	Brown	Wood	NA	В	
Garage	NW Wall	Gray	Concrete Block	NA	В	
Garage	NE - Floor Walkway	Gray	Concrete	NA	В	
Garage	NE - Overhead Door at Spray Booth	Brown	Wood	NA	Α	
Garage	At Maint. Dept. Door Frame	Brown	Wood	NA	Α	
Garage	At NE Men's RR Door Frame	Brown	Wood	NA	Α	
Garage	At Wash Bay	Tan	Glaze Block	NA	Α	
Garage	At Wash Bay	Yellow/White	Concrete Block	NA	В	
Garage	SE Wall	Gray	Concrete Block	NA	В	

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).

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	South Floor Walkway	Gray	Concrete	NA	В	
Garage	South at MO Safety Barrier	Yellow	Metal	NA	В	
Garage	South at MO Safety Barrier	Orange	Metal	NA	В	
Water Dept.	South Wall	White	Concrete Block	NA	В	
Water Dept.	South Wall	Blue	Concrete Block	NA	В	
Water Dept.	Store Wall - East Wall	White	Drywall	NA	В	
Water Dept. Office Area	West Wall	Light Gray	Drywall	NA	В	
Water Dept. Office Area	East Wall	Dark Gray	Drywall	NA	В	
Water Dept. Office Area	Safe Door	Brown	Metal	NA	В	
Water Dept.	Floor - Break Rm	Gray	Concrete	NA	В	
Conference Room	At Doorway	White	Drywall	NA	В	
Men's Restroom - NW	Ceramic Wall Tile	Tan	Ceramics	NA	Α	
Forestry Dept Break Rm	South Wall	Yellow	Concrete Block	NA	В	
Forestry Dept Break Rm	Door	Green	Wood	NA	В	
Buildings & Signs Dept.	West Wall	White	Concrete Block	NA	В	
Buildings & Signs Dept.	Door Frame - Store Room	Brown	Metal	NA	В	
Maint. Dept.	West Bend	White	Concrete Block	NA	В	

Key

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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).

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
Maint. Dept.	Door Frame to Garage	Brown	Wood	NA	Α	
Maint. Dept.	Security Cage	Green	Metal	NA	Α	
Men's RR - Middle East	South Wall - Ceramics	Tan	Ceramic Tile	NA	Α	
Small Engine Repair Shop	Overhead Door Frame	Brown	Metal	NA	Α	
Large Engine Repair Shop	West Wall	Green	Concrete Block	NA	В	
Large Engine Repair Shop	Overhead Door Frame	Green	Metal	NA	Α	
Inventory Dept.	West Wall	White	Concrete Block	NA	В	
Inventory Dept.	Security Cage	Green	Metal	NA	В	
Inventory Dept.	Floor at Gate Entrance	Gray	Concrete	NA	В	
Inventory Dept.	Door	Brown	Metal	NA	В	
Men's RR - Sanitation	Ceramic Wall	Tan	Ceramics	NA	Α	
Sanitation Dept.	Lockers - SE	Gray	Metal	NA	В	
Sanitation Dept.	Breakroom - West Wall	Tan	Ceramics	NA	А	
Sanitation Dept.	Hallway	Tan	Drywall	NA	В	
Sanitation Dept.	South Wall	Tan	Drywall	NA	В	
Sanitation Dept.	North Wall	White	Drywall	NA	В	
Sanitation Dept RR	Door Frame	Brown	Wood	NA	Α	

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).

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
Main Office	West Wall	Yellow	Drywall	NA	В	
Main Office - Men RR	Ceramic Wall	Yellow	Ceramics	NA	В	
Main Office	Open Room - South	Purple	Paneling	NA	В	

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

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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).

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	В	
Lower Level - West Stairwell	At Stairs	White	Plaster	NA	В	
Lower Level - Kitchen	At Oven	WHite	Drywall	NA	В	
Lower Level - Men's RR	At Door	Green	Ceramics	NA	В	
1st Level - Main Lobby	Near Office	Blue	Drywall	NA	В	
1st Level - Cafeteria	East Wall	Green	Drywall	NA	В	
1st Level - Kitchen	North Wall	Yellow	Drywall	NA	В	
1st Level - Men's RR	East Wall	Tan/Yellow	Ceramics	NA	Α	
1st Level - Men's RR	South Wall	Tan/Yellow	Ceramics	NA	Α	
1st Level - Main Office	East Wall	Tan	Plaster	NA	В	
1st Level - Elevator	Elevator Frame	Brown	Metal	NA	В	
2nd Level - Men's RR	Near Door	Tan/Yellow	Ceramics	NA	Α	
2nd Level - Middle Stairwell	Top Landing	White	Plaster	NA	В	
2nd Level - Middle Stairwell	Top Landing	Green	Ceramics	NA	В	
2nd Level - East Stairwell	At Door Frame	Brown	Metal	NA	В	

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).

