

Twin City Water Clinic Laboratory Test Report

Minnesota State Laboratory ID# 027-053-119
 Wisconsin State Laboratory ID# 105-10117
 Wisconsin DNR Lab ID#399073400

X No samples were subcontracted; or the above test result(s) with '***' designation were produced by a subcontracted laboratory. [Laboratory name; address; MDH Lab ID#]. The subcontracted laboratory maintains MDH Certification for the field(s) of testing performed.

Client: Meridian Consulting Group
 Redwing
Address: 16620 61st Ave
 Plymouth, MN 55446

Report Number: 16-11484
Sample Collection Date: 08/18/16
Sample Collection Time: 10:30
Sample Receipt Date: 08/19/16

Twin City Water Clinic Inc.
617 13th Avenue South
Hopkins, MN 55343
Phone: (952)935-3556

Sample ID	Analyte	Sample Location	Parameter	Sample Prep		Sample Analysis		Test	
				Date	Time	Date	Time	Results	Units
16-11484	Lead	BS-1	Drinking Water	08/19/16	10:45	08/22/16	15:17	3.45	µg/L
16-11485	Lead	LBEC- 1	Drinking Water	08/19/16	10:45	08/22/16	15:22	7.37	µg/L
16-11486	Lead	RBEC-2	Drinking Water	08/19/16	10:45	08/22/16	15:26	<2.0	µg/L
16-11487	Lead	RBEC-3	Drinking Water	08/19/16	10:45	08/22/16	15:30	<2.0	µg/L
16-11488	Lead	RBEC-4	Drinking Water	08/19/16	10:45	08/22/16	15:35	<2.0	µg/L
16-11489	Lead	RBEC-5	Drinking Water	08/19/16	10:45	08/22/16	15:48	<2.0	µg/L
16-11490	Lead	RBEC-6	Drinking Water	08/19/16	10:45	08/22/16	16:01	<2.0	µg/L
16-11491	Lead	RBEC-7	Drinking Water	08/19/16	10:45	08/22/16	16:06	<2.0	µg/L
16-11492	Lead	RBEC-8	Drinking Water	08/19/16	10:45	08/22/16	16:10	<2.0	µg/L
16-11493	Lead	RBEC-9	Drinking Water	08/19/16	10:45	08/22/16	16:14	<2.0	µg/L
16-11494	Lead	RBEC-10	Drinking Water	08/19/16	10:45	08/22/16	16:19	<2.0	µg/L
16-11495	Lead	RBEC-11	Drinking Water	08/19/16	10:45	08/22/16	16:23	<2.0	µg/L
16-11496	Lead	RBEC-12	Drinking Water	08/19/16	10:45	08/22/16	16:28	<2.0	µg/L
16-11497	Lead	RBEC-13	Drinking Water	08/19/16	10:45	08/22/16	16:32	<2.0	µg/L
16-11498	Lead	RBEC-14	Drinking Water	08/19/16	10:45	08/22/16	16:36	<2.0	µg/L
16-11499	Lead	RBEC-15	Drinking Water	08/19/16	10:45	08/24/16	10:09	<2.0	µg/L
16-11500	Lead	RBEC-16	Drinking Water	08/19/16	10:45	08/24/16	11:04	<2.0	µg/L
16-11501	Lead	RBEC-17	Drinking Water	08/19/16	10:45	08/24/16	11:08	<2.0	µg/L
16-11502	Lead	RBEC-18	Drinking Water	08/19/16	10:45	08/24/16	11:12	<2.0	µg/L
16-11503	Lead	RBEC-19	Drinking Water	08/19/16	10:45				µg/L

Approved methods used in analyzing the samples listed above have the following reporting levels:
 SM3113 - Lead, 2.0 µg / L
 Maximum contaminant levels: Lead, 15.0 µg / L

Sample temp: 26°C

Sample Collected by: Client TCWC

Approved By:



Laboratory Manager

Senior Analyst

The results listed in this report apply only to the above listed samples. All routine quality assurance procedures were followed, unless otherwise noted. This analytical report must be reported in its entirety. All methods are certified by the Minnesota Department of Health, unless otherwise noted.

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Client: Meridian Consulting Group
 Redwing
Address: 16620 61st Ave
 Plymouth, MN 55446

Report Number: 16-11504
Sample Collection Date: 08/18/16
Sample Collection Time: 10:30
Sample Receipt Date: 08/19/16

Twin City Water Clinic Inc.
617 13th Avenue South
Hopkins, MN 55343
Phone: (952)935-3556

Sample ID	Analyte	Sample Location	Parameter	Sample Prep		Sample Analysis		Test	
				Date	Time	Date	Time	Results	Units
16-11504	Lead	RBEC-20	Drinking Water	08/19/16	10:45	08/24/16	11:25	<2.0	µg/L
16-11505	Lead	RBEC-21	Drinking Water	08/19/16	10:45	08/24/16	11:38	<2.0	µg/L
16-11506	Lead	RBEC-22	Drinking Water	08/19/16	10:45	08/24/16	11:43	2.18	µg/L
16-11507	Lead	RBEC-23	Drinking Water	08/19/16	10:45	08/24/16	11:47	2.5	µg/L
16-11508	Lead	RBEC-24	Drinking Water	08/19/16	10:45	08/24/16	11:51	2.44	µg/L
16-11509	Lead	RBEC-25	Drinking Water	08/19/16	10:45	08/24/16	11:56	<2.0	µg/L
16-11510	Lead	PIA-1	Drinking Water	08/19/16	10:45	08/24/16	12:01	3.28	µg/L
16-11511	Lead	PIA-2	Drinking Water	08/19/16	10:45	08/24/16	12:05	2.33	µg/L
16-11512	Lead	PIA-3	Drinking Water	08/19/16	10:45	08/24/16	12:10	<2.0	µg/L
16-11513	Lead	TBMS-1	Drinking Water	08/19/16	10:45	08/24/16	12:14	7.42	µg/L
16-11514	Lead	TBMS-2	Drinking Water	08/19/16	10:45	08/24/16	12:27	2.81	µg/L
16-11515	Lead	TBMS-3	Drinking Water	08/19/16	10:45	08/24/16	12:40	2.81	µg/L
16-11516	Lead	TBMS-4	Drinking Water	08/19/16	10:45	08/24/16	12:44	<2.0	µg/L
16-11517	Lead	TBMS-5	Drinking Water	08/19/16	10:45	08/24/16	12:49	<2.0	µg/L
16-11518	Lead	TBMS-6	Drinking Water	08/19/16	10:45	08/24/16	12:53	9.85	µg/L
16-11519	Lead	TBMS-7	Drinking Water	08/19/16	10:45	08/24/16	12:58	3.32	µg/L
16-11520	Lead	TBMS-8	Drinking Water	08/19/16	10:45	08/24/16	13:02	2.52	µg/L
16-11521	Lead	TBMS-9	Drinking Water	08/19/16	10:45	08/24/16	13:06	15.7	µg/L
16-11522	Lead	TBMS-10	Drinking Water	08/19/16	10:45	08/24/16	13:11	4.45	µg/L
16-11523	Lead	TBMS-11	Drinking Water	08/19/16	10:45	08/24/16	13:14	3.46	µg/L

