

ORIGINAL JOHNSON UTILITIES L.L.C



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5230 East Shea Boulevard * Scottsdale, Arizona 85254

PH: (480) 998-3300; FAX: (480) 483-7908

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AZ CORP COMMISSION
DOCKET CONTROL

December 17, 2012

Steven Olea, Director
Utilities Division
Arizona Corporation Commission
1200 W. Washington Street
Phoenix, Arizona 85007

RE: Johnson Utilities Company, H2O, Diversified Water Utilities,
Queen Creek Water Company: Compliance with Decision No. 65840
Notice of Violation from ADEQ dated November 29, 2012 (Case #133837)
WS-02987A-99-0583; WS-02987A-00-0618; W-02234A-00-0371; W-02859A-00-0774;
W-01395A-00-0784

Dear Mr. Olea:

As a follow up to the Notice of Violation ("NOV") from the Arizona Department of Environmental Quality ("ADEQ") issued October 9, 2012, we have attached an additional response as Attachment 1. This response addresses Items 3 and 4 only.

Should you have any questions or would like to meet and discuss, please do not hesitate to contact me. Thank you for your time and consideration on this matter.

Sincerely,

Greg Brown
Johnson Utilities, LLC

cc: Docket Control
Brian Bozzo, Compliance Manager

Arizona Corporation Commission
DOCKETED

DEC 18 2012

DOCKETED BY

Attachment 1

JOHNSON UTILITIES, L.L.C.

5230 East Shea Boulevard, Suite 200 * Scottsdale, Arizona 85254
PH: (480) 998-3300; FAX: (480) 483-7908

December 17, 2012

Deborah L. Schadewald-Kohler
Water Quality Utility Field Service Unit
MC: 5415B-1
Arizona Department of Environmental Quality
1110 W Washington St.
Phoenix, AZ 85007

Re: Final Response to Notice of Violation, Case ID #: 133837

Dear Ms. Schadewald-Kohler

Johnson Utilities, L.L.C. (JU) is responding to the Notice of Violation (NOV), Case ID: 133837 received by JU on October 12, 2012. The NOV alleges seven State and Federal violations. Section III, Documenting Compliance, contains seven action items that need to be responded to by JU. Each item has a deadline date. The dates range from 30-days to 90-days. This response address items 3 and 4 which have a 90-day deadline.

NOV Item

3. Within 90 calendar days of receipt of this Notice, Please submit documentation that the violation(s) never occurred, or documentation to show that refresher sampling training has been provided for all current and potential sampling personnel.

Response: No violation occurred. Refresher training was provided for our personnel on August 9, 2012, which was reported in our November 21, 2012, response. The training provided was "Coliform Bacteria Sampling and Analysis" and "Preservation and Sampling Techniques". The instructors were from Legend Technical Services and Arizona Department of Environmental Quality (ADEQ). The training on August 9, 2012, was just 7 days before the August 16, 2012, sampling that resulted in 100% of the samples testing positive for total coliform. On August 13, 2012, our personnel took 20 samples which were all negative. The follow-up samples taken on August 19, 2012, were all negative except for one positive total coliform. The 14 well samples taken in compliance with the Groundwater Rule were all negative as were the seven samples taken from our storage tanks. JU's employees were properly trained and followed the sampling protocols and policies.

In conclusion, this violation never occurred.

NOV Item

4. Within 90 calendar days of receipt of this Notice, Please submit documentation that the violation(s) never occurred, or a description of the sampling protocols and policies for all sampling procedures administered by Johnson Utilities.

Response: No violation occurred. Sampling protocols and policies were in effect at the time of the incident. Attached are photo copies of the "Water and Wastewater Sample Collection and Analysis Quality Assurance Manual" dated December 2010. This document is maintained in the JU field office. The manual contains sections on "EPDS", "Monitoring Plans", "Disinfection Byproducts", "Total Coliform Rule", "Groundwater Rule", Lead and Copper", "Hach, Pocket Colorimeter TM II" (including copies of the SM 4500-Cl G and Hach Instruction Manual), and "Sample Collection Guidance". Each analyses performed also has a copy of the method used, such as SM 4500-Cl G for total chlorine.