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	В	
1st Floor Hall	Wallboard at Rm 113	Brown	Wood	NA	В	
1st Floor Hall	Wall at Clerk of Courts	Tan	Drywall	NA	В	
1st Floor Men's RR	West Wall	White	Ceramics	NA	В	
1st Floor Clerk of Courts	North Office Wall	White/Gray	Drywall	NA	В	
Lower Level Hall	Boiler Rm Door	Brown	Metal	NA	В	
Lower Level Hall	Boiler Rm Door Frame	Brown	Metal	NA	В	
Lower Level Hall	Wall at 614 Break Room	Tan	Drywall	NA	В	
Boiler Room	Floor (East)	Gray	Concrete	NA	В	
Boiler Room	Boiler #1	Gray	Metal	NA	В	
Boiler Room	Boiler #2	Gray	Metal	NA	В	
Boiler Room	Door (Elevator Equip.)	Brown	Metal	NA	В	
Boiler Room	Floor (West)	Gray	Concrete	NA	В	
Lower Level Hall	Terrazzo Floor at Boiler Rm	Gray-ish	Terrazzo	NA	В	
Penthouse	Floor at Stairs	Gray	Concrete	NA	В	
Penthouse	Door (Roof)	Brown	Metal	NA	В	

Key

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

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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
2nd Floor Hall	Wall at Rm 202	Tan	Drywall	NA	В	
2nd Floor Hall	Door Frame at Rm 202	Brown	Metal	NA	В	
2nd Floor Hall	Door at South Stairwell	Wood Varnish	Wood	NA	В	
Penthouse	Door at Stairs	Brown	Metal	NA	В	

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).

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 2nd Floor Break	1.1	28				
4/26/2018	8:53 AM	CH-3	City Hall	Room - West DF Lower	0.25	13				
4/26/2018	8:58 AM	CH-4	City Hall	Level Hallway 0.16 Lower Level		56				
4/26/2018	9:02 AM	CH-5	City Hall	Break Rm - East 0.3		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				
			j							
5/2/2018										
	*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.									



4.2 LAB REPORTS

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

Environmental Management Consulting Inc

Attn: Rob Haveman W7748 County Highway V Lake Mills, WI 53551 9643

Client:

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

> Printed: 05/10/18 Page 1 of 1

> > **NLS Project:** 298646

> > **NLS Customer:** 10525

Fax: 920 648 4370 Phone: 920 648 6343

EPA 180.1

Soman Rhull

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

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) DWB = Dry Weight Basis

Turbidity, screening - SDWA

LOD = Limit of Detection %DWB = (mg/kg DWB) / 10000

MCL = Maximum Contaminant Levels for Drinking Water Samples.

LOQ = Limit of Quantitation 1000 ug/L = 1 mg/L

Shaded results indicate >MCL.

ND

NTU

NA = Not Applicable

1

Reviewed by:

1.0*

05/01/18

1.0*

Authorized by: R. T. Krueger President

721026460

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

Environmental Management Consulting Inc

Attn: Rob Haveman W7748 County Highway V Lake Mills, WI 53551 9643

WDNR Laboratory ID No. 721026460 **WDATCP Laboratory Certification No. 105-330**

EPA Laboratory ID No. WI00034

Printed: 05/10/18 Page 1 of 1

> **NLS Project:** 298645

> 10525 **NLS Customer:**

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

Client:

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.

ND = Not Detected (< LOD) DWB = Dry Weight Basis

LOD = Limit of Detection

%DWB = (mg/kg DWB) / 10000

LOQ = Limit of Quantitation

1000 ug/L = 1 mg/L

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

NA = Not Applicable

Reviewed by:

NORTHERN LAKE SERVICE. INC. **Analytical Laboratory and Environmental Services** 400 North Lake Avenue - Crandon, WI 54520

WDNR Laboratory ID No. 721026460

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

> Printed: 05/10/18 Page 1 of 1

> > **NLS Project:** 298793

10525 **NLS Customer:**

Fax: 920 648 4370 Phone: 920 648 6343

Nonan Rhull

Environmental Management Consulting Inc Client:

Attn: Rob Haveman W7748 County Highway V Lake Mills, WI 53551 9643

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

Ph: (715)-478-2777 Fax: (715)-478-3060

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

ANALYTICAL REPORT

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.

NA = Not Applicable

ND = Not Detected (< LOD) DWB = Dry Weight Basis

LOD = Limit of Detection

%DWB = (ma/ka DWB) / 10000

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

LOQ = Limit of Quantitation 1000 ug/L = 1 mg/L

Reviewed by:

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

> **NLS Project:** 298855

> 10525 **NLS Customer:**

Fax: 920 648 4370 Phone: 920 648 6343

Environmental Management Consulting Inc Client:

Attn: Rob Haveman W7748 County Highway V Lake Mills, WI 53551 9643

Analytical Laboratory and Environmental Services

400 North Lake Avenue - Crandon, WI 54520

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

NORTHERN LAKE SERVICE, INC.

Ph: (715)-478-2777 Fax: (715)-478-3060

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.

ND = Not Detected (< LOD) DWB = Dry Weight Basis

LOD = Limit of Detection

%DWB = (mg/kg DWB) / 10000MCL = Maximum Contaminant Levels for Drinking Water Samples.

LOQ = Limit of Quantitation

1000 ug/L = 1 mg/L

Shaded results indicate >MCL.

