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LOUIS J. TAMPORELLO, JR. - District 5

May 2, 2018

Attn: Mr. Jeremy Harris
Safe Drinking Water Program
LDH/OPH Engineering Services

Re: Morgan City Water System (LA#1101005)
Improving Transparency and Public Information
Distribution System Materials Inventory

Mr. Harris,

In an effort to comply with your request dated February 1, 2018, you will find enclosed information pertaining to our water system as a whole. Included are materials used in our water distribution, mileage of water mains, historical lead and copper results, an explanation of action levels, water sources, and chemicals used for treatment and corrosion. If any additional information is required, please contact us and we will revise as needed.

If you have any questions or need further information, please contact Kawika Kaai at 985-518-3338.

Thank you,

Kawika Kaai
WSG Supervisor
City of Morgan City



City of Morgan City

Lead & Copper Material Survey

Lead & Copper Monitoring:

The City of Morgan City began the implementation of monitoring for lead and copper in 1992. The City did this to be in compliance with the requirements established for the EPA's Lead and Copper Rule (LCR) of 1991. The rule was established so water systems would begin monitoring for lead and copper concentrations in different areas to determine the level of risk found. Based on the results of the initial testing would determine the frequency of testing the water system would need to implement for its monitoring.

The Lead and Copper Rule (LCR) dictated that water systems do an initial evaluation of materials used throughout its system in order to determine where Tier 1 sites were located. There are three different Tiers available for systems to use for their sampling pool. Each Tier has certain criteria that must be met in order to be available for use. Systems must try to first pull from Tier 1 sites. If a water system cannot complete sampling from Tier 1 sites, the system must then move to sites meeting Tier 2 requirements. If a system cannot complete the required sampling from Tier 1 or Tier 2 sites, then Tier 3 sites may be used.

- ❖ Tier 1: are single family structures that contain copper pipes with lead solder installed after 1982, but before September 20, 1988. They also can be serviced or have lead lines, but it is not a requirement to fall into this Tier.
- ❖ Tier 2: are all buildings that contain copper pipes with lead solder installed after 1982, but before September 20, 1988. They also can be serviced or have lead lines, but it is not a requirement to fall into this Tier.
- ❖ Tier 3: are single family structures that contain copper pipes with lead solder installed before 1983.

If for some reason a system is unable to complete the required sampling from any of these sites, then representative sites may be used upon approval.

In 1992 the City of Morgan City was directed to pull from their sampling sites in their distribution system. This was twice in two consecutive six month periods. The results would



Lead & Copper Monitoring (cont.):

determine the frequency of sampling required for the city. Upon submittal to the Louisiana Department of Health & Hospitals, the City of Morgan City was granted "Reduced Monitoring". The City now pulls samples every 3 years because our lead and copper results fell below the action levels set by the EPA.

Action levels are based on the total number of samples pulled. The action level for lead cannot exceed the 90th percentile of 0.015 mg/l. The action level for copper cannot exceed the 90th percentile of 1.3 mg/l.

The City of Morgan City's results for the last four surveys:

<u>Year</u>	<u>Lead</u>	<u>Copper</u>
2017	0.001 mg/l	0.4 mg/l
2014	0.001 mg/l	0.4 mg/l
2011	0.002 mg/l	0.3 mg/l
2008	0.003 mg/l	0.8 mg/l

In 2017, the City used a sampling pool of thirty sites. Five of these sites were Tier 1, two were Tier 2, and twenty three fell into the Tier 3 classification.

Corrosion Control:

The City uses a phosphate base corrosion inhibitor for corrosion control. The chemical is added after it leaves the a hundred and fifty thousand gallon (650,000gal) clear well. Corrosion coupons are used to determine the effectiveness of the inhibitor. Corrosion coupons are pre-weighed and measured metal strips that become mounted inside of a special pipe know as a coupon rack. We use them to estimate the rate of metal corrosion by comparing the initial weight versus the weight after it is removed over a period of time. The time of exposure can vary between sixty days to one hundred and twenty days. Two types of coupons are used when measuring for corrosion, a mild steel (MS) and copper (CU) strip. Chlorine and temperature play a factor in the amount a coupon can deteriorate over time. To counter this, adjustments to the pH and/or injection of chlorine may be needed.