The "Sample Collection Guidance" includes training by Legend Technical Services (Preservatives, General Sampling, Shipping Container Specifics), the Standard Method 9060, Samples, "Microbiological Analyses" (summary of methods and hold times for drinking water samples), and copies of the Legend's sampling procedures for all sampling administered by JU. Legend also provides an online sample collection guide at:

<http://www.legend-group.com/resources/sample-collection-guides>

The "Water and Wastewater Sample Collection and Analysis Quality Assurance Manual" was published in accordance with Arizona Department of Health Services' (ADHS) rule, A.R.S. § 36-495.02(A3). Recently ADHS has developed on-line guidance that can be found at:

<http://www.azdhs.gov/lab/license/drinking-water.htm>

"Drinking Water Field Method Training" was provided by ADHS and ADEQ on October 17, 2012. Attached is a copy of the training certificate issued for my attendance. JU is in compliance with A.R.S. § 36-495.02(A3).

In conclusion, this violation never occurred.

If you have any questions or comments, please contact me at (480) 998-3300.

Sincerely,



Gregory H. Brown, P.E.
Director of Engineering

Attachments: Photos and copies of "Water and Wastewater Sample Collection and Analysis Quality Assurance Manual, December 2010, content.

- cover
- section tags
- monthly monitoring plan
- section tags
- section tags
- 4500-Cl G cover page
- Hach Pocket Colorimeter II Instruction Manual cover page
- Legend Training cover page
- Standard Method 9060 Samples
- Legend "Microbiological Analyses" for Drinking Water
- Legend Sampling Procedures
 - Total Coliform
 - Alkalinity
 - Fluoride
 - Nitrate + Nitrite
 - Nitrite
 - Sulfate
 - Total Dissolved Solids
 - Metals
 - Volatile Organic Compounds or TTHMs
 - Semi-Volatile Organic Compounds
 - Haloacetic Acids

ADHS/ADEQ Training Certificate, Greg Brown, October 17, 2012



Water and Wastewater
Sample Collection and Analysis
Quality Assurance Manual

December 2010

Johnson Utilities, L.L.C.
5230 E. Shea Blvd., Suite 200
Scottsdale, AZ 85255

Entry Point Distribution
System (EPDS)

Monitoring Plans

Disinfection Byproducts
(TTHM/HAA5)

Total Coliform Rule
(TCR)

Ground Water Rule
(GWR)

Maximum

id & Copper

Cl₂ Total
Method 10250

Hach, Pocket
Colorimeter TM II

Sample Collection

3 m ago 2 m ago
3 m ago 2 m ago

12 m ago 1 ago

est of my knowledge.

lected.
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[]

B - A	NH ₂ Cl	NH ₂ Cl
C - B	NHCl ₂	NHCl ₂ + 1/2NCl ₃
N	—	Free Cl + 1/2NCl ₃
2(N - A)	—	NCl ₃
C - N	—	NHCl ₂

Water Works Assoc. 60:847.

PALIN, A.T. 1975. Current DPD methods for residual halogen compounds and ozone in water. *J. Amer. Water Works Assoc.* 67:32. Methods for the Examination of Waters and Associated Materials, Chemical Disinfecting Agents in Water and Effluents, and Chlorine Demand. 1980. Her Majesty's Stationery Off., London, England.

4500-Cl G. DPD Colorimetric Method

1. General Discussion

a. Principle: This is a colorimetric version of the DPD method and is based on the same principles. Instead of titration with standard ferrous ammonium sulfate (FAS) solution as in the titrimetric method, a colorimetric procedure is used.

b. Interference: See A.3 and F.1d. Compensate for color and turbidity by using sample to zero photometer. Minimize chromate interference by using the thioacetamide blank correction.

c. Minimum detectable concentration: Approximately 10 µg Cl as Cl₂/L. This detection limit is achievable under ideal conditions; normal working detection limits typically are higher.

