



Environmental Update RIVERDALE CREEK Grenada, Mississippi

FACT SHEET

October 2016

RIVERDALE CREEK ADVISORY UPDATE

INTRODUCTION

On October 26, 2015, the Mississippi Department of Environmental Quality (MDEQ) issued a water contact advisory for the lower segment of Riverdale Creek in Grenada, MS. The advisory extends from the railroad crossing of Riverdale Creek to the point where the creek flows into the Yalobusha River. Water quality monitoring had indicated these waters could be unsafe for human contact or consumption. Industrial contamination from a chemical solvent groundwater plume appears to have negatively impacted the stream. Advisory signs have been posted along Highway 51 and Riverdale Creek. **Riverdale Creek is not a drinking water source.**

Overview: The Mississippi Department of Environmental Quality is monitoring Riverdale Creek approximately every quarter at three locations and has been sampled four times. The dates of sampling were: August 2015, Nov. 2015, Feb 2016 and June 2016. It should be noted that the August 2015 samples were collected during a drought period and based on those numbers our agency was compelled to issue a water contact advisory. MDEQ will continue to monitor Riverdale Creek on a quarterly basis and evaluate the data accordingly.

Current Status: **The water contact advisory is still in place. MDEQ recommends that people avoid water contact such as swimming, wading, and fishing. People should also avoid drinking from the creek and eating fish or anything else taken from these waters until further notice.**

RIVERDALE CREEK SAMPLING

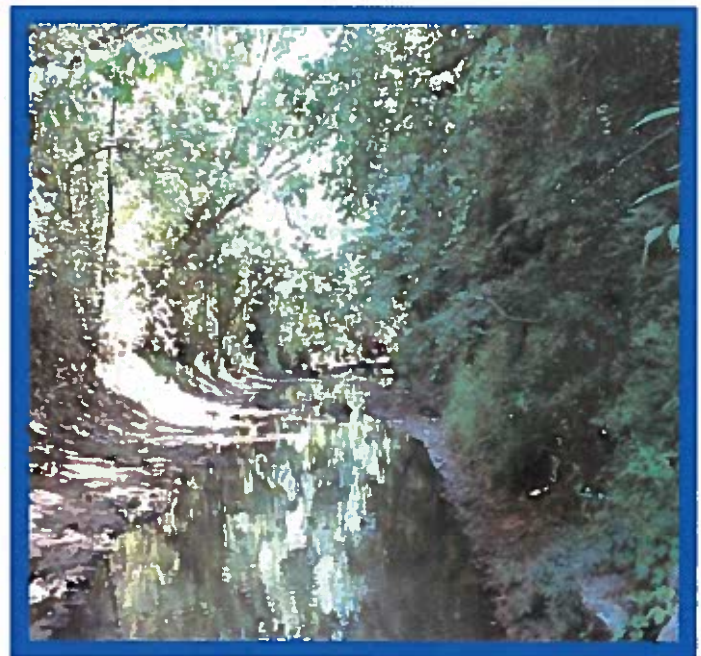
The sampling data and explanation for the sampling that took place from August 2015 to July 2016 is included in this notice. The data shows sampling results for the following constituents:

- Total Arsenic
- Total Chromium
- Total Lead
- Trichloroethene
- Cis-1,2-Dichloroethene
- Vinyl Chloride

The state of Mississippi has established Water Quality Criteria for Intrastate, Interstate, And Coastal Waters. One of the minimum standards is that:

“Waters shall be free from materials attributable to municipal, industrial, agricultural, or other discharges producing color, odor, taste, total suspended or dissolved solids, sediment, turbidity, or other conditions in such degree as to create a nuisance, render the waters injurious to public health, recreation, or to aquatic life and wildlife, or adversely affect the palatability of fish, aesthetic quality, or impair the waters for any designated use.”

The Mississippi Department of Environmental Quality will continue to monitor Riverdale Creek and the clean-up of any contamination impacting the creek. MDEQ's Office of Community Engagement will continue to provide you notices and updates. The Contact Advisory issued by MDEQ on October 26, 2015, will remain in place until the agency receives data that shows the Creek has met natural conditions.



