Mr. Joshua Rothwell  
Fife Lake Elementary School  
108 Pierce Street  
Fife Lake, Michigan 49633

Subject: Fife Lake Elementary, WSSN 2003828  
Lead and Copper Monitoring - Action Level (AL) Exceedance

The Fife Lake Elementary School exceeded the AL for lead during the last round of lead and copper samples collected from drinking water taps on October 5, 2016. An AL exceedance is not a violation, but triggers other requirements under the administrative rules promulgated under the Michigan Safe Drinking Water Act, 1976 PA 399, as amended (SDWA). This is a complicated rule. Be assured this can be resolved.

The compliance samples collected on October 5, 2016, are summarized below:

<table>
<thead>
<tr>
<th>CONTAMINANT: LEAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Contaminant Level Goal* (MCLG)</td>
</tr>
<tr>
<td>0.0 mg/L</td>
</tr>
</tbody>
</table>

*Maximum contaminant level goal means the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Elevated lead results were identified in 2008 and 2010 sampling. As a result, the supply conducted fixture and material replacement. Requirements of the rule include water quality parameter (WQP) monitoring, source water monitoring, corrosion control treatment or study, and public education.

Deliver Consumer Notice of Lead Result – Step Completed  
Within 30 days of learning the results, you need to provide individual lead tap results to the people who receive water from sites that were sampled, even if lead was not detected. You must also send the Michigan Department of Environmental Quality (DEQ) a certification that you met all the delivery requirements, along with a sample copy of your lead consumer notice. The DEQ received Certification that Lead Consumer Notification was completed and was received by the DEQ on 2/27/2017.
Distribute Public Education (PE) – By April 5, 2017
Deliver PE materials to all consumers. The PE material is intended to educate consumers about lead health effects, sources, and steps to minimize exposure. Note that the PE material has a number of required elements. Enclosed is a template you may use to meet the requirement. Also attached is a checklist of PE requirements and Certificate of Distribution. Return a signed copy to the Grand Traverse County Health Department (GTHCD) and the DEQ by April 15, 2017, along with a photo copy of your PE material.

Conduct Water Quality Parameter (WQP) Monitoring – By April 15, 2017
Collect two (2) WQP sample sets. The WQP samples shall be analyzed for pH, alkalinity, calcium, conductivity, phosphate, and silica.

WQP sample collection method and locations:
Collect one set of samples from the raw water sample tap by the pressure tank (with the well pump running) and one set after any treatment (water softener) at the entry point to the distribution system. These are not first-draw samples.

If you use the DEQ Laboratory, order bottles by calling 517-335-8184, or by downloading the Bottle Order Form from http://michigan.gov/deq. Along the top, click Water, click the Drinking Water tab, and then click the DEQ Drinking Water Laboratory bulleted link. There you will find links for Drinking Water Test Fees, Obtaining the Necessary Sampling Units, Bottle Order Form/Requisition for Water Sample Units (EQP2301), and Request for Water Analysis Form (EQP2300). Each WQP sample set is analyzed from one sample bottle per location. Request the analyses using the following three test codes:

<table>
<thead>
<tr>
<th>Test Code</th>
<th>Cost</th>
<th>Bottle Number</th>
<th>Test Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CORR</td>
<td>$51.00</td>
<td>33</td>
<td>Conductivity, Alkalinity, Phosphate, and Calcium</td>
</tr>
<tr>
<td>CPH</td>
<td>$13.00</td>
<td>33</td>
<td>pH Determination</td>
</tr>
<tr>
<td>CSI</td>
<td>$14.00</td>
<td>33</td>
<td>Silica</td>
</tr>
</tbody>
</table>

Conduct Source Water Monitoring – By April 15, 2017
Collect one sample for lead and copper at each entry point to the distribution system. This is NOT a first draw sample. Flush the raw water sample tap by the pressure tank until the well pump is running to collect a sample from this tap that is representative of the groundwater. The purpose of this sampling is to demonstrate that there is no lead or copper in the groundwater, or the water well, and to rule this out as a source of the lead or copper. This is test code CCUB if you use the state drinking water laboratory.

Begin to Correct the Problem – By April 30, 2017
You must propose a corrosion control treatment plan OR propose to perform a corrosion control study in writing to the GTHCD by April 30, 2017. This is to minimize lead and copper in drinking water by reducing corrosion of water pipes and plumbing materials.