2. Apparatus

a. Photometric equipment: One of the following is required:

1) *Spectrophotometer,* for use at a wavelength of 515 nm and providing a light path of 1 cm or longer.

2) *Filter photometer,* equipped with a filter having maximum transmission in the wavelength range of 490 to 530 nm and providing a light path of 1 cm or longer.

b. Glassware: Use separate glassware, including separate spectrophotometer cells, for free and combined (dichloramine) measurements, to avoid iodide contamination in free chlorine measurement.

3. Reagents

See F.2a, b, c, d, e, h, i, and j.

4. Procedure

a. Calibration of photometric equipment: Calibrate instrument with chlorine or potassium permanganate solutions.

1) *Chlorine solutions—*Prepare chlorine standards in the range of 0.05 to 4 mg/L from about 100 mg/L chlorine water standardized as follows: Place 2 mL acetic acid and 10 to 25 mL chlorine-

Cat. No. 59570-88

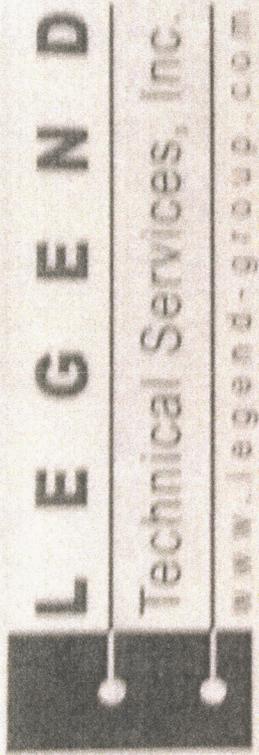
Pocket Colorimeter™ II
Analysis System

Chlorine (Cl₂)

Instruction Manual



Be Right™



L E G E N D

Technical Services, Inc.

www.legend-group.com

Preservatives, General Sampling, Shipping, Container
Specifics

SAMPLE BOTTLES BY LISA PARRISH

9060 SAMPLES*

9060 A. Collection

1. Containers

Collect samples for microbiological examination in nonreactive borosilicate glass or plastic bottles that have been cleansed and rinsed carefully, given a final rinse with deionized or distilled water, and sterilized as directed in Sections 9030 and 9040. For some applications samples may be collected in presterilized plastic bags.

2. Dechlorination

Add a reducing agent to containers intended for the collection of water having residual chlorine or other halogen unless they contain broth for direct plating of sample. Sodium thiosulfate ($\text{Na}_2\text{S}_2\text{O}_3$) is a satisfactory dechlorinating agent that neutralizes any residual halogen and prevents continuation of bactericidal action during sample transit. The examination then will indicate more accurately the true microbial content of the water at the time of sampling.

For sampling chlorinated wastewater effluents add sufficient $\text{Na}_2\text{S}_2\text{O}_3$ to a clean sterile sample bottle to give a concentration of 100 mg/L in the sample. In a 120-mL bottle 0.1 mL of a 10% solution of $\text{Na}_2\text{S}_2\text{O}_3$ will neutralize a sample containing about 15 mg/L residual chlorine. For drinking water samples, the concentration of dechlorinating agent may be reduced: 0.1 mL of a 3% solution of $\text{Na}_2\text{S}_2\text{O}_3$ in a 120-mL bottle will neutralize up to 5 mg/L residual chlorine.

Cap bottle and sterilize by either dry or moist heat, as directed (Section 9040). Presterilized plastic bags or bottles containing $\text{Na}_2\text{S}_2\text{O}_3$ are available commercially.

Collect water samples high in metals, including copper or zinc (>1.0 mg/L), and wastewater samples high in heavy metals in sample bottles containing a chelating agent that will reduce metal toxicity. This is particularly significant when such samples are in transit for 4 h or more. Use 372 mg/L of the disodium salt of ethylenediaminetetraacetic acid (EDTA). Adjust EDTA solution to pH 6.5 before use. Add EDTA separately to sample bottle before bottle sterilization (0.3 mL 15% solution in a 120-mL bottle) or combine it with the $\text{Na}_2\text{S}_2\text{O}_3$ solution before addition.

