



REPORT FOR LEAD TESTING IN DRINKING WATER

for

WHITMAN COLLEGE RENTAL PROPERTIES

Walla Walla, WA 99362

Project #E2016/0808

September 8, 2016

prepared for:

Whitman College
Attn: Fred Miller
345 Boyer Ave.
Walla Walla, WA 99362

prepared by:

Blue Mountain Environmental & Consulting Co., Inc.
PO Box 545/125 Main Street
Waitsburg, WA 99361
(509) 520-6519

PROJECT SUMMARY

Client: Whitman College
345 Boyer Ave.
Walla Walla, WA 99362

Point of Contact: Mr. Fred Miller

Property: Whitman College Rental Properties
Walla Walla, Washington

Major Commercial Activity: University campus

Environmental Professional: Yancy Meyer, BMEC, Inc.

Project Number: E2016/0808

Report Date: September 8, 2016

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1.0 INTRODUCTION

Whitman College retained Blue Mountain Environmental & Consulting Company, Inc. (BMEC) to perform an investigation for the presence of lead in drinking water in all of the Whitman College Rental Properties located in Walla Walla, Washington. Yancy Meyer, Environmental Professional with BMEC, assisted by Caris Lynch of BMEC, performed the water sampling on July 19th and 20th, and August 1st, 2016.

At the request of Whitman College, 1-2 water samples were taken from each building from kitchen and bathroom sinks. Samples were taken according to EPA protocols, allowing the sink/fountain to run for at least 30 seconds prior to sampling mid-stream with sterile containers using nitrile gloves.

Sampling results indicate two of the sinks sampled had total lead levels above the EPA action level of 15 parts per billion (ppb). All of the other samples were either non-detect or below the 15 ppb action level. The treatment technique regulation for lead (referred to as the Lead and Copper Rule) requires water systems to control the corrosivity of the water; however, as most of the samples were low or non-detect, it is the opinion of BMEC that corrosivity is not the issue, and that a filter system to remove the lead at the sinks would be appropriate treatment.

1.1 BACKGROUND

In 1974, Congress passed the Safe Drinking Water Act. This law requires EPA to determine the level of contaminants in drinking water at which no adverse health effects are likely to occur with an adequate margin of safety. These non-enforceable health goals, based solely on possible health risks are called maximum contaminant level goals (MCLGs). The MCLG for lead is zero. EPA has set this level based on the best available science which shows there is no safe level of exposure to lead.

For most contaminants, EPA sets an enforceable regulation called a maximum contaminant level, (MCL) the highest level of a contaminant that EPA allows in drinking water. MCLs ensure that drinking water does not pose either a short-term or long-term health risk. EPA sets MCLs at levels that are economically and technologically feasible. However, because lead contamination of drinking water often results from corrosion of the plumbing materials belonging to water system customers, EPA established a treatment technique rather than an MCL for lead. A treatment technique is an enforceable procedure or level of technological performance which water systems must follow to ensure control of a contaminant.

The treatment technique regulation for lead (referred to as the Lead and Copper Rule) requires water systems to control the corrosivity of the water. The regulation also requires systems to collect tap samples from sites served by the system that are more likely to have plumbing materials containing lead. If more than 10 percent of tap water samples exceed the lead action level of 15 parts per billion, then water systems are required to take additional actions including:

- Taking further steps optimize their corrosion control treatment (for water systems serving 50,000 people that have not fully optimized their corrosion control).
- Educating the public about lead in drinking water and actions consumers can take to reduce their exposure to lead.
- Replacing the portions of lead service lines (lines that connect distribution mains to customers) under the water system's control.

EPA issued the Lead and Copper Rule in 1991 and revised the regulation in 2000 and 2007. States may set more stringent drinking water regulations than EPA; however, Washington State protocols are the same as the national protocols.

