



City of YUMA

Utilities Department
Laboratory
289 N. Figueroa Avenue
Yuma, AZ 85364
(928) 329-2893
(928) 329-2896 fax

**Annual Inorganic
Chemical Analysis Report
Agua Viva Water Treatment Plant**

The Samples for the inorganic analyses are collected in January.
The Data is received by mid March.

Definitions

Primary Inorganic Chemicals – Are chemicals, mainly metals, that the Environmental Protection Agency (EPA) has determined can cause health effects if present at the maximum contaminant level (MCL) over a period of time.

Secondary Inorganic Chemicals – No standards have been set by the EPA for these chemicals at this time. These are considered to be mainly of esthetic interest and do not present a health concern.

MCL – Maximum Contaminant Level. The maximum permissible level for a contaminant in water that is delivered to any user of a water system.

Contaminant – Any physical, chemical, biological, microbiological or radiological substance or matter in water.

MDL – PQL – MRL – RL – Minimum detection level – practical quantitation level – minimum reporting level – reporting level. The lowest measurable quantity of a contaminant that current laboratory instruments or technology can measure.

< -- This symbol indicates “less than” the number that appears to the right of it.

ug/L – micrograms per liter or parts per billion (ppb). Divide by 1000 to convert ug/L to mg/L.

mg/L – milligrams per liter or parts per million (ppm).

ND – Non-detectable. Rather than claiming a contaminant does not exist or is zero (0), laboratories report a contaminant is “non-detectable,” and report the result as less than (<) the reporting level for that particular contaminant.

Analysis Method – Are numbers that identify the specific procedure that was used to test for the contaminant.

Contaminant Code – Identifies the contaminant with a number, mainly for computer/data tracking by the Arizona Department of Environmental Quality.

Arizona Department of Environmental Quality
Drinking Water Inorganic Chemical Analysis Report Form

Entry Point To the Distribution System (EPDS) Only

PWS ID#: AZ0414024 PWS Name: City of Yuma
01/26/2016 0635 (24 hr Clock) Betsy Bowman
 Sample Date Sample Time Owner/Contact Person
928-329-2896 928-373-4588
 Owner/Contact Fax Number Owner/Contact Phone Number

Sample Type
 Compliance Monitoring

Sample Collection Point

EPDS# 002

Agua Viva WTP EPDS 002 (0191-16)

Sampling Site ID Bn0218/16

<p>For MCL or Composite Level Exceedance</p> <p>_____ Original Violation Specimen Number</p> <p>Sample Type</p> <p><input type="checkbox"/> Confirmation</p> <p><input type="checkbox"/> Confirmation - Composite</p>
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INORGANIC CHEMICAL ANALYSIS
 >>>To be completed by laboratory personnel<<<

Analysis Method	MCL	Reporting Limit	Contaminant Name Method	Cont. Code	Analysis Run Date	Results	Exceeds MCL	Exceeds Trigger Limit
<u>200.8</u>	0.010	0.005	Arsenic	1005	<u>01/28/2016</u>	<u>0.0015</u>	<input type="checkbox"/>	
<u>200.8</u>	2	1	Barium	1010	<u>01/28/2016</u>	<u>0.098</u>	<input type="checkbox"/>	
<u>200.8</u>	0.005	0.0025	Cadmium	1015	<u>01/28/2016</u>	<u><0.0005</u>	<input type="checkbox"/>	
<u>200.8</u>	0.1	0.05	Chromium	1020	<u>01/28/2016</u>	<u><0.001</u>	<input type="checkbox"/>	
<u>4500F-C</u>	4	0.5	Fluoride	1025	<u>01/28/2016</u>	<u>0.39</u>	<input type="checkbox"/>	
<u>245.1</u>	0.002	0.001	Mercury	1035	<u>02/11/2016</u>	<u><0.0002</u>	<input type="checkbox"/>	
<u>300.0</u>	10	2.5	Nitrate (as N)	1040	<u>01/27/2016</u>	<u>0.26</u>	<input type="checkbox"/>	(5 mg/L) <input type="checkbox"/>
<u>300.0</u>	1	0.25	Nitrite	1041	<u>01/27/2016</u>	<u><0.05</u>	<input type="checkbox"/>	0.5 mg/L <input type="checkbox"/>
<u>200.8</u>	0.05	0.025	Selenium	1045	<u>01/28/2016</u>	<u><0.005</u>	<input type="checkbox"/>	
<u>200.8</u>	0.006	0.003	Antimony	1074	<u>01/28/2016</u>	<u><0.001</u>	<input type="checkbox"/>	
<u>200.8</u>	0.004	0.002	Beryllium	1075	<u>01/28/2016</u>	<u><0.001</u>	<input type="checkbox"/>	
<u>335.4</u>	0.2	0.2	Cyanide	1024	<u>02/05/2016</u>	<u><0.005</u>	<input type="checkbox"/>	
<u>200.8</u>	No MCL	0.05	Nickel*	1036	<u>01/28/2016</u>	<u><0.005</u>	<input type="checkbox"/>	
<u>200.8</u>	0.002	0.001	Thallium	1085	<u>01/28/2016</u>	<u><0.001</u>	<input type="checkbox"/>	
<u>200.7</u>	No MCL	10	Sodium*	1052	<u>02/04/2016</u>	<u>120</u>	<input type="checkbox"/>	