NA = Not Applicable Reviewed by:

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

Environmental Management Consulting Inc

Attn: Rob Haveman W7748 County Highway V Lake Mills, WI 53551 9643

Client:

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

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Printed: 05/10/18 Page 1 of 1

NLS Project: 298651

NLS Customer: 10525

Fax: 920 648 4370 Phone: 920 648 6343

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

1 Tojoca Oky of Wood / and I abite Library 100000 of								
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 t	had OD had been these	11 1-00 1	atticted a manufacture of III.		Owner Charles	D It t -		<u> </u>

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 DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 LOQ = Limit of Quantitation

NA = Not Applicable

MCL = Maximum Contaminant Levels for Drinking Water Samples.

1000 ug/L = 1 mg/L Shaded results indicate >MCL.

Reviewed by:

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

NORTHERN LAKE SERVICE, INC.

Environmental Management Consulting Inc Client:

Attn: Rob Haveman W7748 County Highway V Lake Mills, WI 53551 9643

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

Somme Mule

Printed: 05/10/18 Page 1 of 1

> **NLS Project:** 298650

10525 **NLS Customer:**

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
ead, 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
Furbidity, 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
Furbidity, screening - SDWA	ND	NTU	1	1.0*	1.0*	05/01/18	EPA 180.1	721026460
MY-3 NLS ID: 1052635	F	, , , , , , , , , , , , , , , , , , ,	1.	1114	11.14	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		,
NY-3 NLSTD: 1052635 CCC: 217853:3 Matrix: DW								
Collected: 04/26/18 09:25 Received: 05/01/18	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-INS	1.1	ug/L ug/L	1	0.10*	0.20 / 15*	05/04/18	EPA 200.8, Rev 5.4	721026460
Furbidity, screening - SDWA	ND	NTU	1	1.0*	1.0*	05/04/18	EPA 180.1	721026460
	טאן	INTO	I I	1.0	1.0	03/01/10	LFA 100.1	121020400
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
_ead, 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
urbidity, 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
ead, 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
Furbidity, screening - SDWA	ND	NTU		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

MCL = Maximum Contaminant Levels for Drinking Water Samples.

DWB = Dry Weight Basis

%DWB = (mg/kg DWB) / 10000

1000 ug/L = 1 mg/L

LOQ = Limit of Quantitation Shaded results indicate >MCL.

Reviewed by:

NA = Not Applicable

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

Environmental Management Consulting Inc

Attn: Rob Haveman W7748 County Highway V Lake Mills, WI 53551 9643

Client:

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

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Printed: 05/10/18 Page 1 of 1

> **NLS Project:** 298606

> 10525 **NLS Customer:**

Fax: 920 648 4370 Phone: 920 648 6343

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

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Pol-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
Pol-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
Pol-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
Pol-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
	1.00	ug/L	1	1.0*	2.0 / 1300*	05/04/18	EPA 200.8, Rev 5.4	721026460
Copper, tot. recoverable as Cu by ICP-MS	120	ug/L	!·	1.0	2.07 1000	00/0-//10	LI A 200.0, INCV 3.4	121020700
Copper, tot. recoverable as Cu by ICP-MS Lead, tot. recoverable as Pb by ICP-MS	ND ND	ug/L ug/L	1	0.10*	0.20 / 15*	05/04/18	EPA 200.8, Rev 5.4	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.

LOD = Limit of Detection ND = Not Detected (< LOD) DWB = Dry Weight Basis

%DWB = (mg/kg DWB) / 10000 MCL = Maximum Contaminant Levels for Drinking Water Samples.

LOQ = Limit of Quantitation 1000 ug/L = 1 mg/L

NA = Not Applicable

Shaded results indicate >MCL.

Reviewed by:

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

Environmental Management Consulting Inc

Attn: Rob Haveman W7748 County Highway V Lake Mills, WI 53551 9643

Client:

WDNR Laboratory ID No. 721026460 **WDATCP Laboratory Certification No. 105-330**

EPA Laboratory ID No. WI00034

Printed: 05/08/18 Page 1 of 1

> **NLS Project:** 298620

> > 10525

NLS Customer: Fax: 920 648 4370 Phone: 920 648 6343

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

SC-1 NLS ID: 1052471								
OC: 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
ead, 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
urbidity, screening - SDWA	ND	NTU	1	1.0*	1.0*	05/01/18	EPA 180.1	721026460
SC-2 NLS ID: 1052472								
OC: 217849:2 Matrix: DW								
ollected: 04/24/18 10:27 Received: 05/01/18								
arameter	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
ead, 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
urbidity, screening - SDWA	ND	NTU	1	1.0*	1.0*	05/01/18	EPA 180.1	721026460
SC-3 NLS ID: 1052473								
OC: 217849:3 Matrix: DW								
ollected: 04/24/18 10:35 Received: 05/01/18								
arameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
opper, 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
ead, 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
urbidity, screening - SDWA	ND	NTU	1	1.0*	1.0*	05/01/18	EPA 180.1	721026460
SC-4 NLS ID: 1052474	·	·	·	·	·		•	
OC: 217849:4 Matrix: DW								
ollected: 04/24/18 10:39 Received: 05/01/18								
arameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
opper, 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
opper, tot. recoverable as ou by ide-ivis			i i	0.10*	0.20 / 15*	05/04/18		721026460
ead, tot. recoverable as Pb by ICP-MS	0.47	ug/L	f I	0.10	0.20 / 13	03/04/10	EPA 200.8. Rev 5.4	121020400

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

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%DWB = (mg/kg DWB) / 10000

1000 ug/L = 1 mg/L

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Shaded results indicate >MCL.