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Laboratory Manager

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Client: Meridian Consulting Group
 Redwing
Address: 16620 61st Ave
 Plymouth, MN 55446

Report Number: 16-11524
Sample Collection Date: 08/18/16
Sample Collection Time: 10:30
Sample Receipt Date: 08/19/16

Twin City Water Clinic Inc.
617 13th Avenue South
Hopkins, MN 55343
Phone: (952)935-3556

Sample ID	Analyte	Sample Location	Parameter	Sample Prep		Sample Analysis		Test	
				Date	Time	Date	Time	Results	Units
16-11524	Lead	TBMS-12	Drinking Water	08/19/16	10:45	08/25/16	10:42	<2.0	µg/L
16-11525	Lead	TBMS-13	Drinking Water	08/19/16	10:45	08/25/16	10:47	<2.0	µg/L
16-11526	Lead	TBMS-14	Drinking Water	08/19/16	10:45	08/25/16	10:51	3.22	µg/L
16-11527	Lead	TBMS-15	Drinking Water	08/19/16	10:45	08/25/16	10:55	13.99	µg/L
16-11528	Lead	TBMS-16	Drinking Water	08/19/16	10:45	08/25/16	11:00	<2.0	µg/L
16-11529	Lead	TBMS-17	Drinking Water	08/19/16	10:45	08/25/16	11:05	<2.0	µg/L
16-11530	Lead	TBMS-18	Drinking Water	08/19/16	10:45	08/25/16	11:18	<2.0	µg/L
16-11531	Lead	TBMS-19	Drinking Water	08/19/16	10:45	08/25/16	11:31	9.01	µg/L
16-11532	Lead	TBMS-20	Drinking Water	08/19/16	10:45	08/25/16	11:35	6.69	µg/L
16-11533	Lead	TBMS-21	Drinking Water	08/19/16	10:45	08/25/16	11:40	3.96	µg/L
16-11534	Lead	TBMS-22	Drinking Water	08/19/16	10:45	08/25/16	11:44	5.64	µg/L
16-11535	Lead	TBMS-23	Drinking Water	08/19/16	10:45	08/25/16	11:48	<2.0	µg/L
16-11536	Lead	TBMS-24	Drinking Water	08/19/16	10:45	08/25/16	11:53	<2.0	µg/L
16-11537	Lead	TBMS-25	Drinking Water	08/19/16	10:45	08/25/16	11:57	2.04	µg/L
16-11538	Lead	TBMS-26	Drinking Water	08/19/16	10:45	08/25/16	12:01	5.99	µg/L
16-11539	Lead	TBMS-27	Drinking Water	08/19/16	10:45	08/25/16	12:06	6.54	µg/L
16-11540	Lead	TBMS-28	Drinking Water	08/19/16	10:45	08/25/16	12:19	6.04	µg/L
16-11541	Lead	TBMS-29	Drinking Water	08/19/16	10:45	08/25/16	12:32	2.94	µg/L
16-11542	Lead	TBMS-30	Drinking Water	08/19/16	10:45	08/25/16	12:37	4.84	µg/L
16-11543	Lead	TBMS-31	Drinking Water	08/19/16	10:45	08/25/16	12:41	4.91	µg/L

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FINAL REPORT

LEAD LEVELS IN DRINKING WATER
RESULTS OF SCREENING SURVEY

Red Wing Public Schools

Red Wing High School
Project #RW-HS-0612

Prepared by:

Atlas Environmental Consulting
1206 38th Street SW
Rochester, MN 55902

July 6, 2012

I. Lead Sampling Strategy and Analysis

Atlas Environmental Consulting used the following lead sample strategy:

• Water Coolers

The sampling objective was to collect water which had been on contact with internal plumbing parts which potentially contain lead. The water was allowed to stay in contact with these parts (including the water tank) for at least 6 hours prior to sampling.

• Other Fixtures

Each sample was taken from a cold-water tap used for drinking and cooking. Any aerators or treatment devices were removed prior to sample collection. The tap had been standing in the plumbing line for at least 6 hours prior to sampling. The first flow of water from the tap was collected in an approved container.

All the water samples drawn were collected from the fixture in question and collected in sampling vials allowing none of the water to go to waste. Sampling vials were filled but not overfilled. Nitric acid was present in the sampling vials as a preservative.

In order to ensure reliable results, each sample was analyzed by a competent laboratory certified by the Minnesota Department of Health (MDH) which uses the United States Environmental Protection Agency approved analytical methods and quality control/assurance procedures. Samples were analyzed using the ICP/MS EPA Method 200.8. These factors allowed the laboratory to reach the recommended detection limit of five parts per billion (ppb).

II. Analytical Results

Analytical results are included in Table II.

III. Recommendations

- A. The Minnesota Department of Health (MDH) recommends that the follow-up investigation be conducted on all fixtures reporting lead contents greater than 20 ppb. See attached Follow-Up Sampling Protocol included in Appendix A.
- B. Atlas Environmental Consulting, as directed by the Environmental Protection Agency (EPA) and the Minnesota Department of Health (MDH), recommends that each tap with elevated lead levels be taken out of service until either a twice-daily flushing program or treatment method proves to lower the lead level to below 20 ppb. Both options are explained in detail below:

a. Twice-Daily Flushing Program

If the fixtures are used for food preparation or used by children or pregnant women for drinking were found to have lead levels above 20 ppb, those fixtures should be flushed two (2) times daily each day for ten (10) minutes, at a minimum, or longer at the District's discretion. A lesser flush time can be used if the school demonstrates that the lead level remains below 20 ppb.