Water Sources:

The City of Morgan City draws water from two sources. The first and main source is located at 1601 LA-70 (29.724112, -91.190637), and was upgraded in 2003. The station uses three pumps to draw water from the Intracoastal Waterway. Pumps A & B are one hundred horsepower (100hp) Goulds, capable of pumping five thousand gallons per minute (5,000gpm) each, and are controlled by variable frequency drives (VFD's). Pump C is a two hundred and fifty horsepower (250hp) diesel driven pump capable of pumping seven thousand six hundred gallons per minute (7,600gpm), but is only operated in emergency situations. The water is discharged into a twenty four inch (24") ductile iron line where it travels 2.12 miles before it arrives at the water plant for treatment.

The second source for water is located at 1631 Front St. (29.707579, -91.218085), where there are two pumps used to draw water from the Atchafalaya River. Pump A is a forty horsepower (40hp) Johnston, capable of pumping two thousand five hundred gallons per minute (2,500gpm). Pump B is a sixty horsepower (60hp) Johnston, capable of pumping four thousand five hundred gallons per minute (4,500gpm). Both pumps are manually operated from the water plant. They discharge into a twenty four inch (24") ductile iron line where it travels .25 miles before arriving at the water plant.

Water Treatment Plant:

The City of Morgan City's Water Treatment Plant is located at 1602 Front St. (29.707785, -91.215651). It is a surface water treatment plant, and was put into service in 1969. The plant uses two pumps to distribute water throughout the City. Pump A is a fifteen inch (15") Worthington Pump that uses a Dan Foss variable frequency drive (VFD) to control the two hundred and fifty horsepower (250hp) Marathon motor. Pump B is a twenty inch (20") Deming – Crane Pump that uses a Ben Shaw variable frequency drive (VFD) to control a two hundred horsepower (200hp) North American Motor. The plant on average produces four million gallons per day (4 MGD), but is capable of producing a max of six million four hundred thousand gallons per day (6.4 MGD). The plant uses a mixture of chlorine and ammonia to produce chloramines which are used to treat our water.



Water Towers:

The City of Morgan City has four water towers to help maintain pressure in our system at all times. Maple St. Water Tower located at 2112 Maple St. (29.71519,-91.205065), was placed into service in 1961. It is capable of holding seven hundred and fifty thousand gallons (750,000gal), and uses altitude valves to maintain its level.

Myrtle St. Water Tower located at 585 Myrtle St. (29.690813,-91.189569), was placed into service in 1982. It is capable of holding seven hundred and fifty thousand gallons (750,000gal), and uses altitude valves to maintain its level.

Oak St. Water Tower located at 130 Oak St. (29.695265,-91.193855), was placed into service in 2011. It is capable of holding seven hundred and fifty thousand gallons (750,000gal), and uses altitude valves to maintain its level.

Wyandotte Water Tower located at 5025 Railroad Ave (29.690356,-91.172643), was placed into service in 1971. It is capable of holding two hundred and fifty thousand gallons (250,000gal) and uses a 3 x 4 x 14 Aurora Type 411- BF pump to maintain its levels. The pump is manually controlled at the water treatment plant.

Water Distribution Materials Inventory:

The City of Morgan City's water distribution system is made up of an estimated 86.7 miles of main line pipe ranging in size from two inch (2") to twenty inch (20"). Pipe mains are made of a variety of different material:

❖ Asbestos Cement

- 6" – 49,416ft
- 8" – 20,650ft
- 10" – 19,161ft
- 12" – 11,062.5
- 16" – 33,536ft

❖ Cast Iron

- 2" – 2,812.5ft
- 4" – 42,245.5ft
- 6" – 140,855ft
- 8" – 35,234.5ft



Water Distribution Materials Inventory (cont.):

- ❖ Cast Iron (cont.)
 - 10" – 24,108ft
 - 12" – 3,280.5ft

- ❖ Plastic (PVC/PE)
 - 2" – 1800ft
 - 4" – 2400ft
 - 6" – 18,792.5ft
 - 8" – 24,795.5ft
 - 12" – 4,275ft
 - 20" – 4,035ft