Reviewed by:

WDNR Laboratory ID No. 721026460 **WDATCP Laboratory Certification No. 105-330**

EPA Laboratory ID No. WI00034

Printed: 05/10/18 Page 1 of 1

> **NLS Project:** 298648

> > 10525

NLS Customer: Fax: 920 648 4370 Phone: 920 648 6343

Environmental Management Consulting Inc Client:

Attn: Rob Haveman W7748 County Highway V Lake Mills, WI 53551 9643

Analytical Laboratory and Environmental Services

400 North Lake Avenue - Crandon, WI 54520

NORTHERN LAKE SERVICE, INC.

Ph: (715)-478-2777 Fax: (715)-478-3060

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

Trojecti City of treetrance City from recess of								
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 ND	NTU	1	1.0*	1.0*	05/01/18	EPA 180.1	721026460
CH-5 NLS ID: 1052623	, . <u>-</u>		1.	1110	1.10			
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 Ct 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*	05/04/18	EPA 180.1	721026460
Values in brackets represent results greater than or equal to	,							

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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LOQ = Limit of Quantitation 1000 ug/L = 1 mg/L

NA = Not Applicable

DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000MCL = Maximum Contaminant Levels for Drinking Water Samples.

Shaded results indicate >MCL.

Reviewed by:

Somme Mule

SAMPLE COLLECTION AND CHAIN OF CUSTODY RECORD Wisconsin DNR cert ID CLIENTMC 721026460 (Cran) / 268533760 (Wauk)

QUOTATION NO.

FAX

SAMPLE ID

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 105-000330 (Cran) / 105-000479 (Wauk) USE BOXES BELOW: Indicate Y or N if GW Sample is field filtered. AVALYZE PER <u>ORDER OF AVALYSIS</u> Indicate G or C if WW Sample is Grab or Composite. NO. 217855 COLLECTION REMARKS (i.e. DNR Well ID #)

COLLECTED BY (signature)	11/1//	CUSTODY SEAL	NO. (IF ANY)	4/27/18	REPORT TO	
RELINQUISHED BY (signature)	7 1/1. // //	RECEIVED BY (signature)		DATE/TIME		
DISPATCHED BY (signature)	CHED BY (signature) METHOD OF TRANSPORT					
RECEIVED AT NLS BY (signatu	re) I i a mu	DATE/TIME	CONDITION	TEMP.	INVOICE TO	
COOLER#	(40)	REMARKS & OTHER INFORM.	ATION			
PRESERVATIVE: $N = nitric$ ac $NP = no$ preservative $Z = zinc$ ace $S = sulfuric$ acid $M = methano$	ate HA = hydrochloric & ascorbic acid	WDNR FACILITY NUMBER	E-MAIL ADDRESS			-

IMPORTANT: Rev. 7/20/15

ADDRESS

ITEM

NO.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

PURCHASE ORDER NO.

LAB. NO.

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.

Wisconsin DATCP ID

MATRIX:

SW = surface water

WW = waste water GW = groundwater DW = drinking water TIS = tissue AIR = air SOIL = soil

SED = sediment PROD = product

MATRIX

(See above)

SL = sludgeOTHER

COLLECTION

TIME 905 am

SAMPLE COLLECTION AND CHAIN OF CUSTODY RECORD NORTHERN LAKE SERVICE, INC. Analytical Laboratory and Environmental Services CLIENT Wisconsin DNR cert ID 721026460 (Cran) / 268533760 (Wauk) 400 North Lake Avenue • Crandon, WI 54520-1298 **ADDRESS** Wisconsin DATCP ID Tel: (715) 478-2777 • Fax: (715) 478-3060 105-000330 (Cran) / 105-000479 (Wauk) 53557 USE BOXES BELOW: Indicate Y or N if GW Sample is field filtered. ANALYZE PER ORDER OF ANALYSIS MATRIX: QUOTATION NO. SW = surface water Indicate G or C if WW Sample is Grab or Composite. WW = waste water GW = groundwater DW = drinking water TIS = tissue CONTACT AIR = air SOIL = soil PURCHASE ORDER NO. FAX SED = sediment PROD = product NO. 217851 SL = sludge OTHER NLS LAB. NO COLLECTION REMARKS (i.e. DNR Well ID #) ITEM COLLECTION MATRIX SAMPLE ID NO. TIME (See above) 941 am Du 3. 4. 5. 6. 7. 8. 9. 10. COLLECTED By (signature REPORT TO CUSTODY SEAL NO. (IF ANY) RELINQUISHED BY RECEIVED BY (signature) DISPATCHED BY (signature) METHOD OF TRANSPORT INVOICE TO CONDITION RECEIVED AT NLS BY (signature) DATE/TIME TEMP. 5-1-18

M = methanol H = hydrochloric acid

1. TO MEET REGULATORY REQUIREMENTS, THIS FORM MUST BE COMPLETED IN DETAIL AND INCLUDED IN THE COOLER CONTAINING THE SAMPLES DESCRIBED.

IMPORTANT:

S = sulfuric acid

NP = no preservative

Rev. 7/20/15

COOLER #
PRESERVATIVE:

2. PLEASE USE ONE LINE PER SAMPLE, <u>NOT</u> PER BOTTLE. 3. RETURN THIS FORM WITH SAMPLES - CLIENT MAY KEEP YELLOW COPY.