Flushing should occur before the school day begins and at midday, just before the lunch period.

To ensure that flushing is reducing the lead level to 20 ppb or below, each fixture being flushed must be tested just prior to the midday flush period.

- i. If the test result is at or below 20 ppb, the flushing must be continued twice each day as long as the fixture is in use.
- ii. If the test result is above 20 ppb, a treatment method must be used to reduce the lead level.

b. Treatment Methods

When flushing a fixture does not provide sufficient protection, other treatment methods must be investigated and used. These methods include:

- i. Removal of the fixture from service. The water supply must be disconnected from fixtures that are seldom used or the entire fixture physically removed, where appropriate.
- ii. Replacement of the fixture. When the fixture itself is suspected to be the source of the lead contamination, a replacement fixture may be used to reduce the lead levels at the tap.
- iii. Repair of the fixture and/or plumbing. All portions of the plumbing contributing excessive amounts of lead must be repaired. The repair includes faucets, lead solder joints, brass components and lead piping.
- iv. Points of Use (POU) Treatment Device. A POU Treatment Device which meets NSD Standard 53, NSF Standard 58 or equivalent requirements must be purchased, installed and operated in accordance with the manufacturer's recommendations.
- v. Chemical Treatment. Treatment to provide altered water chemistry. Methods include the addition of a phosphate inhibitor, an adjustment to the water's hardness, or connection to a new water source that is less corrosive.

Please note that no additional sampling is required when the fixture is removed from service. However, after a treatment method is selected and installed, the fixture must be retested to ensure the lead level is at or below 20ppb. In addition, any time a fixture, the water supply lines or source of water is repaired, replaced or added, the fixture(s) must be tested for lead content using the sample procedure outlined in this report. See attached Initial Screening Sample Protocol attached in Appendix A.

- C. As with all public health issues, a copy of the District's Lead in Drinking Water Analysis Report must be made available to the public through the District's administrative offices. Atlas Environmental Consulting has included a copy of a sample notification form in Appendix A.
- D. The Minnesota Department of Health (MDH) recommends that water samples be collected every five (5) years, at a minimum, to determine any changes that may have occurred in the lead levels.
- E. The Minnesota Department of Health (MDH) also recommends that water systems with copper piping and lead solder connections be flushed when water systems remain idle for extended periods of time.

TABLE I

DRINING WATER SAMPLE RESLUTS

Summary – Municipal Water

School Name	Number of Samples	Samples Over 20 ppb
Red Wing High School	57	0

Atlas Environmental Consulting and the Minnesota Department of Health (MDH) recommend flushing of fixtures with elevated lead levels (>20 ppb). Remedial action should be taken if levels cannot be lowered with flushing. If all the fixtures were not sampled, these should be sampled and analyzed to comply with flushing requirements.

TABLE II
DRINING WATER SAMPLE RESLUTS – FIRST DRAW SAMPLES

Red Wing High School
 Sampling Date: 6-1-12

Project No.	Sample No.	Location	Results (ppb Lead)
RW-HS-0612	01	West Gym Hall – Left Drinking Fountain	12.6
	02	West Gym Hall – Right Drinking Fountain	1.20
	03	Weight Room Drinking Fountain	0.82
	04	South Gym Hallway - Left Cooler	<0.5
	05	South Gym Hallway - Right Cooler	<0.5
	06	Boy’s Athletics Drinking Fountain	<0.5
	07	Boy’s Phy Ed Drinking Fountain	<0.5
	08	Training Room Sink	0.56
	09	Girl’s Athletics Drinking Fountain	<0.5
	10	Girl’s Phy Ed Drinking Fountain	0.60
	11	Room D-100 Sink	1.43
	12	Staff Lounge Across from D-102 Sink	5.89
	13	Music Break Room Sink	8.01
	14	Music Break Room Cooler	0.69
	15	Custodial Break Room Sink	1.54
	16	Kitchen North Wall Kitchen Sink	2.61
	17	Steam Kettle – Left Sink	3.49
	18	Steam Kettle – Middle Sink	4.29
	19	Steam Kettle – Right Sink	6.45
	20	Kitchen South Wall Kitchen Sink	3.13
	21	Grill Area Sink	3.01
	22	Cafeteria – Left Cooler	0.69
	23	Cafeteria – Right Cooler	0.67
	24	Faculty Lunchroom Sink	3.30
	25	Principal’s Area – Left Cooler	<0.5
	26	Principal’s Area – Right Cooler	<0.5
	27	Principal’s Office Workroom Sink	5.35
	28	Nurse’s Office Sink	2.63
	29	Lower H Pod Restroom – Left Cooler	<0.5
	30	Lower H Pod Restroom – Right Cooler	<0.5
	31	Lower H Pod Cooler	0.60
	32	Lower J Pod Restroom – Left Cooler	<0.5
	33	Lower J Pod Restroom – Right Cooler	<0.5
	34	Lower J Pod Cooler	<0.5
	35	Upper H Pod Restroom – Left Cooler	<0.5
	36	Upper H Pod Restroom – Right Cooler	<0.5

Project No.	Sample No.	Location		Results (ppb Lead)
RW-HS-0612	37	Upper H Pod	Cooler	<0.5
	38	Upper J Pod Restroom – Left	Cooler	<0.5
	39	Upper J Pod Restroom – Right	Cooler	<0.5
	40	Upper J Pod	Cooler	1.16
	41	I pod Break Room	Sink	5.94
	42	K-105 (F.A.C.S.)	Sink	0.53
	43	K-102 (F.A.C.S.) – NE Corner #1	Sink	3.28
	44	K-102 (F.A.C.S.) – #2	Sink	1.58
	45	K-102 (F.A.C.S.) – #3	Sink	0.58
	46	K-102 (F.A.C.S.) – #4	Sink	2.18
	47	K-102 (F.A.C.S.) – #5	Sink	1.69
	48	K-102 (F.A.C.S.) – #6	Sink	1.12
	49	CFI – Left	Cooler	<0.5
	50	CFI – Right	Cooler	<0.5
	51	CFI Workroom	Sink	0.85
	52	Copy Room	Sink	3.52
	53	Concert Hall – Left	Cooler	<0.5
	54	Concert Hall – Right	Cooler	<0.5
	55	District Office – Left	Cooler	<0.5
	56	District Office – Right	Cooler	<0.5
	57	District Office Break Room	Sink	1.81

APPENDIX A

Sampling Protocols

Notification Letter

Follow-Up Sampling Protocol Lead in Drinking Water

Read these entire instructions before you sample!!!