Laboratory Information

>>>To be completed by laboratory personnel<<<

Lab ID Number: AZ0778
 Specimen Number: 2016012702891
 Name: Eurofins Eaton Analytical
 Printed Name and Phone Number of Lab Contact: Thomas D. French (480) 778 1558
 Authorized Signature: _____
 Date Public Water System Notified: _____
 Comments: _____

All units must be reported in milligrams per liter (mg/L)
 *Contaminants without an MCL
 DWAR 2IN: Revised 8/2009

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City of Yuma
Betsy Bowman
Laboratory
289 N. Figueroa Ave.
Yuma, AZ 85364

Samples Received on:
01/27/2016 1237

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
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Aqua Viva WTP EPDS 002 (0191-16) (201601270289)

Sampled on 01/26/2016 0635

PWSID: AZ0414024
Well ID: 002

EPA 200.8 - ICPMS Metals

1/27/2016	01/28/2016	12:12	887110	(EPA 200.8)	Aluminum Total ICAP/MS	220	ug/L	20	1
1/27/2016	01/28/2016	12:12	887110	(EPA 200.8)	Antimony Total ICAP/MS	ND	ug/L	1	1
1/27/2016	01/28/2016	12:12	887110	(EPA 200.8)	Arsenic Total ICAP/MS	1.5	ug/L	1	1
1/27/2016	01/28/2016	12:12	887110	(EPA 200.8)	Barium Total ICAP/MS	98	ug/L	2	1
1/27/2016	01/28/2016	12:12	887110	(EPA 200.8)	Beryllium Total ICAP/MS	ND	ug/L	1	1
1/27/2016	01/28/2016	12:12	887110	(EPA 200.8)	Cadmium Total ICAP/MS	ND	ug/L	0.5	1
1/27/2016	01/28/2016	12:12	887110	(EPA 200.8)	Chromium Total ICAP/MS	ND	ug/L	1	1
1/27/2016	01/28/2016	12:12	887110	(EPA 200.8)	Copper Total ICAP/MS	ND	ug/L	2	1
1/27/2016	01/28/2016	12:12	887110	(EPA 200.8)	Lead Total ICAP/MS	ND	ug/L	0.5	1
1/27/2016	01/28/2016	12:12	887110	(EPA 200.8)	Manganese Total ICAP/MS	ND	ug/L	2	1
1/27/2016	01/28/2016	12:12	887110	(EPA 200.8)	Nickel Total ICAP/MS	ND	ug/L	5	1
1/27/2016	01/28/2016	12:12	887110	(EPA 200.8)	Selenium Total ICAP/MS	ND	ug/L	5	1
1/27/2016	01/28/2016	15:14	887168	(EPA 200.8)	Silver Total ICAP/MS	ND	ug/L	0.5	1
1/27/2016	01/28/2016	12:12	887110	(EPA 200.8)	Thallium Total ICAP/MS	ND	ug/L	1	1
1/27/2016	01/28/2016	12:12	887110	(EPA 200.8)	Zinc Total ICAP/MS	ND	ug/L	20	1

EPA 200.7 - ICP Metals

1/27/2016	02/04/2016	1:59	888478	(EPA 200.7)	Calcium Total ICAP	85	mg/L	1	1
1/27/2016	02/04/2016	1:59	888478	(EPA 200.7)	Iron Total ICAP	ND	mg/L	0.02	1
1/27/2016	02/04/2016	1:59	888478	(EPA 200.7)	Magnesium Total ICAP	32	mg/L	0.1	1
1/27/2016	02/04/2016	1:59	888478	(EPA 200.7)	Potassium Total ICAP	4.9	mg/L	1	1
1/27/2016	02/04/2016	1:59	888478	(EPA 200.7)	Sodium Total ICAP	120	mg/L	1	1

EPA 245.1 - Mercury Total

2/11/2016	02/11/2016	18:19	890347	(EPA 245.1)	Mercury	ND	ug/L	0.2	1
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EPA 200.7 - ICP Metals

1/27/2016	02/04/2016	01:59	888578	(EPA 200.7)	Silica	8.9	mg/L	0.5	1
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SM2330B - Hydroxide as OH, Calculated

	01/28/2016	14:10		(SM2330B)	Hydroxide as OH Calculated	ND	mg/L	2	1
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SM 2330B - pH of CaCO3 saturation(60C)

	01/28/2016	13:57		(SM 2330B)	pH of CaCO3 saturation(60C)	6.8	Units	0.1	1
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SM4500-CO2-D - Carbon Dioxide,Free(25C)-Calc.

