



MISSOURI DEPARTMENT OF NATURAL RESOURCES
 WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH
FORM S – SECTION 2 – LABORATORY RESULTS – FORM SA (2019 UPDATE)

SLUDGE MONITORING RESULTS FOR METALS, NUTRIENTS, PATHOGENS AND VECTORS

PERMIT NO: MO -	REPORT PERIOD: (CALENDAR YEAR)
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FACILITY NAME

Use this form to report sludge monitoring required under Standard Conditions for NPDES Permits, Part III, dated Aug. 1, 2019. For a copy, contact the department at (573) 522-4502.

If the facility has a design population equivalent (P.E.) of 150 or less, treat the sludge generated as septage and consequently, no testing is required.

Report all results on **dry weight** basis.

Attach copies of all laboratory results for the items below.

A. MINIMUM MONITORING LIST FOR ALL PERMITTEES

PARAMETER	UNITS	AVERAGE	MINIMUM	MAXIMUM	NUMBER OF SAMPLES
TOTAL SOLIDS	%				
TOTAL ARSENIC	mg/kg				
TOTAL CADMIUM	mg/kg				
TOTAL COPPER	mg/kg				
TOTAL LEAD	mg/kg				
TOTAL MERCURY	mg/kg				
TOTAL MOLYBDENUM	mg/kg				
TOTAL NICKEL	mg/kg				
TOTAL SELENIUM	mg/kg				
TOTAL ZINC	mg/kg				

B. ADDITIONAL MONITORING FOR LAND APPLICATION

PARAMETER	UNITS	AVERAGE	MINIMUM	MAXIMUM	NUMBER OF SAMPLES
TOTAL KJELDAHL NITROGEN	mg/kg				
TOTAL PHOSPHORUS AS P	mg/kg				
TOTAL POTASSIUM AS K	mg/kg				

If more than two dry tons of sludge per acre/year is applied complete the following:

ORGANIC NITROGEN AS N	mg/kg				
AMMONIA NITROGEN AS N	mg/kg				
NITRATE NITROGEN AS N	mg/kg				

C. POLLUTANT LIMITS			
POLLUTANT	AVERAGE SAMPLE CONCENTRATION mg/kg DRY WEIGHT	LOW METAL CONCENTRATION mg/kg DRY WEIGHT	CEILING CONCENTRATION mg/kg DRY WEIGHT
ARSENIC		41	75
CADMIUM		39	85
COPPER		1,500	4,300
LEAD		300	840
MERCURY		17	57
MOLYBDENUM		18	75
NICKEL		420	420
SELENIUM		36	100
ZINC		2,800	7,500

D. PATHOGENS							
<p>Pathogen testing is required for all sludges to show operational compliance, including sludges treated by a PSRP approved method.</p> <p>The geometric mean of the density of fecal coliform is less than 2,000,000 Most Probable Number (MPN) or Colony Forming Units (CFU) per gram of total solids (dry weight basis) for each group of seven samples:</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No Sampling frequency _____</p> <p>Geometric mean per gram of total solids for each group of seven samples was:</p> <table border="1"> <tr> <td>MPN/CFU</td> <td>SAMPLE DATE</td> </tr> <tr> <td>MPN/CFU</td> <td>SAMPLE DATE</td> </tr> <tr> <td>MPN/CFU</td> <td>SAMPLE DATE</td> </tr> </table>		MPN/CFU	SAMPLE DATE	MPN/CFU	SAMPLE DATE	MPN/CFU	SAMPLE DATE
MPN/CFU	SAMPLE DATE						
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E. VECTOR REDUCTION PROCESSES							
<p><input type="checkbox"/> 38 percent volatile solids reduction (attach calculations).</p> <p><input type="checkbox"/> SOUR test, mg O/hr/g (attach graph and calculations).</p> <p><input type="checkbox"/> Other. Attach explanation.</p>							