OH = sodium hydroxide

HA = hydrochloric & ascorbic acid

N = nitric acid

Z = zinc acetate

4. PARTIES COLLECTING SAMPLE, LISTED AS REPORT TO AND LISTED AS INVOICE TO AGREE TO STANDARD TERMS & CONDITIONS ON REVERSE.

REMARKS & OTHER INFORMATION

WDNR FACILITY NUMBER

E-MAIL ADDRESS

SAMPLE COLLECTION AND CHAIN OF CUSTODY RECORD NORTHERN LAKE SERVICE, INC.

CLIENT EMC ADDRESS W1748 CY Hwy V CITY Lake Mills STATE JEPS 57	Wisconsin DNR cert ID 721026460 (Cran) / 268533760 (Wauk) Wisconsin DATCP ID 105-000330 (Cran) / 105-000479 (Wauk)	Analytical Laboratory and Environmental Services 400 North Lake Avenue • Crandon, WI 54520-1298 Tel: (715) 478-2777 • Fax: (715) 478-3060 SE BOXES BELOW: Indicate Y or N if GW Sample is field filtered. Indicate G or C if WW Sample is Grab or Composite.		
	MATRIX: SW = surface water			
PROJECT DESCRIPTION / NO. (Ity of West Allis 180559- DNR EID# Historical Society CONTACT PHONE PURCHASE ORDER NO. FAX	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 MATRIX (See about)	No. 214		
ITEM NO. LAB. NO. SAMPLE ID DATE	LECTION MATRIX TIME (See above)	COLLECTION REMARKS (i.e. DNR Well ID #)		
1. 1053405 HS-1 5/2/10	95/am DW X			
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10.				
		DATE/TIME REPORT TO		
1/4//1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/	CUSTODY SEAL NO. (IF ANY) ED BY (signature)	5/3/18 DATE/TIME 5/3/18		
DISPATCHED BY (signature) // METH	D OF TRANSPORT	DATE/TIME		
RECEIVED AT NLS BY (signature) DATE/I	378 9.45 QHILO OF	TEMP. INVOICE TO		
COOLER #	S & OTHER INFORMATION			
	CILITY NUMBER E-MAIL ADDRESS			

Rev. 7/20/15

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 Wisconsin DNR cert ID 721026460 (Cran) / 268533760 (Wauk) 400 North Lake Avenue • Crandon, WI 54520-1298 **Wisconsin DATCP ID** Tel: (715) 478-2777 • Fax: (715) 478-3060 105-000330 (Cran) / 105-000479 (Wauk) ZIP USE BOXES BELOW: Indicate Y or N if GW Sample is field filtered. AVALYZE PER OFFICE OF AVALYSIS MATRIX: SW = surface water Indicate G or C if WW Sample is Grab or Composite. WW = waste water GW = groundwater DW = drinking water TIS = tissue AIR = air SOIL = soil PURCHASE ORDER NO. FAX SED = sediment PROD = product NO. 217856 SL = sludge OTHER COLLECTION REMARKS (i.e. DNR Well ID #) ITEM NO. COLLECTION MATRIX SAMPLE ID See above DATE TIME 927 am 930 3. 4. 5. 6. 7. 8. 9. 10. COLLECTED BY (stanature) CUSTODY SEAL NO. (IF ANY) REPORT TO RELINQUISHED RECEIVED BY (signature) DISPATCHED BY (signature) METHOD OF TRANSPORT DATE/TIME **INVOICE TO** CONDITION TEMP. RECEIVÉD AT NLS BY (signature) **REMARKS & OTHER INFORMATION** COOLER#

E-MAIL ADDRESS

1. TO MEET REGULATORY REQUIREMENTS, THIS FORM MUST BE COMPLETED IN DETAIL AND INCLUDED IN THE COOLER CONTAINING THE SAMPLES DESCRIBED.

NP = no preservative Z = zinc acetate HA = hydrochloric & ascorbic acid
S = sulfuric acid M = methanol H = hydrochloric acid

WDNR FACILITY NUMBER

IMPORTANT:

PRESERVATIVE:

N = nitric acid

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

OH = sodium hydroxide

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.

CLIENT	Wisconsin DNR cert ID	Analytical Laboratory and Environmental Services			
ADDRESS W1948 Cty Hary V	721026460 (Cran) / 268533760 (Wauk) Wisconsin DATCP ID	400 North Lake Avenue • Crandon, WI 54520-1298 Tel: (715) 478-2777 • Fax: (715) 478-3060			
Lake Mills STATE 53551	105-000330 (Cran) / 105-000479 (Wauk) MATRIX: SW = surface water	BOXES BELOW: Indicate Y or N if GW Sample is field filtered.			
PROJECT DESCRIPTION/NO. (ify of West All's 170539-0/	WW = waste water	Indicate G or C if WW Sample is Grab or Composite.			
DNR FID# Liberty Heights CONTACT PHONE	GW = groundwater DW = drinking water TIS = tissue AIR = air				
PURCHASE ORDER NO. FAX	SOIL = soil SED = sediment PROD = product				
	SL = sludge OTHER	/ / / / / / No. 21510			
NO. LAB. NO. SAMPLE ID DATE	THE RESERVENT	COLLECTION REMARKS (i.e. DNR Well ID #)			
1. 153592 64-1 5/3/18	1106an DW X				
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5.					
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RECEIVED	DBY (signature)	DATE/TIME			
DISPATCHED BY (signature) METHOD (OF TRANSPORT	DATE/TIME			
		INVOICE TO			
RECEIVED AT NLS BY (signature) DATE/TIME 5-3- DEMARKS 8	CONDITION CONDITION CONTINUES OTHER INFORMATION	TEMP.			
COOLER#					
PRESERVATIVE: N = nitric acid OH = sodium hydroxide WDNR FACI	LITY NUMBER E-MAIL ADDRESS				