1. Label the sample container with the time, date, location and your initials.
2. Each sample is to be collected from a cold water tap (used for drinking or cooking) or drinking water cooler.
3. Remove any aerators or water treatment devices from spigot.
4. Follow the water collection instructions below for individual fixtures.
5. Turn on the cold tap. Let the water run for **10 minutes**.
6. **This is important.** Nitric acid is sometimes used as a preservative in the bottle and should not be spilled, splashed or poured out of the sample container.
7. Fill the entire container with water. Be sure to seal the container with tape after screwing the top back on.
8. Fill out the Water Sampling Data Sheet and contact Atlas Environmental Consulting the same day. There is a time limit on the sample preservative!

Initial Screening Sampling Protocol

Lead in Drinking Water

Read these entire instructions before you sample!!!

NOTE: To determine whether plumbing lines are a source of lead contamination, collect two initial screening samples one month apart at the furthest point from the water entry to the building. Samples should be collected from lines used to supply water for drinking or cooking. Samples of drinking water should also be collected from each addition to the original building.

1. Label the sample container with the time, date, location and your initials.
2. Each sample is to be collected from a cold water tap (used for drinking or cooking) or drinking water cooler.
3. The samples should be collected before any water is used out of that tap that day.
4. Remove any aerators or water treatment devices from the spigot.
5. Place the opened water sample container sent to you under the tap.
6. Turn on the cold water tap slowly. (**This is important.** Nitric acid is sometimes used as a preservative in the bottle and should not be spilled, splashed or poured out of the sample container.)
7. Fill the entire container with water. Be sure to seal the container with tape after screwing the top back on.
8. Fill out the Water Sampling Data Sheet and contact Atlas Environmental Consulting the same day. There is a time limit on the sample preservative!

Example Notification Letter

Informing Parents, Teachers and Employees of the Availability of Water Test Results

Date: <<Date of Notification Letter>>

To: Parents, Teachers and Other Staff of <<School Name>>

Water samples collected and analyzed from <<coolers/drinking fountains/sinks/kitchen sinks/hand wash/custodial sinks>> at <<School Name>>. Samples were collected on <<date of collection>> at <<specific locations>>.

Results of analyses are posted in the school administrative office, Room <<room number>>.

The United State Environmental Protection Agency (EPA) sets drinking water standards and has determined that lead is a health concern at certain levels of exposure. There is currently a standard of 15 parts per billion (ppb) for municipal water supplies. EPA's standard for school districts is 20 ppb.

EPA and others are concerned about lead in drinking water. Too much lead in the human body can cause serious damage to the brain, kidneys, nervous system and red blood cells. The greatest risk, even with short-term exposure, is to young children and pregnant women.

Lead levels in your drinking water are likely to be high if:

- your home or school water system has lead pipes;
- your home or school has copper pipes with lead solder;
- you have soft or acidic water; or
- water sits in the pipes for several hours.

Lead exposure can occur from many sources. Much of the lead in dust, air and food is derived from automobile emissions. Since lead contamination can occur from many sources, the EPA and Minnesota Department of Health (MDH) recommends the following:

- Wash children's hands frequently, especially before meals and bedtime.
- Use water from cold tap for drinking and cooking.
- Flush faucets for 1-2 minutes when the water has not been used for more than six (6) hours.

If you have any questions or comments about lead as a public health hazard, please contact:

Colin A. Boysen
Atlas Environmental Consulting
1206 38th Street SW
Rochester, MN 55902
507-261-2309

Water Sampling Data Sheet

School: Colvill

Sample Number	Location	Type	Date	Time	Results
Col 1	Outside Room 101	Sink	11/6/2013	7:28 AM	<2.0 ug/l
Col 2	Hallway by Kitchen	Cooler	11/6/2013	7:25 AM	<2.0 ug/l
Col 3	Kitchen – Large Stainless Sink	Kitchen Sink	11/6/2013	7:29 AM	2.69 ug/l
Col 4	Room 119 – Teacher’s Lounge	Sink	11/6/2013	7:30 AM	<2.0 ug/l
Col 5	Room 205	Sink	11/6/2013	7:32 AM	<2.0 ug/l
Col 6	Room 213B (Restroom)	Cooler	11/6/2013	7:34 AM	<2.0 ug/l
Col 7	Room 216	Drinking Fountain	11/6/2013	7:35 AM	2.26 ug/l
Col 8	Room 218	Drinking Fountain	11/6/2013	7:37 AM	<2.0 ug/l
Col 9	Room 218	Sink	11/6/2013	7:37 AM	<2.0 ug/l
Col 11	Hallway on 3rd Floor	Cooler	11/6/2013	7:37 AM	<2.0 ug/l
Col 12	Room 306	Sink	11/6/2013	7:46 AM	<2.0 ug/l
Col 13	Room 308	Drinking Fountain	11/6/2013	7:44 AM	<2.0 ug/l
Col 14	Room 309	Drinking Fountain	11/6/2013	7:42 AM	<2.0 ug/l
Col 15	Room 311	Sink	11/6/2013	7:43 AM	2.35 ug/l

Water Sampling Data Sheet

School: Sunnyside

Sample Number	Location	Type	Date	Time	Results
SS 1	Kitchen Prep – Dishwasher	Kitchen Sink	11/6/2013	6:38 AM	<2.0 ug/l
SS 2	Kitchen Prep – Cooking Area	Kitchen Sink	11/6/2013	6:37 AM	<2.0 ug/l
SS 3	Nurse's Office	Sink	11/6/2013	6:40 AM	<2.0 ug/l
SS 4	Conference Room	Sink	11/6/2013	6:42 AM	4.5 ug/l
SS 5	Front Foyer	Drinking Fountain	11/6/2013	6:43 AM	<2.0 ug/l
SS 6	Gym – Northwest Corner	Drinking Fountain	11/6/2013	6:45 AM	<2.0 ug/l
SS 7	C-Wing Hallway – North	Cooler	11/6/2013	6:45 AM	4.82 ug/l
SS 8	C-Wing Hallway – South	Cooler	11/6/2013	6:47 AM	<2.0 ug/l
SS 9	Teacher's Work Room - 162	Sink	11/6/2013	6:49 AM	<2.0 ug/l
SS 10	A-Wing Hallway – North	Cooler	11/6/2013	6:51 AM	<2.0 ug/l
SS 11	A-Wing Hallway – South	Drinking Fountain	11/6/2013	6:51 AM	3.25 ug/l
SS 12	B-Wing Hallway – North	Cooler	11/6/2013	6:53 AM	<2.0 ug/l
SS 13	B-Wing Hallway – South	Drinking Fountain	11/6/2013	6:55 AM	<2.0 ug/l
SS 14	Room 180 LLC Rom	Sink	11/6/2013	6:58 AM	<2.0 ug/l