3. Sampling Procedures

When the sample is collected, leave ample air space in the bottle (at least 2.5 cm) to facilitate mixing by shaking, before examination. Collect samples that are representative of the water being tested, flush or disinfect sample ports, and use aseptic techniques to avoid sample contamination.

* Approved by Standard Methods Committee, 1997.
Joint Task Group, 20th Edition—Eugene W. Rice (chair), Robert H. Bordner, Terry C. Covert, Charles P. Gerba, Nancy H. Hall, Walter Jakubowski, Louis A. Kaplan, Gordon A. McFeters, Nelson P. Moyer.

Keep sampling bottle closed until it is to be filled. Remove stopper and cap as a unit; do not contaminate inner surface of stopper or cap and neck of bottle. Fill container without rinsing; replace stopper or cap immediately, and if used, secure hood around neck of bottle.

a. Potable water: If the water sample is to be taken from a distribution-system tap without attachments, select a tap that is supplying water from a service pipe directly connected with the main, and is not, for example, served from a cistern or storage tank. Open tap fully and let water run to waste for 2 or 3 min, or for a time sufficient to permit clearing the service line. Reduce water flow to permit filling bottle without splashing. If tap cleanliness is questionable, choose another tap. If a questionable tap is required for special sampling purposes, disinfect the faucet (inside and outside) by applying a solution of sodium hypochlorite (100 mg NaOCl/L) to faucet before sampling; let water run for additional 2 to 3 min after treatment. Do not sample from leaking taps that allow water to flow over the outside of the tap. In sampling from a mixing faucet remove faucet attachments such as screen or splash guard, run hot water for 2 min, then cold water for 2 to 3 min, and collect sample as indicated above.

If the sample is to be taken from a well fitted with a hand pump, pump water to waste for about 5 to 10 min or until water temperature has stabilized before collecting sample. If an outdoor sampling location must be used, avoid collecting samples from frost-proof hydrants. If there is no pumping machinery, collect a sample directly from the well by means of a sterilized bottle fitted with a weight at the base; take care to avoid contaminating samples by any surface scum. Other sterile sampling devices, such as a trip bailer, also may be used.

In drinking water evaluation, collect samples of finished water from distribution sites selected to assure systematic coverage during each month. Carefully choose distribution system sample locations to include dead-end sections to demonstrate bacteriological quality throughout the network and to ensure that localized contamination does not occur through cross-connections, breaks in the distribution lines, or reduction in positive pressure. Sample locations may be public sites (police and fire stations, government office buildings, schools, bus and train stations, airports, community parks), commercial establishments (restaurants, gas stations, office buildings, industrial plants), private residences (single residences, apartment buildings, and town-house complexes), and special sampling stations built into the distribution network. Preferably avoid outdoor taps, fire hydrants, water treatment units, and backflow prevention devices. Establish sampling program in consultation with state and local health authorities.

b. Raw water supply: In collecting samples directly from a river, stream, lake, reservoir, spring, or shallow well, obtain samples representative of the water that is the source of supply to consumers. It is undesirable to take samples too near the bank or too far from the point of drawoff, or at a depth above or below the point of drawoff.