S = sulfuric acid IMPORTANT:

Rev. 7/20/15

M = methanol

H = hydrochloric acid

2. PLEASE USE ONE LINE PER SAMPLE, <u>NOT PER BOTTLE</u>.
3. RETURN THIS FORM WITH SAMPLES - CLIENT MAY KEEP YELLOW COPY.
4. PARTIES COLLECTING SAMPLE, LISTED AS <u>REPORT TO</u> AND LISTED AS <u>INVOICE TO</u> AGREE TO STANDARD TERMS & CONDITIONS ON REVERSE.

1. TO MEET REGULATORY REQUIREMENTS, THIS FORM MUST BE COMPLETED IN DETAIL AND INCLUDED IN THE COOLER CONTAINING THE SAMPLES DESCRIBED.

SAMPLE COLLECTION AND CHAIN OF CUSTODY RECORD

NORTHERN LAKE SERVICE, INC.

CLIENT EMC ADDRESS WITH STATE VIP V CITY Lake Mills STATE 5355 PROJECT DESCRIPTION NO. 1505 DNR FIDT BOND LIGENSE # MUNICIPAL VALUE PURCHASE ORDER NO. FAX	SW = surface water WW = waste water GW = groundwater DW = drinking water TIS = tissue AIR = air SOIL = soil SED = sediment PROD = product SL = sludge	Analytical Laboratory and 400 North Lake Avenu Tel: (715) 478-2777 • I SE BOXES BELOW: Indicate Y or Indicate G or C if WW Samp	r N if GW Sample is field filtered.
ITEM NLS SAMPLE ID DO	COLLECTION MATRIX		COLLECTION REMARKS (i.e. DNR Well ID #)
105 30 30	106/18 930 am DW X		(i.e. DNR Well ID #)
2. 634 1 -2	922 1 1 X		
3. 635 -3 1111	925 X		
4. 636 -4	928 X		
5. 6317 V 5	9)9 V X		
6. SAN			
7.			
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COLLECTED BY (signature)	CUSTODY SEAL NO. (IF ANY)	PATE/TIME 4/26/18	REPORT TO
RELINQUISHED BY (signature)	ECEIVED BY (signature)	4/30/18	-
DISPATCHED BY (signature)	METHOD OF TRANSPORT	DATE/TIME	
Aarra Blume 5	TE/TIME CONDITION 5-1-(8 (0:00 OK) MARKS & OTHER INFORMATION	TEMP.	INVOICE TO
PRESERVATIVE: N = nitric acid OH = sodium hydroxide NP = no preservative Z = zinc acetate HA = hydrochloric & ascorbic acid S = sulfuric acid M = methanol H = hydrochloric acid	ONR FACILITY NUMBER E-MAIL ADDRESS FORM MUST BE COMPLETED IN DETAIL AND INCLUDED IN TO	HE COOLER CONTAINING THE S	AMPLES DESCRIBED.

IMPORTANT: Rev. 7/20/15

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4. PARTIES COLLECTING SAMPLE, LISTED AS <u>REPORT TO</u> AND LISTED AS <u>INVOICE TO</u> AGREE TO STANDARD TERMS & CONDITIONS ON REVERSE.

SAMPLE COLLECTION AND CHAIN OF CUSTODY RECORD NORTHERN LAKE SERVICE, INC. Analytical Laboratory and Environmental Services Wisconsin DNR cert ID CLIENT 721026460 (Cran) / 268533760 (Wauk) 400 North Lake Avenue • Crandon, WI 54520-1298 **ADDRESS** Wisconsin DATCP ID Tel: (715) 478-2777 • Fax: (715) 478-3060 105-000330 (Cran) / 105-000479 (Wauk) USE BOXES BELOW: Indicate Y or N if GW Sample is field filtered. MATRIX: PORDER OF AWALYSIS QUOTATION-NO. SW = surface water Indicate G or C if WW Sample is Grab or Composite. WW = waste water GW = groundwater DW = drinking water TIS = tissue AIR = air SOIL = soil PURCHASE ORDER NO. FAX SED = sediment PROD = product NO. 217848 SL = sludge OTHER COLLECTION REMARKS ITEM COLLECTION MATRIX NLS LAB. NO SAMPLE ID NO. (i.e. DNR Well ID #) (See above) DATE TIME 855 am 1. 85-8 2. 3. 902 4. 905 5. 6. 7. 8. 9. 10. COLLECTED BY (signature) CUSTODY SEAL NO. (IF ANY) REPORT TO RELINQUISHED BY Signatur RECEIVED BY (signature) DISPATCHED BY (signature) METHOD OF TRANSPORT DATE/TIME INVOICE TO TEMP. DATE/TIME CONDITION

COOLER #

PRESERVATIVE: NP = no preservative

N = nitric acid Z = zinc acetate M = methanol

OH = sodium hydroxide HA = hydrochloric & ascorbic acid H = hydrochloric acid

2. PLEASE USE ONE LINE PER SAMPLE, NOT PER BOTTLE.

WDNR FACILITY NUMBER

REMARKS & OTHER INFORMATION

E-MAIL ADDRESS

1. TO MEET REGULATORY REQUIREMENTS, THIS FORM MUST BE COMPLETED IN DETAIL AND INCLUDED IN THE COOLER CONTAINING THE SAMPLES DESCRIBED.