Water Sampling Data Sheet
 School: Jefferson (Bldg. Closed)

Sample Number	Location	Type	Date	Time	Results
Jeff 1	Kitchen Prep – North	Kitchen Sink	11/7/2013	7:55 AM	3.66 ug/l
Jeff 2	Kitchen Prep – South	Kitchen Sink	11/7/2013	7:55 AM	<2.0 ug/l
Jeff 3	Basement Outside Room 002C	Drinking Fountain	11/7/2013	7:57 AM	<2.0 ug/l
Jeff 4	Room 101	Sink	11/7/2013	7:52 AM	<2.0 ug/l
Jeff 5	Room 100	Sink	11/7/2013	7:51 AM	3.8 ug/l
Jeff 7	Room 105 – North	Sink	11/7/2013	7:46 AM	19.01 ug/l
Jeff 8	Room 105 – South	Sink	11/7/2013	7:46 AM	<2.0 ug/l
Jeff 9	Hallway Outside Room 108	Cooler	11/7/2013	7:46 AM	<2.0 ug/l
Jeff 10	Hallway Across from Room 110	Cooler	11/7/2013	7:45 AM	<2.0 ug/l
Jeff 11	Hallway Across from Room 213	Cooler	11/7/2013	8:03 AM	<2.0 ug/l
Jeff 12	Hallway Outside Room 208	Cooler	11/7/2013	8:03 AM	<2.0 ug/l
Jeff 15	Room 202	Sink	11/7/2013	8:06 AM	6.52 ug/l

Water Sampling Data Sheet

School: Burnside

Sample Number	Location	Type	Date	Time	Results
Burn 2	Room 160 – Classroom Area	Sink	11/5/2013	6:45 AM	<2.0 ug/l
Burn 3	Hallway Outside Room 157	Cooler	11/5/2013	6:45 AM	<2.0 ug/l
Burn 4	Room 158	Sink	11/5/2013	6:45 AM	<2.0 ug/l
Burn 5	Room 157	Sink	11/5/2013	6:47 AM	6.02 ug/l
Burn 6	Room 156	Sink	11/5/2013	6:50 AM	<2.0 ug/l
Burn 7	Room 150	Sink	11/5/2013	6:50 AM	<2.0 ug/l
Burn 8	Room 149	Sink	11/5/2013	6:55 AM	<2.0 ug/l
Burn 9	Room 148	Sink	11/5/2013	6:55 AM	<2.0 ug/l
Burn	Room 147	Sink	11/5/2013	6:58 AM	5.56 ug/l
Burn	Hallway Outside Room 146	Cooler	11/5/2013	6:59 AM	<2.0 ug/l
Burn	Room 146	Sink	11/5/2013	7:00 AM	5.74 ug/l
Burn	Room 145	Sink	11/5/2013	7:00 AM	11 ug/l
Burn	Room 143	Sink	11/5/2013	7:02 AM	11 ug/l
Burn	Room 142	Sink	11/5/2013	7:03 AM	13.1 ug/l
Burn	Room 129	Sink	11/5/2013	7:19 AM	<2.0 ug/l
Burn	Room 107	Sink	11/5/2013	7:08 AM	<2.0 ug/l
Burn	Room 110	Sink	11/5/2013	7:10 AM	3.31 ug/l
Burn	Room 112	Sink	11/5/2013	7:11 AM	5.51 ug/l
Burn	Room 113	Sink	11/5/2013	7:12 AM	4.54 ug/l
Burn	Hallway Outside Room 113 –	Cooler	11/5/2013	7:13 AM	<2.0 ug/l
Burn	Hallway Outside Room 113 –	Cooler	11/5/2013	7:13 AM	<2.0 ug/l
Burn	Room 115	Sink	11/5/2013	7:15 AM	<2.0 ug/l
Burn	Room 116	Sink	11/5/2013	7:16 AM	<2.0 ug/l
Burn	Room 117	Sink	11/5/2013	7:18 AM	<2.0 ug/l
Burn	Room 119	** Sink	11/5/2013	7:20 AM	32.07 ug/l
Burn	Hallway Outside Room 119 –	Cooler	11/5/2013	7:23 AM	<2.0 ug/l
Burn	Hallway Outside Room 119 –	Cooler	11/5/2013	7:22 AM	<2.0 ug/l
Burn	Room 120	Sink	11/5/2013	7:32 AM	8.31 ug/l
Burn	Room 121	Sink	11/5/2013	7:24 AM	4 ug/l
Burn	Room 125	Sink	11/5/2013	7:25 AM	<2.0 ug/l
Burn	Room 127	Sink	11/5/2013	7:27 AM	<2.0 ug/l
Burn	Room 104 – Staff Lounge	Sink	11/5/2013	7:28 AM	<2.0 ug/l
Burn	Nurse's Office	Sink	11/5/2013	7:30 AM	4.77 ug/l
Burn	Kitchen – Small Stainless Sink	* Hand Wash Sink	11/5/2013	6:40 AM	24.7 ug/l
Burn	Kitchen – Small Kettle	Other	11/5/2013	6:40 AM	2.18 ug/l
Burn	Kitchen – Large Kettle	Other	11/5/2013	6:40 AM	2.1 ug/l

* Sink should not have been testing - Not used for drinking or food prep

** Retesting; Previous test was 1.42 ug/l

**Red Wing Public Schools ISD #256
And
Goodhue County Education District**

**Lead in Water
Management Plan**

**Kevin Johnson
Director of Buildings and Grounds
Red Wing Public School District
2451 Eagle Ridge Drive
Red Wing, MN 55066
651-385-4500**

Lead in Water Plan

Purpose

Drinking Water Coolers – Inventory

Potable Water Sources – Sampling

Flushing Guidelines

EPA List of Lead-Containing Drinking Water Coolers

1.0 Purpose

Among the most significant exposure pathways is ingestion of lead-contaminated drinking water. Emphasis on reducing the contamination of drinking water in K-12 schools and child care facilities has been specifically targeted and is the basis for this plan.