1. Corrosion Control Treatment Plan (Treatment Plan): This option would be selected if a system chooses to proceed directly to selecting a treatment process. The steps involved in selection, installation, operation, and monitoring of such a treatment system are complex. A qualified consultant is necessary. If treatment is the supply’s preferred option, or is found to be necessary after a study, a proposal and permit application must be submitted. The treatment technology selection must be based on data such as the
WQP sample results; whether lead, copper, or both are high; and any existing treatment systems. After treatment is installed, the water supply must be operated by a D-5 level operator, submit monthly operating reports, perform ongoing WQP sampling in the treated water, and meet any other applicable requirements for the treatment option selected. Contact us for guidance on corrosion control options and for more information regarding the additional ongoing operation, maintenance, and oversight required for utilizing a corrosion control treatment system.

OR

2. Corrosion Control Study (Study): A Study would evaluate the effectiveness of different treatment options such as pH, alkalinity, or hardness adjustment; or injection of a corrosion control chemical, such as phosphate or silicate, in preventing leaching of plumbing materials into the water. The water supply would evaluate these corrosion control treatment processes using information such as water chemistry, physical tests such as pipe loop tests, or coupon tests as described in Rule 604f(3) of the SDWA. A water quality consultant will still be necessary. A Study allows systems sufficient time to select an appropriate treatment process to install.

The corrosion control treatment specified in the SDWA is intended to be used at municipal water supply plants to reduce how much lead and copper is leached into the water from contact with plumbing materials. Since Forest Area Community Schools owns the entire distribution system, an alternate option of "material replacement" may be pursued to reduce the amount of lead and copper leached into the water. The water supply would do a "treatment study" by sampling every potential drinking water location for lead and copper and replace the fixtures that are leaching lead or copper into the water above the AL. Usually, it is drinking fountains and water faucets, along with any soldered fittings that can be accessed, that get replaced with new, low-lead products.

These replaced fixtures would then be sampled to show that water from them meets the lead and copper AL. If all drinking water fixtures meet the lead action level, Fife Lake Elementary would be allowed to cease installing optimal corrosion control treatment under Rule 604f(2)(c). This "material replacement" option may be initiated by the water supply, or the corrosion control treatment required in the SDWA will be required. Previous experience has shown that this "treatment study" and "plumbing material replacement" is preferable to the corrosion control study, treatment installation, and ongoing operation and maintenance of treatment at noncommunity water supplies.

Lead and Copper Monitoring
If Fife Lake Elementary proceeds with an investigative study and plumbing material replacement, compliance monitoring will begin after identified fixtures and connecting plumbing are replaced and the confirmation sampling is complete. Contact the GTCHD in writing before starting the compliance monitoring. Select the same sites used in previous monitoring periods, unless the sample siting plan has been changed with the GTCHD. All monitoring, reporting, consumer notification, and DEQ certification requirements remain in effect. Contact the GTCHD before starting any compliance monitoring.

Within 30 days of learning the results, provide consumer notification, even if lead was not detected. All monitoring, reporting, consumer notification, and DEQ certification requirements remain in effect.
If the action levels are met during two consecutive six-month monitoring periods, you may discontinue the corrosion control study and installation of treatment and you may discontinue your PE activities.

In Conclusion
Plumbing material replacement has been demonstrated at many noncommunity water supplies to protect public health without the need for treatment installation and the ongoing operation and maintenance.

If you can show that both lead and copper ALs are met in two consecutive six-month periods, the GTCHD may determine the study and installation of treatment can be discontinued. In the meantime, you must propose a Treatment Plan or propose to perform a Study (Investigative study with plumbing material replacement) by the dates above. If treatment is found to be necessary, it must be installed.

As stated earlier, the AL is the concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water supply shall follow. If water from the tap does exceed this limit, then the facility must take certain steps to correct the problem. Because lead may pose a serious health risk, the U.S. Environmental Protection Agency has set an MCLG of zero for lead. The MCLG is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety. In addition to the replacement of fixtures that are over 0.015 mg/L lead, replacing fixtures approaching this level, aerator cleaning to remove any particulate lead, and routine flushing to avoid excessive stagnation, should be considered.

We recognize that the Lead and Copper Rule is complex and may be confusing. The GTCHD and the DEQ are partnering to continue to offer assistance in implementing these regulations. Please contact Mr. Kevin Holdwick, P.E., at 517-284-6532 with questions regarding treatment. If you have additional questions concerning this matter, please contact me.