Microbiological Analyses

Drinking Water

Description	Method	TAT	Hold Time	Container
Algae Count	Microscopy	3-5 Day	ASAP	100 ml sterile, Na ₂ S ₂ O ₃
Algae Count and Identification	Microscopy	3-5 Day	ASAP	100 ml sterile, Na ₂ S ₂ O ₃
Anaerobic Plate Count	Mod. SM 9215B	3-5 Day	24 Hour	Sterile Container
<i>Ascaris lumbricoides</i> *	SM 10550	3 Day**	24 Hour	1- 4 Liter Bottle
<i>Bacillus anthracis</i>	CDC-PRES. 1D	2-3 Day	ASAP	Sterile Bottle or Swab Kit
Bacteria Count & Stain	Microscopy	7-10 Day	N/A	Agar Plate or Swab Kit
<i>Clostridium perfringens</i> , MF	Bisson et al., 1979	7-10 Day	ASAP	100 ml sterile, Na ₂ S ₂ O ₃
Coliform, Total (Colilert)	SM 9223B	2-3 Day	30 Hour	100 ml sterile, Na ₂ S ₂ O ₃
Coliform, Total (MF)	SM 9222B	4-5 Day	30 Hour	100 ml sterile, Na ₂ S ₂ O ₃
Coliform, Total (MPN)	SM 9221B	4-5 Day	30 Hour	100 ml sterile, Na ₂ S ₂ O ₃
Common Large Tapeworm*	SM 10550	3 Day**	24 Hour	1- 4 Liter Bottle
Cryptosporidium*	SM 9711B	5-10 Day	48 Hour	Filter
<i>E. coli</i> (MPN)	SM 9221F	4-5 Day	6 Hour	100 ml sterile, Na ₂ S ₂ O ₃
<i>E. coli</i> (MPN; Quanti-Tray)	SM 9223B	2-3 Day	30 Hour	100 ml sterile, Na ₂ S ₂ O ₃
<i>Entamoeba histolytica</i> *	SM 9711C	5-7 Day	48 Hour	Filter or 4 Liter Sterile Bottle
Enteric Virus – Water	SM 9510	45-60 Day	48 Hour	Filter
<i>Enterococcus</i> species	ASTM D 6503	5 to 7 Day	6 Hour	100 ml sterile, Na ₂ S ₂ O ₃
Fecal Coliform (MF)	SM 9222D	24 Hour	6 Hour	100 ml sterile, Na ₂ S ₂ O ₃
Fecal Coliform (MPN)	SM 9221E	4-5 Day	6 Hour	100 ml sterile, Na ₂ S ₂ O ₃
Fecal <i>Streptococcus</i>	SM 9230B	4-5 Day	6 Hour	100 ml sterile, Na ₂ S ₂ O ₃
<i>Giardia lamblia</i> *	SM 9711B	5-10 Day	48 Hour	Filter
Heterotrophic Plate Count	SM 9215B	3-5 Day	8 Hour	100 ml sterile, Na ₂ S ₂ O ₃
Heterotrophic Plate Count (MF)	SM 9215D	3-5 Day	8 Hour	100 ml sterile, Na ₂ S ₂ O ₃