2.0 SCOPE OF SERVICES

LEAD IN DRINKING WATER: Title XIV of The Public Health Service Act: Safety of Public Water Systems (Safe Drinking Water Act) regulates the maximum level of lead considered to be safe for drinking water at 15 ppb. The scope of service included sampling of drinking water in the campus buildings, interest houses, and the Mill Creek cabins, and analysis of the samples by an accredited laboratory. Analysis of the results to recommend corrective action if needed.

3.0 SUMMARY OF REGULATIONS

3.1. TITLE XIV OF THE PUBLIC HEALTH SERVICE ACT SAFETY OF PUBLIC WATER SYSTEMS (SAFE DRINKING WATER ACT)

The NATIONAL DRINKING WATER REGULATIONS SEC. 1412 regulates contaminants in drinking water, and has set a 15 ppb maximum level for lead. Any lead contamination above that level must be addressed by treatment.

4.0 SAMPLING METHODOLOGY

Blue Mountain Environmental & Consulting sampled drinking water according to EPA protocols, allowing the sink/fountain to run for at least 30 seconds prior to sampling mid-stream with sterile containers using nitrile gloves. The samples were then submitted with chain of custody documentation to On-Site Laboratory for analysis of total lead content.

5.0 LABORATORY INFORMATION

Samples were analyzed by On-Site Laboratory in Redmond, Washington by EPA Method 200.8. OnSite Environmental, Inc. performs a wide variety of analytical methods under various regulatory programs using published and internally developed validated test methods. The laboratory participates in semi-annual single-blind performance evaluations studies as part of on-going certification/accreditation with the Washington Department of Ecology (WDOE) and Alaska Department of Environmental Conservation (ADEC).

6.0 RESULTS

The following sample results were over the EPA action level of 15 ppb:

Sample Number	Location	Result
8-22-71	622 E Main Unit 1 bathroom	47 ppb
8-22-52	602 E Main Room 310 Bath	43 ppb

The following sample results were at or above the detection limit of 1.0 ppb and under the EPA action level of 15 ppb:

Sample Number	Location	Result
8-22-09	108 Shady Rill Kitchen	2.3 ppb
8-22-10	108 Shady Rill Bath	4.6 ppb
8-22-13	14 Merriam Kitchen	1.5 ppb
8-22-14	14 Merriam Bath	1.0 ppb
8-22-21	131 Otis Kitchen	11 ppb
8-22-22	131 Otis Bath	1.4 ppb
8-22-23	357 Linden Kitchen	5.3 ppb
8-22-24	357 Linden Bath	2.9 ppb
8-22-25	9 Boyer utility sink	2.9 ppb
8-22-26	9 Boyer Bathroom	1.1 ppb
8-22-29	15 Boyer Bath	5.9 ppb
8-22-31	25 Boyer Bath	1.0 ppb
8-22-33	606 E Main Bath	1.0 ppb
8-22-35	602 E Main Room 2 Kitchen	1.0 ppb
8-22-48	602 E Main Room 207 Bath	1.1 ppb
8-22-55	602 E Main Room 311 Kitchen	1.6 ppb
8-22-57	363 Linden Kitchen	1.5 ppb
8-22-59	610 E Main Kitchen	1.2 ppb
8-22-61	612 E Main Kitchen	1.8 ppb
8-22-62	612 E Main Bath	1.6 ppb
8-23-63	622 E Main Unit 4 Kitchen	1.6 ppb
8-23-64	622 E Main Unit 4 Bath	2.9 ppb
8-25-66	622 E Main Unit 3 Kitchen	1.0 ppb
8-22-67	622 E Main Unit 3 Bath	2.1 ppb
8-22-70	622 E Main Unit 1 Kitchen	2.6 ppb
8-23-81	720 N Main St Unit 3 Bath	1.0 ppb
8-23-83	720 N Main Unit 4 Bath	1.2 ppb
8-23-84	718 N Main Kitchen	1.5 ppb
8-23-85	718 N Main Bath	1.1 ppb
8-23-86	714 N Main Kitchen	2.4 ppb
8-23-87	714 N Main Bath	1.1 ppb
8-23-88	714.5 N Main Kitchen	2.2 ppb
8-23-89	714.5 N Main Bath	1.6 ppb
8-23-96	707 Issacs Kitchen	1.7 ppb
8-23-97	707 Issacs Bath	1.0 ppb
8-23-99	713 Issacs Bath	2.0 ppb