2.0 Drinking Water Coolers – Inventory

The Lead Contamination Control Act of 1988 required states to establish programs to help all schools and daycare centers to test for and remedy lead contamination in drinking water and other sources which receive water from municipal water sources. Education agencies and daycare centers that collect water samples are required to complete Water Sample Survey Inventory forms and return them to the Minnesota Department of Health.

Initial investigation of schools who accomplished the lead in water tests found that approximately 28 percent of the taps tested exceeded 20 parts per billion (ppb). Once samples have been collected and results indicate levels above 20 ppb, the facilities will be required to follow the requirements of the Safe Drinking Water Act to reduce the lead levels within their water systems. For facilities other than schools, 15 ppb is the standard.

The Minnesota Department of Education and the Minnesota Department of Health have developed an agreement based on discussions and Environmental Protection Agency lead in water standards. The premise is based on an understanding that schools water systems may be a contributing source of lead contamination, allowing schools a 5 ppb variance to the Federal standard of 15 ppb as the school or daycare center is not the point source of the water.

All public drinking water supplies (point source, such as wells) who provide drinking water to 25 or more individuals are required to implement testing of their water sources under the Lead in Copper Rule (56 CFR 26480) of the Safe Drinking Water Act.

We have completed an inventory of all water coolers present in our buildings and the list has been submitted to the Minnesota Department of Health. Copies of that inventory are found in the forms section of this program.

Additionally, we have either repaired, replaced, permanently removed or rendered inoperable all coolers which were on EPA's list of water coolers which are not lead free. A listing of those fixtures are also identified in the Forms section of this plan.

- If possible lead contamination is suspected from drinking water coolers which are not on EPA's list, we elect to test these coolers to determine their contribution to any laws in water burden within our drinking water system.
- Water cooler sampling will be conducted as follows:
 - First-draw screening samples will be collected after allowing fixtures to remain idle for at least six (6) hours of no use prior to the fixture being sampled.
 - Follow-up samples will be collected to pinpoint sources of lead from water coolers which has lead concentrations above 20 ppb. (Minnesota schools may use this standard as a result of a variance being granted.) Other water supply systems should follow the 15 ppb standard.

3.0 Potable Water Sources - Sampling

It is the responsibility of the facility providing water to occupants pursuant to MS 123.36 Subdivision 4a¹, schools with lead solder pipe joints flush the pipes and faucets to ensure that any potable water which may contain lead in excess of 15 ppb be flushed out of the system.

Flushing should occur before individuals gain access to the fixtures in the morning and before midday meals and flushed at least ten (10) minutes.

- The Department of Health recommends the following sampling and remediation guidelines for lead in water.
 - First-draw samples of fixtures and faucets should be collected from a cold water tap.
 - Aeration or treatment devices will be removed from the tap prior to sample collection.
 - Samples will be collected at least once every five (5) years from all fixtures/faucets used to supply drinking or cooking water (see Forms section for sampling instructions).
 - Upon receipt of results, any fixtures with lead in excess of 20 ppb will be handled using one of the four remedial options below:
 - Fixture will be taken out of service.
 - Repair fixture to remove lead source.
 - Replace fixture with lead-free fixture.
 - Install point of use treatment device (filter, etc.).
 - Resample to determine effectiveness of remedial option selected.
 - Remedial options will be documented.

4.0 Flushing Guidelines²

A twice daily system of flushing the potable water sources in the system should be sufficient to lower lead levels below 20 ppb. This is a Minnesota specific variance for schools. For all other water distribution systems, 15 ppb is the standard. All water taps used for drinking or cooking should be flushed for ten (10) minutes, twice per day, at the beginning of the day and just prior to lunch.

Flushing will be accomplished as follows:

- *Interior plumbing* – locate fixture farthest from the service line for each wing and open faucets and slush for ten (10) minutes).
- *Drinking fountains* (without refrigeration) – open valve and flush for ten (10) minutes.
- *Kitchen faucets* – open cold water taps and flush for ten (10) minutes.

See Forms section for documentation of daily flushing activities.

¹ Flushing requirements for schools were repealed in Chapter 224 of the 1993 Omnibus Education Bill; however, if lead levels cannot be maintained below 20 ppb, flushing should be considered as an option.

² Flushing requirements for schools were repealed in Chapter 224 of the 1993 Omnibus Education Bill; however, if lead levels cannot be maintained below 20 ppb, flushing should be considered as an option.

5.0 EPA List of Lead-Containing Drinking Water Coolers

The EPA was directed to distribute a list of water coolers that were not lead free to states by February, 1989. In addition, the Consumer Products Safety Commission was directed to initiate a recall or other corrective actions for water coolers with lead-lined tanks by October 31, 1989.

The following is the list of drinking water coolers which are not lead free. An inventory of water coolers has been conducted and can be found in the Forms section for this plan.

Hasley Taylor Company

WM8A: 838269	WT8A: 66 421303	WT8A: 66 421268
GC10ACR: 65 361559	GC10A: 69 598593	GC10A: 142378
GC10A: 113383	GC5A: 142646	RWM13A: 834774
WMA-1	SWA-1	S3/5/10 C&D
S300/500/1000D	SCWT/SCWT-A	DC-DHC-1
5656 FTN*	5800 8800 FTN*	

*with cusp connection

EBCO Manufacturing Company

Whose products are also marked under the names "Oasis", "Kelvinator", and "Aquarius," and were also marketed by Westinghouse Corporation. All pressure bubbler water coolers with shipment dates from 1962 through 1977. These units contain one 50-50 tin-lead solder joints on the bubbler valve.