Sincerely,

[Signature]

Todd Brookens, R.S., Saginaw Bay District Office
Noncommunity Water Supplies Unit
Environmental Health Section
Drinking Water and Municipal Assistance Division
517-388-9818/brookenst@michigan.gov

tb/sw

Enclosures
cc: Mr. Peter Johne, Certified Water Operator, Fife Lake Elementary School
 Mr. Thomas Buss, Environmental Health Director, GTCHD
 Mr. Eric Burt, Noncommunity Program Coordinator, GTCHD
 Ms. Dana DeBruyn, DEQ
 Mr. Kevin Holdwick, DEQ
 Mr. Kristofer Dorcy, DEQ,
<table>
<thead>
<tr>
<th>Complete By</th>
<th>Requirement</th>
<th>Comments</th>
<th>Act 399 Rule Citation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right away</td>
<td>Deliver Consumer Notice Of Lead Result to persons served at each site tested within 30 days of knowing the result.</td>
<td>Collect one set of samples from the raw water sample tap by the pressure tank (with the well pump running) and one set after any treatment at the entry point to the distribution system. These are not fast-draw samples. (Repeat each lead and copper monitoring period until both ALs are met)</td>
<td>Rule 410(f)</td>
</tr>
<tr>
<td>Right away</td>
<td>Collect WQP samples.</td>
<td></td>
<td>Rule 604f(3)(c)(i)(C)(f)</td>
</tr>
<tr>
<td>Right away</td>
<td>Perform PE activities, including delivering PE materials to all consumers.</td>
<td>PE required activities are listed in the enclosed template and checklist. Repeat every year until the lead AL is met in the most recent round of sampling.</td>
<td>Rule 410(1) &amp; 410(3)(d)</td>
</tr>
<tr>
<td>Right away</td>
<td>Send GTCHD certification of PE compliance along with a sample copy of the materials delivered.</td>
<td>Sample certification enclosed. Required whenever PE is required.</td>
<td></td>
</tr>
<tr>
<td>Completed</td>
<td>Send DEQ certification of Consumer Notice of Lead Result.</td>
<td>Notice of lead testing has been completed.</td>
<td></td>
</tr>
<tr>
<td>April 15, 2017</td>
<td>Collect one lead and copper sample from each entry point to the distribution system.</td>
<td>Repeat the source water sampling every third year until both ALs are met for the whole 3-year period.</td>
<td>710c(1)</td>
</tr>
<tr>
<td>April 30, 2017</td>
<td>Submit a written proposal for optimal corrosion control treatment or a corrosion control study.</td>
<td>Contact DEQ for guidance on corrosion control options. Corrosion control study and treatment installation may cease if both ALs are met during 2 consecutive 6-month monitoring periods as a result of a treatment study and material replacement.</td>
<td>604f(2)(a)(i)</td>
</tr>
<tr>
<td>Recommended as soon as possible</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between June 1 and December 31, 2017</td>
<td>Collect 10 samples from the distribution system and have them analyzed for lead and copper.</td>
<td>Notify GTCHD prior to compliance sampling. See “Lead and Copper Monitoring for Compliance” for details. Report the results to the GTCHD and deliver the signed consumer notice of individual lead results using the notice provided by the DEQ.</td>
<td>604f(2)(c)</td>
</tr>
<tr>
<td>Between January 1 and July 31, 2018</td>
<td>Collect 10 samples from the distribution system and have them analyzed for lead and copper.</td>
<td>Notify GTCHD prior to compliance sampling. See “Lead and Copper Monitoring for Compliance” for details. Report the results to the DEQ and deliver the signed consumer notice of individual lead results using the notice provided by the DEQ.</td>
<td>604f(2)(c)</td>
</tr>
</tbody>
</table>
Summary of Public Education (PE) Requirements and Certificate of Distribution
For Noncommunity Water Supplies that Exceed the Lead Action Level

Supply Name: Fife Lake Elementary School

Water Supply Serial Number (WSSN): 2003628

Public education (PE) materials must be delivered as soon as possible but within 60 days after the end of the monitoring period in which the lead exceedance occurred and repeated once every 12 months for as long as the lead action level is exceeded. Then send documentation to the local health department (LHD) that contains:

- A demonstration that the water supply has delivered the PE materials that meet the content requirements and the delivery requirements.