Riverdale Creek, Grenada, MS

DATE	Arsenic, Total		MDEQ Numeric Criteria (ug/L)	Chromium, Total		MDEQ Numeric Criteria (ug/L)	Lead, Total		MDEQ Numeric Criteria (ug/L)	Trichloroethene		2015 EPA Human Health AWQC ug/L	cis-1,2-Dichloroethene		*Drinking Water MCL ug/L	Vinyl Chloride		2015 EPA Human Health AWQC ug/L
	ug/L (MQL-0.5)			ug/L (MQL-0.5)			ug/L (MQL-0.5)			ug/L (MQL-5.0)			ug/L (MQL-5.0)			ug/L (MQL-5.0)		
8.27.15	1.42		24	No Sample		98	<MQL		15	6.29		7	66.0		70	TRACE 4.47		1.6
11.17.15	No Sample		24	No Sample		98	No Sample		15	<MQL		7	33.9		70	6.69		1.6
8.27.15	1.49		24	No Sample		98	<MQL		15	11.2		7	152		70	16.2		1.6
11.17.15	No Sample		24	No Sample		98	No Sample		15	TRACE 4.30		7	91.7		70	23.4		1.6
2.29.16	1.12		24	0.85		98	<MQL		15	TRACE 3.88		7	21.1		70	4.97		1.6
6.1.16	1.49		24	1.23		98	2.72		15	TRACE 2.26		7	36.0		70	9.41		1.6
7.22.16	3.14		24	0.89		98	5.34		15	5.08		7	56.4		70	*10.2		1.6
11.17.15	No Sample		24	No Sample		98	No Sample		15	<MQL		7	<MQL		70	<MQL		1.6
8.27.15	1.69		24	No Sample		98	<MQL		15	7.63		7	61.1		70	6.57		1.6
11.17.15	No Sample		24	No Sample		98	No Sample		15	TRACE 4.86		7	88.5		70	18.7		1.6
2.29.16	1.15		24	0.89		98	<MQL		15	TRACE 3.39		7	17.7		70	TRACE 3.62		1.6
6.1.16	1.87		24	1.49		98	3.08		15	5.77		7	41.5		70	5.74		1.6
7.22.16	3.02		24	0.83		98	4.67		15	<MQL		7	23.3		70	<MQL		1.6
8.27.15	1.57		24	No Sample		98	<MQL		15	8.43		7	105		70	6.87		1.6
11.17.15	No Sample		24	No Sample		98	No Sample		15	<MQL		7	TRACE 4.83		70	<MQL		1.6
8.27.15	1.46		24	No Sample		98	<MQL		15	TRACE 3.32		7	38.2		70	TRACE 2.15		1.6
11.17.15	No Sample		24	No Sample		98	No Sample		15	TRACE 3.74		7	60.0		70	11.7		1.6
2.29.16	1.22		24	0.86		98	<MQL		15	TRACE 3.60		7	15.7		70	TRACE 3.17		1.6
6.1.16	1.91		24	0.74		98	2.64		15	TRACE 4.44		7	29.3		70	TRACE 3.94		1.6
7.22.16	3.10		24	1.05		98	4.32		15	<MQL		7	17.6		70	<MQL		1.6
8.27.16	1.34		24	No Sample		98	<MQL		15	8.02		7	35.7		70	TRACE 3.83		1.6
11.17.15	No Sample		24	No Sample		98	No Sample		15	<MQL		7	32.9		70	8.22		1.6

Total Arsenic

Mississippi has a water quality criterion for total dissolved arsenic. The samples are for total arsenic. Dissolved arsenic is a portion of total arsenic. Therefore, if total arsenic results are less than the criterion for dissolved arsenic, there is no exceedance. Concentrations below established criteria should pose no threat to aquatic life or human health.

Total Chromium

Mississippi has a water quality criterion for hexavalent chromium. The samples are for total chromium. Hexavalent chromium is a portion of total Chromium. Therefore, if total chromium results are less than the criterion for hexavalent chromium, there is no exceedance. Concentrations below established criteria should pose no threat to aquatic life or human health.