CP3	CP3-50	CP3H	CP5	CP10
CP10-50	7P	13P	13PL	DP20
DP20-50	DP3R	DP3RH	DP8A	DP8AH
DP13A	DP131-50	DP14A-50/60	DP10X	C10E
WFE10	PX-10	DP12N	DP15W	DP5M
DP7M	DP7MH	DPM8	DPM8H	DP13M
DP13M-60	DP14M	DP15M	DP16M	CP3M
CP5M	DP15MW	DP5S	DP7S	DP13S
DP5F	DP10F	EP5F	EP10F	WTC10
WEEC03	WEECO5	WEECO7	WEEC10	WEEC13
WCCH03	WEFC03	WEFC08	WEFC10	WEFC13
WEFC15	WEFC20	WEFC13-0X	WEFC20-0X	WEKC05-0X
WEFH03	WEFH08	WEKC03	WEKC05	WELC05
WELC07	WELC08	WELC13	WELC14	WELC15
WELC16	WELH07	WELH08	WEMC07	WEMC13
WW07T	WEFH03	WEFH08	WEPC05	WERC05
WERC07	WERC13	WETC05	WETC10	WEWC07
WEEC03-0X	WEEC10-0X	DP14S	DP7SM	DP13SM
DP7WM	DP7WMD			

Bottled water coolers with shipment dates from 1962 through 1977 with model numbers CPI9H and DBIRH. These units may have one 50-50 tin-lead solder joint.

Bottled water cooler produced between 1978 and 1981 with model numbers DB2 and DB1R9H. These coolers contain one 50-50 tin-lead solder joint.

Sunroe Corporation

Bottled water coolers manufactured between 1979 and 1983. Model numbers include USB-1, USB-3, T6Size, BC, and BCH.

Model numbers of the water coolers found as of March 1989 with lead-lined tanks:

<u>Brand</u>	<u>Model Numbers</u>
Halsey Taylor	WM8A

Halsey Taylor
Halsey Taylor
Halsey Taylor
Halsey Taylor
Halsey Taylor

WT 8A
GC 10ACR
GC 10A
GC 5A
RWM 13A

Pude

Meridian Consulting Group, LLC.
7622 115th Avenue North
Champlin, MN 55316
612-834-4406



Red Wing Public Schools
2451 Eagle Ridge Drive
Red Wing, MN 55066
Contact: Kevin Johnson

20333

Invoice for services, July 2014
Invoice Number: 0564
Invoice Date: 8-2-2014

Description	MDE Project	UFARS Finance Code	Amount
Health & Safety Management Shanda Jorgensen		352	\$825.00
Hazardous Waste Shanda Jorgensen		349 - <i>351-000</i>	\$1875.00
Asbestos Shanda Jorgensen		358 - <i>351-000</i>	\$525.00
Lead in Water Shanda Jorgensen		349 - <i>351-000</i>	\$75.00
Machine Guarding Shanda Jorgensen		347 - <i>351-000</i>	\$300.00
MSDS Annual Hosting and Database Will Bombardier		352	\$500.00

05-005-860-352-311-000
~~10/8/14~~

Your Meridian contact is Shanda Jorgensen

Total: \$4100.00

Terms: Payment due within 30 days of invoice date.

Dude

Meridian Consulting Group, LLC.
16620 61st Avenue North
Plymouth, MN 55446
612-834-4406

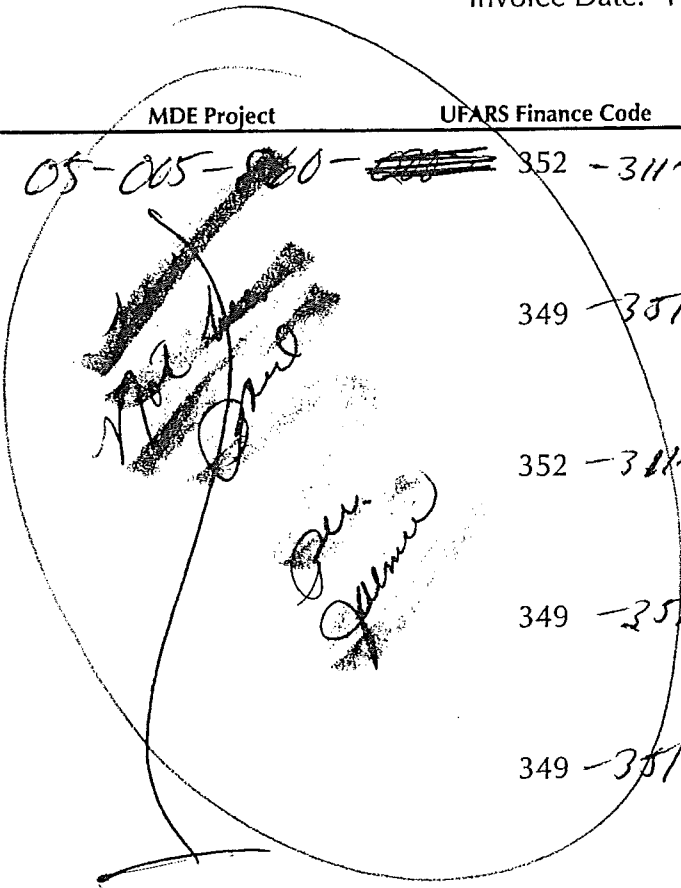


Please Note New Address

Red Wing Public Schools
2451 Eagle Ridge Drive
Red Wing, MN 55066
Contact: Kevin Johnson

Invoice for services, October 2014
Invoice Number: 0579
Invoice Date: 11-11-2014

Description	MDE Project	UFARS Finance Code	Amount
Health & Safety Management Shanda Jorgensen	05-005-060-000	352 - 311-000	\$2175.00
Hazardous Waste Shanda Jorgensen	05-005-060-000	349 - 351-000	\$150.00
Indoor Air Quality Shanda Jorgensen	05-005-060-000	352 - 311-000	\$262.50
Lead in Water/Paint Shanda Jorgensen	05-005-060-000	349 - 351-000	\$225.00
Radon Shanda Jorgensen	05-005-060-000	349 - 351-000	\$150.00



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2/2/15

Your Meridian contact is Shanda Jorgensen

Total: \$2962.50

Terms: Payment due within 30 days of invoice date.