Sample Collection Information – Drinking Water

Analyte: Total Coliform and *E. coli*

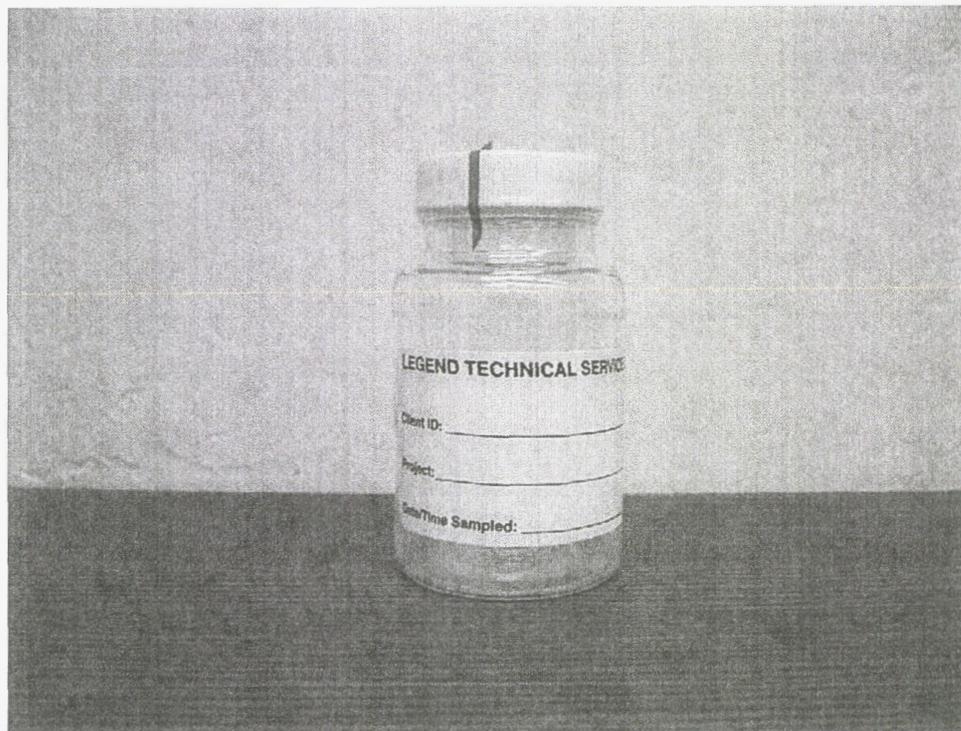
EPA/Standard Method: SM 9223B

Container/Preservative: 120 mL, sterile; Sodium Thiosulfate

Holding Time: 30 hours

Instructions: Remove aerator/screen from faucet before collecting sample. Disinfect exterior of faucet and flush tap for 5 minutes. Remove seal from sample bottle. Fill sample bottle just past the fill line, leaving one inch of head space. Do not rinse preservative or touch inside of container.

Photo:





Sample Collection Information – Drinking Water

Analyte: Alkalinity

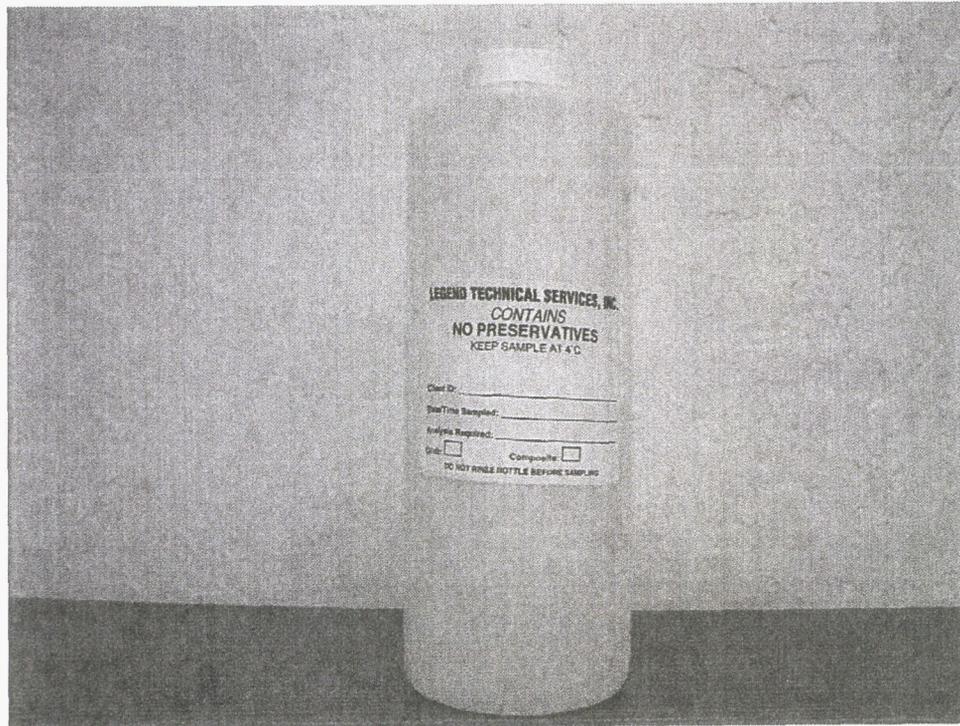
EPA/Standard Method: SM 2320B

Container/Preservative: 250/500/1000 mL, plastic; None

Holding Time: 14 days

Instructions: Fill container to neck. Transport samples on ice.