Total Lead

Mississippi has a water quality criterion for total dissolved lead. The samples are for total lead. Dissolved lead is a portion of total lead. Therefore, if total lead results are less than the criterion for dissolved lead, there is no exceedance. Concentrations below established criteria should pose no threat to aquatic life or human health.

Trichloroethene

Mississippi does not list a criterion for trichloroethene. When a Mississippi specific criterion does not exist for toxicants, MDEQ uses the most recent EPA recommended criteria for the protection of human health which is applied for this parameter. If the results for trichloroethene are less than the 2015 EPA recommended criterion for the protection of human health, there is no exceedance. Concentrations below established criteria should pose no threat to aquatic life or human health.

Cis-1,2-Dichloroethene

Mississippi does not list a criterion for cis-1,2-dichloroethene. When a Mississippi specific criterion does not exist for a toxicant, MDEQ uses the most recent EPA recommended criteria for the protection of human health. EPA does not have recommended Human Health Aquatic Water Quality Criteria for this parameter. Therefore, MDEQ defaults to the National Primary Drinking Water Regulations for cis-1,2-dichloroethene. If the cis-1,2-dichloroethene results are less than the National Primary Drinking Water Regulations number for the parameter, there is no exceedance. Concentrations below established criteria should pose no threat to aquatic life or human health.

Vinyl Chloride

Mississippi does not list a criterion for vinyl chloride. When a Mississippi specific criterion does not exist for toxicants, MDEQ uses the most recent EPA recommended criteria for the protection of human health, which is applied for this parameter. If the results for vinyl chloride less than the 2015 EPA recommended criteria for the protection of human health, there is no exceedance. Concentrations below established criteria should pose no threat to aquatic life or human health. Vinyl chloride does not occur naturally in the environment but is a man-made product. Vinyl chloride can be produced as a by-product or when chlorinated solvents such as TCE chemically break down.

UNDERSTANDING UNITS OF MEASUREMENT

UG/L– Micrograms per Liter

Technical environmental reports involving soil, water, or air contamination often report numerical values in units unfamiliar to people who don't routinely read these types of reports. Concentrations of chemicals in water are typically measured in units of the mass of chemical (milligrams, mg or micrograms, ug) per volume of water (liter, L, l)- (one part per billion). A way to visualize one microgram per Liter in water is to think of it as one drop in one billion drops of water or about one drop of water in a swimming pool.

ABBREVIATIONS/DEFINITIONS

MQL- Minimum Quantification Limit: A minimum concentration of a pollutant that can be measured within the limits of the laboratory equipment's precision and accuracy. When MQL is used, the laboratory is saying that the pollutant is not present at or above the minimum concentration that can be read. It may be present at a lower concentration, but cannot be "seen" by the instrument.

AWQC- Ambient Water Quality Criterion: The Clean Water Act requires EPA to develop criteria for ambient water quality that accurately reflect the latest scientific knowledge on the impacts of pollutants on human health and the environment.

AMBIENT- surrounding area or environment

EPA- Environmental Protection Agency

MDEQ– Mississippi Department of Environmental Quality

WATER QUALITY CRITERIA: elements of State water quality standards, expressed as constituent concentrations, levels, or narrative statements, representing a quality of water that supports the present and future most beneficial uses.

**FOR MORE INFORMATION ON RIVERDALE CREEK MONITORING:
MDEQ, P.O. Box 2261, Jackson, MS 39225**

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http://www.deq.state.ms.us/MDEQ.nsf/page/CE_ElectronicFileRoom?OpenDocument

**FOR HEALTH INFORMATION ABOUT THE CONSTITUENTS BEING SAMPLED:
AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY (ATSDR)**

This fact sheet does not answer the most frequently asked health questions about Vinyl Chloride, Arsenic, Lead, Chromium, Trichloroethene, or Cis-1,2-Dichloroethene. For more information, you may call the ATSDR Information Center at 1-800-232-4636 or visit the website at <http://www.atsdr.cdc.gov/>.

FOR MORE INFORMATION ON GRENDA MANUFACTURING CLEAN UP:

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