Meridian Consulting Group, LLC.
7622 115th Avenue North
Champlin, MN 55316
612-834-4406

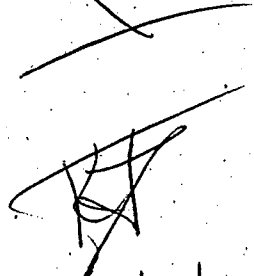


00333

Red Wing Public Schools
2451 Eagle Ridge Drive
Red Wing, MN 55066
Contact: Kevin Johnson

Invoice for services, September 2013
Invoice Number: 0519
Invoice Date: 10-9-2013

Description	MDE Project	UFARS Finance Code	Amount
Health & Safety Management Shanda Jorgensen	05-005-860-	352 - 311-000	\$980.00
Asbestos Shanda Jorgensen		358 - 351-000	\$280.00
Hazardous Waste Shanda Jorgensen		349 - 351-000	\$140.00
Indoor Air Quality Shanda Jorgensen		352 - 311-000	\$700.00
Lead in Water		349 - 351-000	\$140.00


10/18/13



Your Meridian contact is Shanda Jorgensen Total: \$2240.00

Terms: Payment due within 30 days of invoice date.

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Champlin, MN 55316
612-834-4406



20333

Red Wing Public Schools
2451 Eagle Ridge Drive
Red Wing, MN 55066
Contact: Kevin Johnson

Invoice for services, October 2013
Invoice Number: 0523
Invoice Date: 11-9-2013

Description	MDE Project	UFARS Finance Code	Amount
Health & Safety Management Shanda Jorgensen	05-005-860-	352 -311-000	\$1575.00
Asbestos Shanda Jorgensen		358 -357-000	\$245.00
Indoor Air Quality Shanda Jorgensen		352 -311-000	\$140.00
Lead in Water Shanda Jorgensen		349 -357-000	\$280.00
MSDS Acquisition and Installation Caroline Rich		352 -311-000	\$480.00

11/13/13

Your Meridian contact is Shanda Jorgensen

Total: \$2720.00

Terms: Payment due within 30 days of invoice date.

Meridian Consulting Group, LLC.
7622 115th Avenue North
Champlin, MN 55316
612-834-4406



20333

Red Wing Public Schools
2451 Eagle Ridge Drive
Red Wing, MN 55066
Contact: Kevin Johnson

Invoice for services, July 2012
Invoice Number: 0456
Invoice Date: 9-17-2012

Description	MDE Project	UFARS Finance Code	Amount
Health & Safety Management Colin Boysen	05-005-860-	352 -311- 000 000	\$980.00
IAQ Management Colin Boysen		352 -311-000	\$105.00
Asbestos Periodic Inspections Surveillance delivery Colin Boysen		358 -351-000	\$350.00
Lead in Water Colin Boysen		349 -357-000	\$175.00
Radon Colin Boysen		349 -357-000	\$70.00

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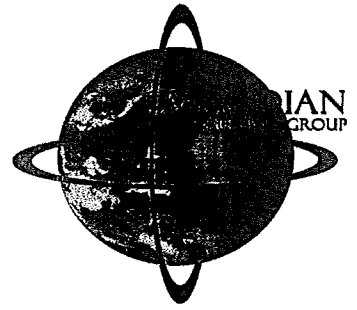
Your Meridian contact is Colin Boysen

Total: \$1680.00

Terms: Payment due within 30 days of invoice date.

20333

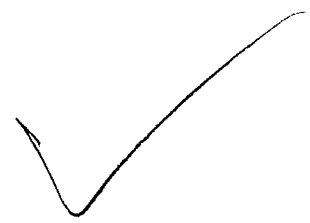
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Champlin, MN 55316
612-834-4406



Red Wing Public Schools
2451 Eagle Ridge Drive
Red Wing, MN 55066
Contact: Kevin Johnson

Invoice for services, June 2012
Invoice Number: 0449
Invoice Date: 6-30-2012

Description	MDE Project	UFARS Finance Code	Amount
Health & Safety Management Colin Boysen	05-005-860	352-311-000	\$1172.50
Asbestos Project Management Colin Boysen		358-351-000	\$1470.00
Lead in Water Colin Boysen		349-357-000	\$315.00
Hazardous Waste Colin Boysen		349-351-000	\$385.00
Annual MSDS Hosting		352-311-000	\$750.00



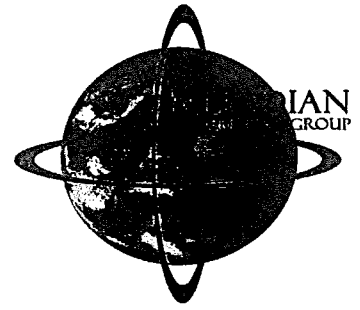
Your Meridian contact is Colin Boysen

Total: \$4092.50

Terms: Payment due within 30 days of invoice date.

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7622 115th Avenue North
Champlin, MN 55316
612-834-4406



Red Wing Public Schools
2451 Eagle Ridge Drive
Red Wing, MN 55066
Contact: Kevin Johnson

Invoice for services, May 2012
Invoice Number: 0441
Invoice Date: 5-12-2012

Description	MDE Project	UFARS Finance Code	Amount
Health & Safety Management Colin Boysen		05-005-860-352-311-000	\$1802.50
Asbestos Inspection Colin Boysen	1,	358-351-000	\$385.00
Lead in Water/Construction	1,	349-351-000	\$420.00

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6/25/12

(11/12)

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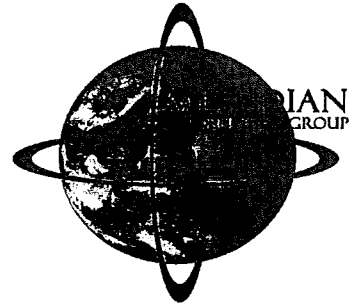
Your Meridian contact is Colin Boysen

Total: \$2607.50

Terms: Payment due within 30 days of invoice date.

20333

Meridian Consulting Group, LLC
7622 115th Avenue North
Champlin, MN 55316
612-834-4406



Red Wing Public Schools
2451 Eagle Ridge Drive
Red Wing, MN 55066
Contact: Kevin Johnson

Invoice for services, December 2011
Invoice Number: 0422
Invoice Date: 1-11-2012

Description	MDE Project	UFARS Finance Code	Amount
Health & Safety Management Colin Boysen	05-05-860- 000	352 - 311 - 000	\$3045.00
Lead in Water Colin Boysen		349 - 351 - 000	\$70.00
AHERA Periodic Surveillance (Distribution to buildings) Colin Boysen		358 - 357 - 000	\$210.00
Teacher's Checklist Survey Will Bombardier		352 - 357 - 000	\$750.00

1/17/12



Your Meridian contact is Colin Boysen

Total: \$4075.00

Terms: Payment due within 30 days of invoice date.