S = sulfuric acid Rev. 7/20/15

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.

CLIENT EMC ADDRESS W7748 Cty Hwy V CITY Lake MIlls wI STATE ZIP STATE STATE	Wisconsin DNR cert ID 721026460 (Cran) / 268533760 (Wauk) Wisconsin DATCP ID 105-000330 (Cran) / 105-000479 (Wauk)	Analytical Laboratory and Environmental Services 400 North Lake Avenue • Crandon, WI 54520-1298 Tel: (715) 478-2777 • Fax: (715) 478-3060 EB BOXES BELOW: Indicate Y or N if GW Sample is field filtered.		
PROJECT DESCRIPTION / NO. QUOTATION NO.	MATRIX: SW = surface water	Indicate G or C if WW Samp		
City of West Allis 180559-	WW = waste water GW = groundwater			
Seroir Center DNR-LICENSE#	DW = drinking water TIS = tissue			
CONTACT PHONE	TIS = tissue AIR = air			
PURCHASE ORDER NO. FAX	SOIL = soil SED = sediment			
	PROD = product SL = sludge		/ / / / No. 2178	
	OTHER ST / ST			
NO. LAB, NO. SAMPLE ID COLL DATE	MATRIX (See above)		COLLECTION REMARKS (i.e. DNR Well ID #)	
1. 1052471 SC-1 4/24/18	85/am DW X			
2. 472 SC-2	1027 1 1 X			
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4. 474 SC-4	1039 V V X			
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DISPATCHED BY (signature) METHOD	OF TRANSPORT	DATE/TIME		
REGEIVED AT NLS BY (signature) DATE/TIME 5-1- REMARKS COOLER #	CONDITION CONDITION & OTHER INFORMATION	TEMP.	INVOICE TO	
	E-MAIL ADDRESS			

IMPORTANT: Rev. 7/20/15 2. PLEASE USE ONE LINE PER SAMPLE, NOT PER BOTTLE.
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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 CLIENT Wisconsin DNR cert ID 721026460 (Cran) / 268533760 (Wauk) 400 North Lake Avenue • Crandon, WI 54520-1298 **Wisconsin DATCP ID** Tel: (715) 478-2777 • Fax: (715) 478-3060 105-000330 (Cran) / 105-000479 (Wauk) USE BOXES BELOW: Indicate Y or N if GW Sample is field filtered. ANALYZE PER OFIDER OF ANALYSIS MATRIX: SW = surface water Indicate G or C if WW Sample is Grab or Composite. WW = waste water GW = groundwater DW = drinking water TIS = tissue AIR = air SOIL = soil PURCHASE ORDER NO. FAX SED = sediment PROD = product SL = sludge NO. 217852 OTHER ITEM NLS LAB. NO. COLLECTION MATRIX COLLECTION REMARKS SAMPLE ID NO. (i.e. DNR Well ID #) DATE (See above) TIME 47 am 2. 3. 4. 5. 902 6. 7. 8. 9. 10. COLLECTED BY (signature) CUSTODY SEAL NO. (IF ANY) REPORT TO DATE/TIME RELINQUISHED BY (signature RECEIVED BY (signature) DATE/TIME DISPATCHED BY (signature) METHOD OF TRANSPORT DATE/TIME INVOICE TO RECEIVED AT NLS BY (signature) DATE/TIME CONDITION TEMP.

1. TO MEET REGULATORY REQUIREMENTS, THIS FORM MUST BE COMPLETED IN DETAIL AND INCLUDED IN THE COOLER CONTAINING THE SAMPLES DESCRIBED.

E-MAIL ADDRESS

IMPORTANT:

S = sulfuric acid

NP = no preservative

COOLER #
PRESERVATIVE:

PLEASE USE ONE LINE PER SAMPLE, <u>NOT</u> PER BOTTLE.
 RETURN THIS FORM WITH SAMPLES - CLIENT MAY KEEP YELLOW COPY.

3. RETURN THIS FORM WITH SAMPLES - CLIENT MAY KEEP YELLOW COP
Rev. 7/20/15
4. PARTIES COLLECTING SAMPLE, LISTED AS REPORT TO AND LISTED AS

OH = sodium hydroxide

H = hydrochloric acid

HA = hydrochloric & ascorbic acid

N = nitric acid

Z = zinc acetate

M = methanol

4. PARTIES COLLECTING SAMPLE, LISTED AS REPORT TO AND LISTED AS INVOICE TO AGREE TO STANDARD TERMS & CONDITIONS ON REVERSE.

