

Linda Poole
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COLORADO STATE UNIVERSITY
Soil, Water & Plant Testing Laboratory
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Fort Collins, CO 80523-1120
Phone: 970-491-5061 / Fax: 970-491-2930

Date Received: 1/19/2016
Date Reported: 1/26/2016

Billing:

DOMESTIC WATER ANALYSIS

LAB # W1184

SOURCE: 4 Saxon blue exhaust

"Routine Package"

	<u>Results</u>	<u>Limit</u>	<u>Recommended</u>
Conductivity	4114		$\mu\text{mhos/cm}$
pH	4.1	6.5 to 8.5	
			<u>mg/L</u>
Calcium	7.24	N/A	
Magnesium	1.36	N/A	
Sodium	863	20	
Potassium	231	N/A	
Carbonate	<0.1	N/A	
Bicarbonate	1180	N/A	
Chloride	159	250	
Sulfate	962	250	
Nitrate	1.0	45	
Nitrate-Nitrogen	0.2	10	
Total Alkalinity			
as CaCO ₃	968	400	
Total Hardness			grains per gallon
as CaCO ₃	24	300	1.4
Total Dissolved Solids	3,406	500	

"Metals" and "Individual Element" Analysis

	<u>Results</u>	<u>Limit</u>
	<u>mg/L</u>	<u>mg/L</u>
Boron	1.85	N/A
Phosphorus	<0.01	N/A
Aluminum	63.8	0.05 to 0.2
Iron	0.36	0.3
Manganese	0.63	0.05
Copper	<0.01	1.3
Zinc	0.5	5.0
Nickel	0.02	0.1
Molybdenum	0.01	N/A
Cadmium	0.017	0.005
Chromium	0.03	0.10
Barium	0.08	2.0
Lead	0.005	0.015
Ammonium	*	N/A
Fluoride	*	4.0
Arsenic	*	0.010
Selenium	*	0.05
Mercury	*	0.002

* Not requested

COMMENTS:

The pH, sulfate, alkalinity, total dissolved solids, aluminum, iron, manganese and cadmium exceed the EPA suggested limits for domestic use. Sodium exceeds the EPA drinking water health advisory limit for domestic use. The EPA has not set a maximum contaminant level (MCL) for sodium in municipal water supplies where it is required to have sodium below a legal limit. They have determined that there may be a health issue for individuals on sodium restricted diets if the sodium level exceeds 20 ppm.

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Billing:

LIVESTOCK WATER ANALYSIS

LAB # W1184 L

SOURCE: 4 Saxon blue exhaust

"Routine Package"

	Recommended Limit	
Conductivity	4114	µmhos/cm
pH	4.1	
	<u>mg/L</u>	<u>mg/L</u>
Calcium	7.24	N/A
Magnesium	1.36	N/A
Sodium	863	N/A
Potassium	231.3	N/A
Carbonate	<0.1	N/A
Bicarbonate	1180	N/A
Chloride	159	N/A
Sulfate	962	N/A
Nitrate	1.0	443
Nitrate-Nitrogen	0.2	100
Total Alkalinity as CaCO ₃	968	N/A
Total Hardness as CaCO ₃	24	N/A
		grains per gallon 1.4
Total Dissolved Solids	3,406	10,000

"Metals" and "Individual Element" Analysis

	Recommended Limit	
	<u>mg/L</u>	<u>mg/L</u>
Boron	1.85	5.0
Phosphorus	<0.01	N/A
Aluminum	63.77	5.0
Iron	0.36	N/A
Manganese	0.63	N/A
Copper	<0.01	0.5
Zinc	0.5	24.0
Nickel	0.02	N/A
Molybdenum	0.01	N/A
Cadmium	0.017	0.05
Chromium	0.034	1.0
Barium	0.078	1.0
Lead	0.005	0.1
Ammonium	*	N/A
Fluoride	*	2.0
Arsenic	*	0.2
Selenium	*	0.05
Mercury	*	0.01

* Not requested

COMMENTS:

This water is satisfactory for livestock use but may cause temporary diarrhea or be refused at first by animals not accustomed to the salt content. It is poor water to use for poultry and can cause watery feces, increased mortality and poor growth, especially in turkeys.

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Billing:

IRRIGATION WATER ANALYSIS

LAB # W1184 I

SOURCE: 4 Saxon blue exhaust

"Routine Package"

	Results	Results
Conductivity	4114	µmhos/cm
pH	4.1	
pHc	7.9	
	mg/L	meq/L
Calcium	7.24	0.36
Magnesium	1.36	0.11
Sodium	863	37.56
Potassium	231	5.92
Carbonate	<0.1	<0.1
Bicarbonate	1180	19.35
Chloride	159	4.49
Sulfate	962	20.02
Nitrate	1.0	1.0
Nitrate-Nitrogen	0.2	0.2
Boron	1.85	
Pounds of Sulfate per acre foot	855	
Pounds of Nitrate per acre foot	0.6	

SAR 77.2

Salinity	Sodium
Hazard <u>Very High</u>	Hazard <u>Very High</u>

COMMENTS:

This water is classified as a medium salinity water, however the sodium is very high making the water unsuitable for irrigation.