To meet this requirement, water supplies must document delivery activities. Send this checklist or similar documentation to the LHD along with a sample copy of the PE material that was distributed.

The following is required:

☒ Post PE material in a public place or common area in each of the buildings served by the water supply.

Locations Posted: FIFE LAKE ELEMENTARY MAIN OFFICE

☒ Distribute PE printed material to each person served by the water supply. The water supply may use electronic transmission instead of or combined with printed materials as long as it achieves at least the same coverage.

Date Delivered: FOREST AREA WEB SITE 10/23/17

☒ If applicable, make a good faith effort to locate any organizations being served by the water supply system in mention, such as child care centers, and deliver PE materials along with an informational notice that encourages distribution to all potentially affected customers or users.

Organizations Contacted:

I affirm that public education material content and delivery requirements have been completed. I am enclosing a sample of the public education material we delivered.

Signature
Eugene Szmydrock

Printed Name
Eugene Szmydrock

Title
MAINTENANCE DIRECTOR

Within 10 days of the end of the period in which the PE is required, a completed and signed copy of this certification must be returned back to the Local Health Department.
IMPORTANT INFORMATION ABOUT LEAD IN YOUR DRINKING WATER

This notice is brought to you by:

Supply Name: Fife Lake Elementary

Water Supply Serial Number (WSSN): 2003628

Date Distributed: ____________________________

The supply listed above found elevated levels of lead in drinking water in some homes/buildings. Lead can cause serious health problems, especially for pregnant women and young children. Please read this notice closely to see what you can do to reduce lead in your drinking water.

HEALTH EFFECTS OF LEAD
Lead can cause serious health problems if too much enters your body from drinking water or other sources. It can cause damage to the brain and kidneys, and can interfere with the production of red blood cells that carry oxygen to all parts of your body. The greatest risk of lead exposure is to infants, young children, and pregnant women. Scientists have linked the effects of lead on the brain with lowered IQ in children. Adults with kidney problems and high blood pressure can be affected by low levels of lead more than healthy adults. Lead is stored in the bones and it can be released later in life. During pregnancy, the child receives lead from the mother’s bones, which may affect brain development.

SOURCES OF LEAD
Drinking water is one possible source of lead exposure. Lead is a common metal found in the environment and enters drinking water primarily as a result of the corrosion, or wearing away, of materials containing lead in the water distribution system and plumbing. These materials include lead-based solder used to join copper pipe, brass and chrome plated brass faucets, and in some cases, pipes made of lead. Plumbing products such as pipes and fixtures, including those advertised as “lead free,” may contribute lead to drinking water. The law currently allows these products with up to 0.25 percent lead to be labeled as “lead free.” Older fixtures may contain higher levels of lead.

STEPS TO REDUCE EXPOSURE TO LEAD IN DRINKING WATER

1. **Run the water to flush out lead.** Run water for 15-30 seconds or until it becomes cold or reaches a steady temperature before using it for drinking or cooking, if it hasn’t been used for several hours. This flushes lead-containing water from the pipes.

2. **Use cold water for cooking and preparing baby formula.** Do not cook with or drink water from the hot water tap; lead dissolves more easily into hot water. Do not use water from the hot water tap to make baby formula.

3. **Do not boil water to remove lead.** Boiling water will not reduce lead levels.

4. **Get your child tested.** Contact your local health department or healthcare provider to find out how you can get your child tested for lead if you are concerned about exposure.

5. **Identify if plumbing fixtures contain lead.** Faucets, fittings, and valves may contribute lead to drinking water unless they have been replaced since 2013. Any new connecting plumbing and fittings should meet the 2014 lead-free definition. If you replace your faucet, buy a new one that meets the 2014 lead-free definition. Visit the National Sanitation Foundation Web site at www.nsf.org to learn more about lead-containing plumbing fixtures.
WHAT HAPPENED? WHAT IS BEING DONE?
The action level was exceeded for lead during the most recent round of monitoring of drinking water taps. Sample locations and sample results are available and were posted via the Consumer Notice of Lead Results.

Noncompliant taps have been removed from service.
We are beginning to take corrective action. This involves additional sampling. Also, we are performing plumbing assessment to determine if fixtures and connecting plumbing should be replaced with new "lead-free" materials, and assessing the option of corrosion control treatment.