8-23-103	721 Penrose Bath	2.3 ppb
8-23-107	112 Shady Rill Kitchen	1.6 ppb
8-23-108	112 Shady Rill Bath	1.3 ppb
8-23-110	220 Marcus Main bathroom	1.2 ppb
8-23-111	220 Marcus A Kitchen	1.4 ppb
8-23-116	219 Marcus Bathroom	2.1 ppb
8-23-133	356 University main floor Bath	1.0 ppb
8-23-134	721 Valencia Kitchen	1.2 ppb
8-23-135	721 Valencia Bath	1.0 ppb

The following samples were below the detection limit of 1.0 ppb:

Sample Number	Location
8-22-01	709 N Main Kitchen
8-22-02	709 N Main Bath
8-22-03	710 N Main Kitchen
8-22-04	710 N Main 1 st Floor Bath
8-22-05	713 Penrose Kitchen
8-22-06	713 Penrose Bath
8-22-07	209 Penrose Kitchen
8-22-08	209 Penrose Bath
8-22-11	20 Merriam Kitchen
8-22-12	20 Merriam Bath
8-22-15	416 Cypress Kitchen
8-22-16	416 Cypress Bath
8-22-17	407 Cypress Kitchen
8-22-18	407 Cypress Bath
8-22-19	122 Otis Kitchen
8-22-20	122 Otis Bath
8-22-27	17 Boyer Kitchen
8-22-28	17 Boyer Bath
8-22-30	25 Boyer Kitchen
8-22-32	606 E Main Kitchen
8-22-34	602 E Main Room 6 laundry
8-22-36	602 E Main Room 2 Bath
8-22-37	602 E Main Room 1
8-22-38	602 E Main Room 105 Bath
8-22-39	602 E Main Room 103 Kitchen
8-22-40	602 E Main Room 103 Bath
8-22-41	602 E Main Room 104 Kitchen
8-22-42	602 E Main Room 104 Bath
8-22-43	602 E Main Room 208 Kitchen
8-22-44	602 E Main Room 208 Bath
8-22-45	602 E Main Room 206 Kitchen
8-22-46	602 E Main Room 206 Bath
8-22-47	602 E Main Room 207 Kitchen
8-22-49	602 E Main Room 309 Kitchen
8-22-50	602 E Main Room 309 Bath
8-22-51	602 E Main Room 310 Kitchen
8-22-53	602 E Main Room 312 Kitchen
8-22-54	602 E Main Room 312 Bath
8-22-56	602 E Main Room 311 Bath
8-22-58	363 Linden Bath
8-22-60	610 E Main Bath
8-22-68	622 E Main Unit 2 Kitchen
8-22-69	622 E Main Unit 2 Bath
8-22-72	172 Park Kitchen
8-22-73	172 Park main floor Bath
8-23-74	411 Cypress Kitchen
8-23-75	411 Cypress Bath
8-23-76	720 N Main Unit 2 Kitchen
8-23-77	720 N Main Unit 2 Bath