REMARKS & OTHER INFORMATION

WDNR FACILITY NUMBER

SECTION V AIR MONITORING/IAQ

5.1 CARBON MONOXIDE (CO)

<u>Carbon Monoxide (CO)</u>: 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)

<u>Carbon Dioxide (CO₂):</u> 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)

<u>Temperature & Relative Humidity (RH)</u>: 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°f	70.6°f	74.4°f
1	2	HD 1	75.7°f	72.6°f	74.0°f
1	3	MY 1	77.7°f	66.4°f	72.8°f
1	4	CH 1	74.5°f	70.6°f	72.9°f
1	5	LB 1	73.7°f	71.3°f	72.5°f
1	6	FS 21	72.8°f	68.2°f	70.5°f
2	1	PD 2	72.4°f	70.7°f	71.3°f
2	2	HD 2	74.5°f	72.4°f	73.2°f
2	3	MY 2	77.4°f	70.4°f	73.1°f
2	4	CH 2	74.3°f	70.5°f	71.6°f
2	5	LB 2	76.0°f	72.6°f	74.0°f
2	6	FS 22	73.5°f	68.5°f	71.6°f
3	1	PD 3	74.3°f	70.6°f	73.9°f
3	2	SC 1	78.1°f	74.5°f	77.1°f
3	3	MY 3	76.1°f	72.0°f	73.9°f
3	4	CH 3	73.4°f	68.3°f	70.9°f
3	5	LB 3	74.1°f	69.8°f	71.8°f
3	6	FS 31	79.7°f	72.7°f	76.3°f
4	1	PD 4	73.2°f	71.6°f	72.5°f
4	2	SC 2	76.5°f	71.6°f	73.8°f
4	3	MY 4	73.6°f	70.2°f	72.0°f
4	4	CH 4	72.7°f	69.6°f	71.1°f
4	5	FS 1t	74.1°f	68.7°f	70.7°f
4	6	FS 32	75.2°f	65.1°f	72.0°f

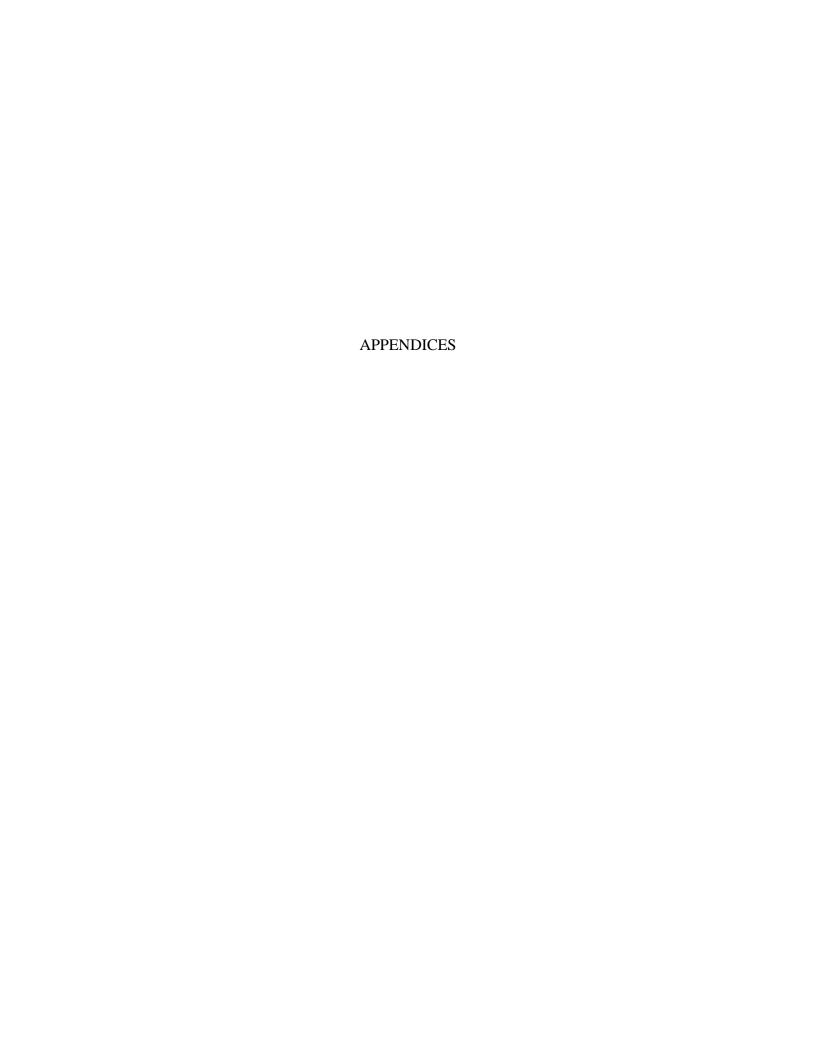
5.3.3 **TABLE 5:** RELATIVE HUMIDITY SAMPLE ANALYSIS

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
IID1	
HD1	Health Department - Clinic
HD2	Health Department - East Office Area
SC1	Senior Center - Main Office
SC2	Senior Center - Wain Office Senior Center - Cafeteria
502	Schiol Center - Careteria
MY1	Municipal Yards - Garage Area
MY2	Municipal Yards - Main Office
MY3	Municipal Yards - Sanitation Office
MY4	Municipal Yards - Water Department
	True true true true true true true true t
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
Tige (
FS31	Fire Station No. 3 - Break Room
FS32	Fire Station No. 3 - Day Room



METHODS

PLM

XRF

WATER