All mains are repaired with stainless steel full circle clamps, iron fittings, and/or C-900 PVC pipe. All taps prior to 1990 were made either by directly tapping into the mains, or with brass tapping saddles. Flares on "K" type copper tubing were used for the connections from the corporation stop to the curb stop. The tap sizes range from three-quarter inch (3/4") to two inch (2"). After 1990, the City started to utilize Polyethylene (PE) tubing and brass compression fittings. When making repairs on services the City, as a rule, will replace the service line from the corporation stop to the curb stop if the line is found to be copper. There are currently six thousand four hundred and twenty-five (6,425) service connections in the City. The number that is currently active is only six thousand and ninety (6,090). Of the six thousand four hundred and twenty-five (6,425) connections, one thousand nine hundred and twenty-three are connected to the mains using Polyethylene (PE). The rest of the service connections are made with a flexible "K" type copper tubing. As of 2011, the City has begun to use ductile iron meters for meters larger than one inch, and an ABS composite type for meters up to one inch. The City has **NO LEAD** service lines within the City's limits. The City has a total of seven hundred and forty-three (743) meters that meet these criteria in its system.

Information for this report was gathered through reports, application records and water distribution system maps. In some cases the figures gathered are estimated due to the availability of records. The reference material used, to the best of the City's knowledge, supports the collective accuracy of this report.

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State of Louisiana
Louisiana Department of Health
Office of Public Health

Certified Mail # - 7017 1000 0000 1037 2216 - Return Receipt Requested

February 1, 2018

Frank Grizzaffi
% Morgan City Water System
P.O. Box 1218
Morgan City, LA 70381

Re: Lead and Copper Rule
Improving Transparency and Public Information
Morgan City Water System
PWSID #: LA1101005

Dear Mayor Grizzaffi:

In the early 1990's, community and non-transient non-community water systems were required to complete a materials evaluation of its distribution system and maintain a materials inventory as part of the water system's lead and copper sampling plan per 40 CFR §141.86(a) and LAC 51:XII.1703. The materials inventory was required to identify construction materials present in the water system's distribution which may contain lead such as piping, solder, caulking, and interior lining of distribution mains, alloys and home plumbing. The materials inventory was required to include locations served by a lead service line and/or other lead plumbing served by the water system. With respect to copper, the materials inventory was required to identify construction materials present in the water system's distribution containing copper such as piping and alloys, service lines, and home plumbing.

In response to recent events, the USEPA has requested that the Louisiana Department of Health (LDH) work with public water systems to improve transparency regarding the implementation of the Lead and Copper Rule (LCR). Therefore, LDH is requesting for public water systems to provide the following information either through their own publicly accessible website or through LDH's website:

- Materials inventory of the distribution system previously required to complete under the LCR. This inventory must include the locations of lead services lines, together with any updates to the inventory and map(s) of lead service lines and lead plumbing in the system.

The information requested above should be posted on the water system's website or submitted to the LDH by **March 31, 2018**. LDH will post the information to the Department's website or

Lead and Copper Rule
Improving Transparency and Public Education
Morgan City Water System
LA1101005

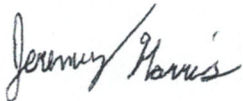
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provide a link to the information on the website. If the water system fails to provide or post the information, it will be noted on the Department's website that no information has been provided. All information should be updated prior to submitting to the State. If your water system does not have a distribution system materials inventory, the water system will have to generate the materials inventory.

Public water systems should also enhance efforts to ensure that residents promptly receive lead sampling results through lead consumer notices and that the general public receives prompt information on how to reduce exposure to high lead levels in drinking water systems. LDH appreciates your attention in this matter and looks forward to working with you in ensuring the protection of public health.

If you have any questions or need further information, do not hesitate to contact me at Jeremy.Harris@la.gov or (225)342-7471.

Sincerely,



Jeremy Harris, E.I.
Safe Drinking Water Program
LDH/OPH Engineering Services

Enclosure: United States Environmental Protection Agency letter to Secretary Rebekah Gee