For More Information
Call us at:

For more information on reducing lead exposure around your home/building and the health effects of lead, visit EPA’s Website at www.epa.gov/lead or contact your health care provider.
Summary of Public Education (PE) Requirements and Certificate of Distribution
For Noncommunity Water Supplies that Exceed the Lead Action Level

Public education (PE) materials must be delivered within 60 days after the end of the monitoring period in which the lead exceedance occurred and repeated once every 12 months for as long as the lead action level is exceeded. Within 10 days after the end of the period in which PE is required, send documentation to the local health department (LHD) that contains:

- A demonstration that the water supply has delivered the PE materials that meet the content requirements and the delivery requirements.

To meet this requirement, water supplies may use this checklist to document delivery activities. Send this checklist, or similar documentation to the LHD along with a sample copy of the PE material that was distributed.

Start Here:

1. Post PE material in a public place or common area in each of the buildings served by the water supply. Locations posted: [Main Office]

2. Distribute PE printed material to each person served by the water supply. The water supply may use electronic transmission instead of or combined with printed materials as long as it achieves at least the same coverage. Date delivered: [10/23/17]

3. Make a good faith effort to locate the following organizations being served by the water supply system in mention and deliver PE materials, along with an informational notice that encourages distribution to all potentially affected customers or users.
   - Licensed Childcare Centers:
   - Public and Private Schools: [X]

4. Certify. I affirm that public education material content and delivery requirements have been completed. I am enclosing a sample of the public education material we delivered.
   [Signature] Eugene Seymouch [Printed Name] Maintenance Director

   [Water Supply Name] Fife Lake Elementary [Water Supply Serial Number (WSSN)] 2003628

Within 10 days of the end of the period in which the PE is required a completed and signed copy of this certification must be returned back to the [Local Health Department].
IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

(System Name)
WATER CONTAINS ELEVATED LEVELS OF LEAD

[Insert name of water supply] found elevated levels of lead in drinking water in some homes/buildings. Lead can cause serious health problems, especially for pregnant women and children 6 years and younger. Please read this notice closely to see what you can do to reduce lead in your drinking water.

This notice is brought to you by [insert water supply name]. Water Supply Serial Number [insert water supply WSSN] Date [Insert the date distributed]

HEALTH EFFECTS OF LEAD

Lead can cause serious health problems if too much enters your body from drinking water or other sources. It can cause damage to the brain and kidneys, and can interfere with the production of red blood cells that carry oxygen to all parts of your body. The greatest risk of lead exposure is to infants, young children, and pregnant women. Scientists have linked the effects of lead on the brain with lowered IQ in children. Adults with kidney problems and high blood pressure can be affected by low levels of lead more than healthy adults. Lead is stored in the bones and it can be released later in life. During pregnancy, the child receives lead from the mother's bones, which may affect brain development.

SOURCES OF LEAD

Lead enters drinking water primarily as a result of the corrosion, or wearing away, of materials containing lead in the water distribution system and plumbing. These materials include lead-based solder used to join copper pipe, brass and chrome plated brass faucets, and in some cases, pipes made of lead. Plumbing products such as pipes and fixtures, including those advertised as "lead free," may contribute lead to drinking water. The law currently allows these products with up to 0.25 percent lead to be labeled as "lead free." Older fixtures may contain higher levels of lead.

STEPS TO REDUCE EXPOSURE TO LEAD IN DRINKING WATER

We are currently evaluating various means to reduce lead levels. This may include replacing fixtures and piping which may be contributing lead to the water, and/or installing chemical corrosion control treatment. The program selected will be conducted in accordance with the requirements of the USEPA and the MDEQ. If you have questions about how we are carrying out the requirements of the lead regulation, please contact the management at this facility.

The following simple steps can be taken to reduce your exposure to lead in drinking water. This is a simple and inexpensive measure you can take to protect your health. "Flush" the tap before using the water for consumption. Flushing the tap means running the cold water faucet until the water gets noticeably colder, usually about 15-30 seconds. Do not cook with, or drink water from the hot water tap. Hot water can dissolve more lead, more quickly than cold water. You can consult a variety of sources for additional information. Your family doctor or pediatrician can perform a blood test for lead and provide you with information about the health effects of lead.

For More Information
Call us at [Insert Number]. For more information on reducing lead exposure around your building and the health effects of lead, visit EPA's Web site at www.epa.gov/lead or contact your health care provider.