Rounding on totals after summation.
(c) - indicates calculated results

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	01/28/2016	14:10	(SM4500-CO2-D)	Carbon Dioxide,Free(25C)-Calc.	ND	mg/L	2	1
	SM 2330B - Langelier Index - 25 degree							
	01/28/2016	14:10	(SM 2330B)	Langelier Index - 25 degree	0.90	None		1
	SM2330B - Carbonate as CO3, Calculated							
	01/28/2016	22:35	(SM2330B)	Carbonate as CO3, Calculated	ND	mg/L	2	1
	SM 2340B - Total Hardness as CaCO3 by ICP							
	02/04/2016	10:46	(SM 2340B)	Total Hardness as CaCO3 by ICP (calc)	340	mg/L	3	1
	SM 1030E - Anion Sum - Calculated							
	01/29/2016	11:41	(SM 1030E)	Anion Sum - Calculated	12	meq/L	0.001	1
	SM 1030E - Cation Sum - Calculated							
	02/04/2016	10:46	(SM 1030E)	Cation Sum - Calculated	12	meq/L	0.001	1
	SM 2330B - pH of CaCO3 saturation(25C)							
	02/04/2016	10:46	(SM 2330B)	pH of CaCO3 saturation(25C)	7.3	Units	0.1	1
	SM2330B - Bicarb.Alkalinity as HCO3,calc							
	01/28/2016	14:10	(SM2330B)	Bicarb.Alkalinity as HCO3calc	170	mg/L	2	1
	SM 2330 - Agressiveness Index-Calculated							
	02/04/2016	10:46	(SM 2330)	Agressiveness Index-Calculated	13	None	0.1	1
	SM 2330B - Langlier Index at 60 degrees C							
	02/04/2016	22:34	(SM 2330B)	Langelier Index at 60 degrees C	1.4	None		1
	SM 1030E - Cation/Anion Difference							
	02/04/2016	22:34	(SM 1030E)	Cation/Anion Difference	0.049	%		1
	EPA 300.0 - Nitrate, Nitrite by EPA 300.0							
	01/27/2016	16:40	886907 (EPA 300.0)	Nitrate as Nitrogen by IC	0.26	mg/L	0.2	2
	01/27/2016	16:40	886907 (EPA 300.0)	Nitrate as NO3 (calc)	1.2	mg/L	0.88	2
	01/27/2016	16:40	886907 (EPA 300.0)	Nitrite Nitrogen by IC	ND	mg/L	0.1	2
	01/27/2016	16:40	886907 (EPA 300.0)	Total Nitrate, Nitrite-N, CALC	0.26	mg/L	0.1	1
	EPA 300.0 - Chloride, Sulfate by EPA 300.0							
	01/28/2016	15:08	887232 (EPA 300.0)	Chloride	120	mg/L	5	5
	01/28/2016	15:08	887232 (EPA 300.0)	Sulfate	290	mg/L	2.5	5
	EPA 335.4 - Cyanide by manual distillation							
2/5/2016	02/05/2016	18:33	889469 (EPA 335.4)	Cyanide by manual distillation	ND (L4)	mg/L	0.005	1
	SM 4500F-C - Fluoride							
	01/28/2016	21:43	887346 (SM 4500F-C)	Fluoride	0.39	mg/L	0.05	1
	SM 2320B - Alkalinity in CaCO3 units							
	01/28/2016	05:09	887242 (SM 2320B)	Alkalinity in CaCO3 units	140	mg/L	2	1
	E160.1/SM2540C - Total Dissolved Solids (TDS)							
1/29/2016	01/29/2016	16:48	887569 (E160.1/SM2540C)	Total Dissolved Solids (TDS)	770	mg/L	10	1

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Eaton Analytical

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Laboratory Data
Report: 573001

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Samples Received on:
01/27/2016 1237

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
SM4500-HB - PH (H3=past HT not compliant)								
	01/28/2016	05:09 887243	(SM4500-HB)	PH (H3=past HT not compliant)	8.2	Units	0.1	1
SM 5540C/EPA 425.1 - Surfactants								
	01/27/2016	17:13 886960	(SM 5540C/EPA 425.1)	Surfactants	ND	mg/L	0.1	1
SM2510B - Specific Conductance								
	01/28/2016	05:09 887244	(SM2510B)	Specific Conductance, 25 C	1200	umho/cm	2	1

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