8-23-78	720 N Main Unit 1 Kitchen
8-23-79	720 N Main Unit 1 Bath
8-23-80	720 N Main Unit 3 Kitchen
8-23-82	720 N Main Unit 4 Kitchen
8-23-90	Prentiss Hall kitchen sink
8-23-91	708 N Main St Bath
8-23-92	706 N Main Kitchen
8-23-93	706 N Main Bath
8-23-94	703 Issacs Kitchen
8-23-95	703 Issacs Bath
8-23-98	713 Issacs Kitchen
8-23-100	615 Issacs Kitchen
8-23-101	615 Issacs Bath
8-23-102	721 Penrose Kitchen
8-23-104	508 E Main Kitchen
8-23-105	508 E Main Bath
8-23-106	508 E Main Beauty Shop Back Room
8-23-109	220 Marcus Main unit Kitchen
8-23-112	220 Marcus Unit A Bath
8-23-113	220 Marcus Unit B Kitchen
8-23-114	220 Marcus Unit B Bath
8-23-115	219 Marcus Kitchen
8-23-117	232 Stanton Kitchen
8-23-118	232 Stanton Bath
8-23-119	222 Stanton Kitchen
8-23-120	222 Stanton Bath
8-23-121	216 Stanton Kitchen
8-23-122	216 Stanton Bath
8-23-123	222 Fulton Kitchen
8-23-124	222 Fulton Bath
8-23-125	116 Merriam Kitchen
8-23-126	116 Merriam Bath
8-23-128	171 Park Kitchen
8-23-129	171 Park Bath
8-23-132	356 University Kitchen
8-23-136	Spring Valley Ranch Kitchen
8-23-137	Spring Valley Ranch Bath

8.0 DISCUSSION & RECOMMENDATIONS

Sampling results indicate two of the sinks sampled had total lead levels above the EPA action level of 15 parts per billion (ppb). All of the other samples were either non-detect or below the 15 ppb action level. The treatment technique regulation for lead (referred to as the Lead and Copper Rule) requires water systems to control the corrosivity of the water; however, as most of the samples were low or non-detect, it is the opinion of BMEC that corrosivity is not the issue, and that a filter system to remove the lead at the sinks would be appropriate treatment.

9.0 AUTHENTICATION

Having followed sampling protocol and stringent QA/QC controls, the conclusions in this report are well-founded, professional opinions.

Report Written By:



Yancy Meyer
Environmental Professional
BMEC

Report Reviewed By:



Steve Wing
Environmental Professional
BMEC

10.0 REPORT LIMITATIONS

The enclosed site assessment has been performed for the exclusive use by Whitman College, or agents specified by them, for the transaction at issue concerning the subject properties in Walla Walla, Washington.

The purpose of an environmental investigation is to evaluate potential or actual effects of past or current practices on a given site. In performing an environmental investigation, a balance must be struck between reasonable inquiry into environmental issues and an exhaustive analysis of every conceivable issue of possible concern. This environmental assessment contains BMEC opinion regarding environmental issues of concern and/or additional issues that may need to be addressed. In rendering our professional opinion, BMEC warrants that the services provided within the scope of this assessment were performed, within the limits described, in accordance with generally accepted environmental consulting principles and practices. No other warranty, expressed or implied, is made. The following paragraphs describe the assumptions and standard parameters under which such opinion is rendered.

Any opinions and/or recommendations presented in this report apply to site conditions existing at the time of performance of services. BMEC is unable to report on or accurately predict events that may affect the site after performance of services, whether occurring naturally or caused by human forces. BMEC assumes no responsibility for conditions BMEC did not investigate, or conditions not generally recognized as environmentally unacceptable at the time services were performed.

Except where there is expressed concern of our client, or where specific environmental contaminants have previously been reported by others, naturally occurring toxic substances, or contaminant concentrations not of current environmental concern, may not be addressed in this document.

No assessment is thorough enough to exclude the presence of hazardous materials at a given site. Therefore, if specific hazardous materials have not been identified during this assessment, the lack of such identifications should not be construed as a guarantee of the absence of hazardous materials, but merely as the result of services performed within the scope, limitations, and cost of work done.

BMEC is not responsible for the effects of changes in applicable environmental standards, practices, or regulations after the performance of services. Services provided for this assessment were performed in accordance with BMEC's agreement and understanding with our client, which may not be fully disclosed in this report. Opinions and/or recommendations are intended for the client, purpose, site, location, time frame, and project parameters indicated.

This report was prepared solely for the use of our client, and should be reviewed in its entirety; BMEC is not responsible for subsequent separation, detachment, or partial use of this document. Any reliance on this report by a third party shall be at such party's sole risk.

Appendix A

Laboratory Reports