



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
Main Street 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

01/17/2012 0925 (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# 001

MAIN ST WTP EPDS 001

Sampling Site ID

<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>

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 Reporting Limit
<u>200.8</u>	<u>0.010</u>	<u>0.010</u>	<u>Arsenic</u>	<u>1005</u>	<u>01/20/2012</u>	<u>0.0017</u>	<input type="checkbox"/>	<input type="checkbox"/>
<u>200.8</u>	<u>2</u>	<u>2</u>	<u>Barium</u>	<u>1010</u>	<u>01/20/2012</u>	<u>0.10</u>	<input type="checkbox"/>	<input type="checkbox"/>
<u>200.8</u>	<u>0.005</u>	<u>0.005</u>	<u>Cadmium</u>	<u>1015</u>	<u>01/20/2012</u>	<u><0.0005</u>	<input type="checkbox"/>	<input type="checkbox"/>
<u>200.8</u>	<u>0.1</u>	<u>0.1</u>	<u>Chromium</u>	<u>1020</u>	<u>01/20/2012</u>	<u><0.001</u>	<input type="checkbox"/>	<input type="checkbox"/>
<u>4500F-C</u>	<u>4</u>	<u>4</u>	<u>Fluoride</u>	<u>1025</u>	<u>01/25/2012</u>	<u>0.53</u>	<input type="checkbox"/>	<input type="checkbox"/>
<u>245.1</u>	<u>0.002</u>	<u>0.002</u>	<u>Mercury</u>	<u>1035</u>	<u>01/26/2012</u>	<u><0.0002</u>	<input type="checkbox"/>	<input type="checkbox"/>
<u>300.0</u>	<u>10</u>	<u>5</u>	<u>Nitrate (as N)</u>	<u>1040</u>	<u>01/18/2012</u>	<u>0.28</u>	<input type="checkbox"/>	<input type="checkbox"/>
<u>300.0</u>	<u>1</u>	<u>0.5</u>	<u>Nitrite</u>	<u>1041</u>	<u>01/18/2012</u>	<u><0.05</u>	<input type="checkbox"/>	<input type="checkbox"/>
<u>200.8</u>	<u>0.05</u>	<u>0.05</u>	<u>Selenium</u>	<u>1045</u>	<u>01/20/2012</u>	<u><0.005</u>	<input type="checkbox"/>	<input type="checkbox"/>
<u>200.8</u>	<u>0.006</u>	<u>0.006</u>	<u>Antimony</u>	<u>1074</u>	<u>01/20/2012</u>	<u><0.001</u>	<input type="checkbox"/>	<input type="checkbox"/>
<u>200.8</u>	<u>0.004</u>	<u>0.004</u>	<u>Beryllium</u>	<u>1075</u>	<u>01/20/2012</u>	<u><0.001</u>	<input type="checkbox"/>	<input type="checkbox"/>
<u>335.4</u>	<u>0.2</u>	<u>0.2</u>	<u>Cyanide</u>	<u>1024</u>	<u>01/26/2012</u>	<u><0.005</u>	<input type="checkbox"/>	<input type="checkbox"/>
<u>200.8</u>	<u>0.1</u>	<u>0.1</u>	<u>Nickel*</u>	<u>1036</u>	<u>01/20/2012</u>	<u><0.005</u>	<input type="checkbox"/>	<input type="checkbox"/>
<u>200.8</u>	<u>0.002</u>	<u>0.002</u>	<u>Thallium</u>	<u>1085</u>	<u>01/20/2012</u>	<u><0.001</u>	<input type="checkbox"/>	<input type="checkbox"/>
<u>200.7</u>	<u>No MCL</u>		<u>Sodium*</u>	<u>1052</u>	<u>01/24/2012</u>	<u>120</u>	<input type="checkbox"/>	<input type="checkbox"/>

Laboratory Information

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

Lab ID Number: AZ0455
 Specimen Number: 2012011901761
 Name: MWH Laboratories
 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)
 *Unregulated Contaminants
 DWAR 21N: Revised 8/2009



MWH

LABORATORIES

A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory
Hits Report: 385990

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

Samples Received on:
01/18/2012

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
	201201190175	MAIN ST WTP EPDS 001				
01/25/2012	11:13	Agressiveness Index-Calculated	12		None	0.1
01/20/2012	22:06	Alkalinity in CaCO3 units	150		mg/L	2
01/20/2012	21:21	Aluminum Total ICAP/MS	200	200	ug/L	20
01/23/2012	13:10	Anion Sum - Calculated	12		meq/L	0.001
01/20/2012	21:21	Arsenic Total ICAP/MS	1.7	10	ug/L	1
01/20/2012	21:21	Barium Total ICAP/MS	100	2000	ug/L	2
01/23/2012	13:10	Bicarb.Alkalinity as HCO3calc	180		mg/L	2
01/24/2012	20:51	Calcium Total ICAP	86		mg/L	1
01/25/2012	11:13	Cation Sum - Calculated	12		meq/L	0.001
01/18/2012	22:36	Chloride	120	250	mg/L	5
01/25/2012	12:25	Fluoride	0.53	4	mg/L	0.05
01/23/2012	13:09	Langelier Index - 25 degree	0.51		None	
01/23/2012	13:09	Langelier Index at 60 degrees C	-3.2		None	
01/20/2012	21:21	Lead Total ICAP/MS	0.56	15	ug/L	0.5
01/24/2012	20:51	Magnesium Total ICAP	31		mg/L	0.1
01/18/2012	22:36	Nitrate as Nitrogen by IC	0.28	10	mg/L	0.25
01/18/2012	22:36	Nitrate as NO3 (calc)	1.2	45	mg/L	1.1
01/20/2012	22:06	PH (H3=past HT not compliant)	7.8		Units	0.1
01/25/2012	11:13	pH of CaCO3 saturation(25C)	7.2		Units	0.1
01/23/2012	13:09	pH of CaCO3 saturation(60C)	6.8		Units	0.1
01/24/2012	20:51	Potassium Total ICAP	4.5		mg/L	1
01/24/2012	20:51	Silica	9.0		mg/L	0.5
01/24/2012	20:51	Sodium Total ICAP	120		mg/L	1
01/20/2012	22:06	Specific Conductance, 25 C	1200	900	umho/cm	2
01/18/2012	22:36	Sulfate	290	250	mg/L	2.5
01/24/2012	22:44	Total Dissolved Solids (TDS)	780	500	mg/L	10
01/25/2012	11:13	Total Hardness as CaCO3 by ICP (calc)	340		mg/L	3
01/18/2012	22:36	Total Nitrate, Nitrite-N, CALC	0.28		mg/L	0.1



MWH

LABORATORIES

A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory Data
Report: 385990

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

Samples Received on:
01/18/2012

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
MAIN ST WTP EPDS 001 (201201190175)						Sampled on 01/17/2012 0925		
PWSID: AZ0414024								
Well ID: 001								
Variable ID: 0098-12								
EPA 200.8 - ICPMS Metals								
01/20/2012	21:21	834905	(EPA 200.8)	Aluminum Total ICAP/MS	200	ug/L	20	1
01/20/2012	21:21	834905	(EPA 200.8)	Antimony Total ICAP/MS	ND	ug/L	1	1
01/20/2012	21:21	834905	(EPA 200.8)	Arsenic Total ICAP/MS	1.7	ug/L	1	1
01/20/2012	21:21	834905	(EPA 200.8)	Barium Total ICAP/MS	100	ug/L	2	1
01/20/2012	21:21	834905	(EPA 200.8)	Beryllium Total ICAP/MS	ND	ug/L	1	1
01/20/2012	21:21	834905	(EPA 200.8)	Cadmium Total ICAP/MS	ND	ug/L	0.5	1
01/20/2012	21:21	834905	(EPA 200.8)	Chromium Total ICAP/MS	ND	ug/L	1	1
01/20/2012	21:21	834905	(EPA 200.8)	Copper Total ICAP/MS	ND	ug/L	2	1
01/20/2012	21:21	834905	(EPA 200.8)	Lead Total ICAP/MS	0.56	ug/L	0.5	1
01/20/2012	21:21	834905	(EPA 200.8)	Manganese Total ICAP/MS	ND	ug/L	2	1
01/20/2012	21:21	834905	(EPA 200.8)	Nickel Total ICAP/MS	ND	ug/L	5	1
01/20/2012	21:21	834905	(EPA 200.8)	Selenium Total ICAP/MS	ND	ug/L	5	1
01/25/2012	20:59	835913	(EPA 200.8)	Silver Total ICAP/MS	ND	ug/L	0.5	1
01/20/2012	21:21	834905	(EPA 200.8)	Thallium Total ICAP/MS	ND	ug/L	1	1
01/20/2012	21:21	834905	(EPA 200.8)	Zinc Total ICAP/MS	ND	ug/L	20	1
EPA 200.7 - ICP Metals								
01/24/2012	20:51	835643	(EPA 200.7)	Calcium Total ICAP	86	mg/L	1	1
01/24/2012	20:51	835643	(EPA 200.7)	Iron Total ICAP	ND	mg/L	0.02	1
01/24/2012	20:51	835643	(EPA 200.7)	Magnesium Total ICAP	31	mg/L	0.1	1
01/24/2012	20:51	835643	(EPA 200.7)	Potassium Total ICAP	4.5	mg/L	1	1
01/24/2012	20:51	835643	(EPA 200.7)	Sodium Total ICAP	120	mg/L	1	1
EPA 245.1 - Mercury								
1/25/2012	01/26/2012	20:53	835907 (EPA 245.1)	Mercury	ND	ug/L	0.2	1
EPA 200.7 - ICP Metals								
01/24/2012	20:51	835647	(EPA 200.7)	Silica	9.0	mg/L	0.5	1
SM2330B - Hydroxide as OH, Calculated								
01/23/2012	13:09		(SM2330B)	Hydroxide as OH Calculated	ND	mg/L	2	1
SM 2330B - pH of CaCO3 saturation(60C)								
01/23/2012	13:09		(SM 2330B)	pH of CaCO3 saturation(60C)	6.8	Units	0.1	1
SM4500-CO2-D - Carbon Dioxide,Free(25C)-Calc.								

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



MWH

LABORATORIES

A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory Data
Report: 385990

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

Samples Received on:
01/18/2012

Table with columns: Prepared, Analyzed, QC Ref #, Method, Analyte, Result, Units, MRL, Dilution. Contains multiple rows of test data including SM 2330B, SM 2340B, SM 1030E, EPA 300.0, and EPA 335.4.

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



MWH

LABORATORIES

A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory Data
Report: 385990

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

Samples Received on:
01/18/2012

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
E160.1/SM2540C - Total Dissolved Solids (TDS)								
1/24/2012	01/24/2012	22:44 635683	(E160.1/SM2540C)	Total Dissolved Solids (TDS)	780	mg/L	10	1
SM4500-HB - PH (H3=past HT not compliant)								
	01/20/2012	22:06 635382	(SM4500-HB)	PH (H3=past HT not compliant)	7.8	Units	0.1	1
SM 5540C/EPA 425.1 - Surfactants								
	01/18/2012	16:16 634916	(SM 5540C/EPA 425.1)	Surfactants	ND	mg/L	0.05	1
SM2510B - Specific Conductance								
	01/20/2012	22:06 635387	(SM2510B)	Specific Conductance, 25 C	1200	umho/cm	2	1