Photo:





Sample Collection Information – Drinking Water

Analyte: Fluoride

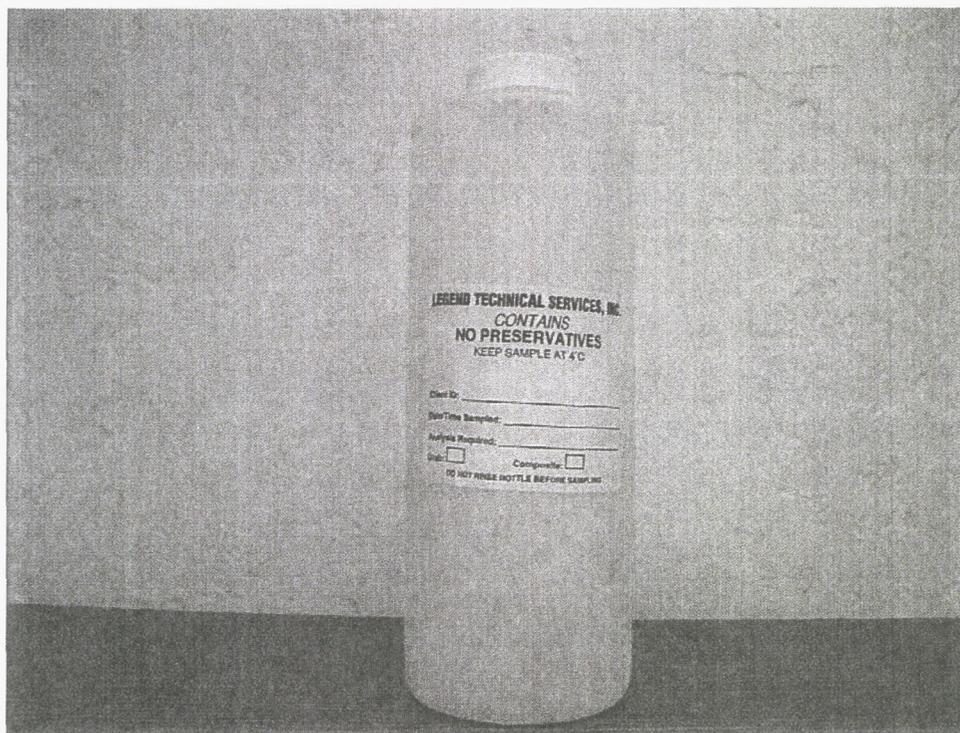
EPA/Standard Method: SM 4500 F C or EPA 300.0

Container/Preservative: 250/500/1000 mL plastic; None

Holding Time: 28 days

Instructions: Fill container to neck. Transport samples on ice.

Photo:





Sample Collection Information – Drinking Water

Analyte: Nitrate + Nitrite

EPA/Standard Method: SM 4500 NO3 F

Container/Preservative: 250/500/1000 mL plastic; Sulfuric Acid

Holding Time: 28 days

Instructions: Fill container to neck. Do not rinse out preservative. Transport samples on ice.

Photo:





Sample Collection Information – Drinking Water

Analyte: Nitrite

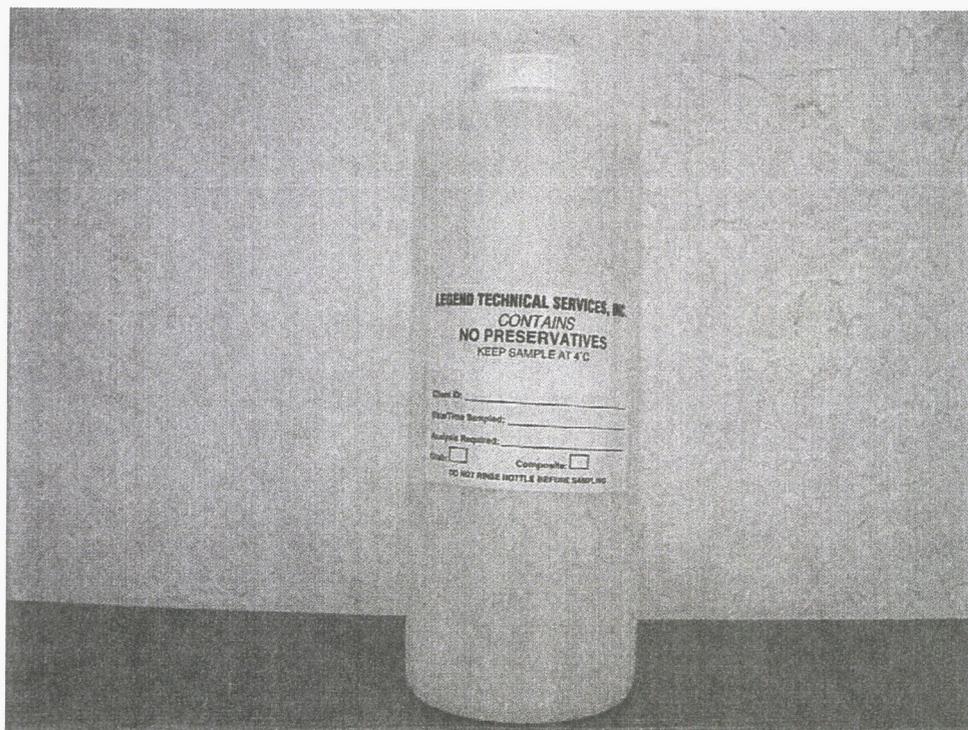
EPA/Standard Method: SM 4500 NO2 B

Container/Preservative: 250/500/1000 mL plastic; None

Holding Time: 48 hours

Instructions: Fill container to neck. Transport samples on ice.

Photo:





Sample Collection Information – Drinking Water

Analyte: Sulfate

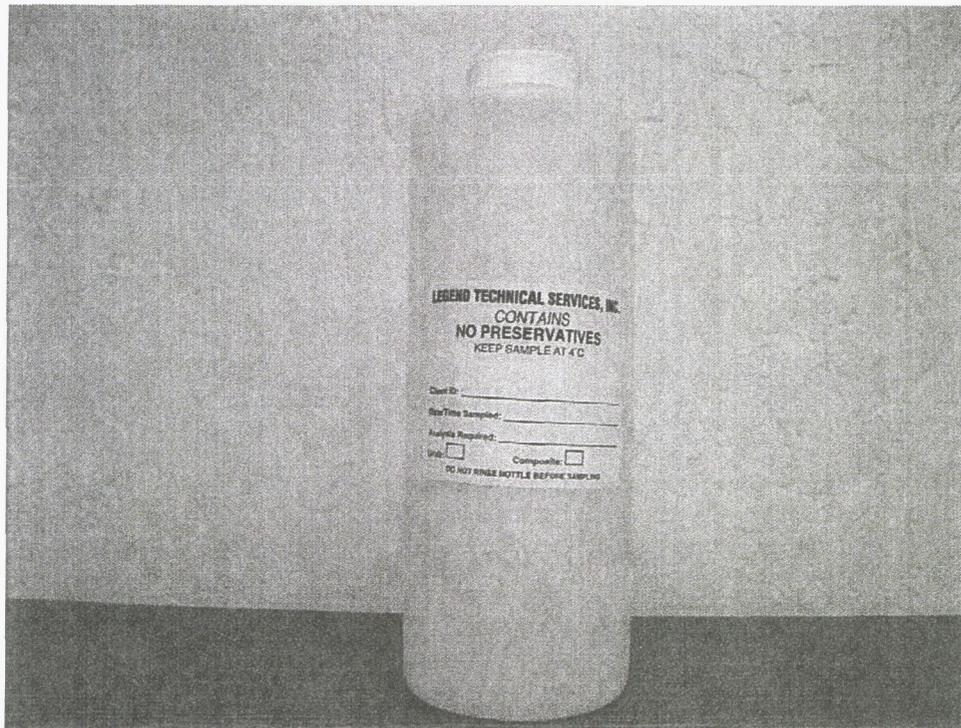
EPA/Standard Method: EPA 300.0

Container/Preservative: 250/500/1000 mL plastic; None

Holding Time: 28 days

Instructions: Fill container to neck. Transport samples on ice.

Photo:





Sample Collection Information – Drinking Water

Analyte: Total Dissolved Solids (TDS)

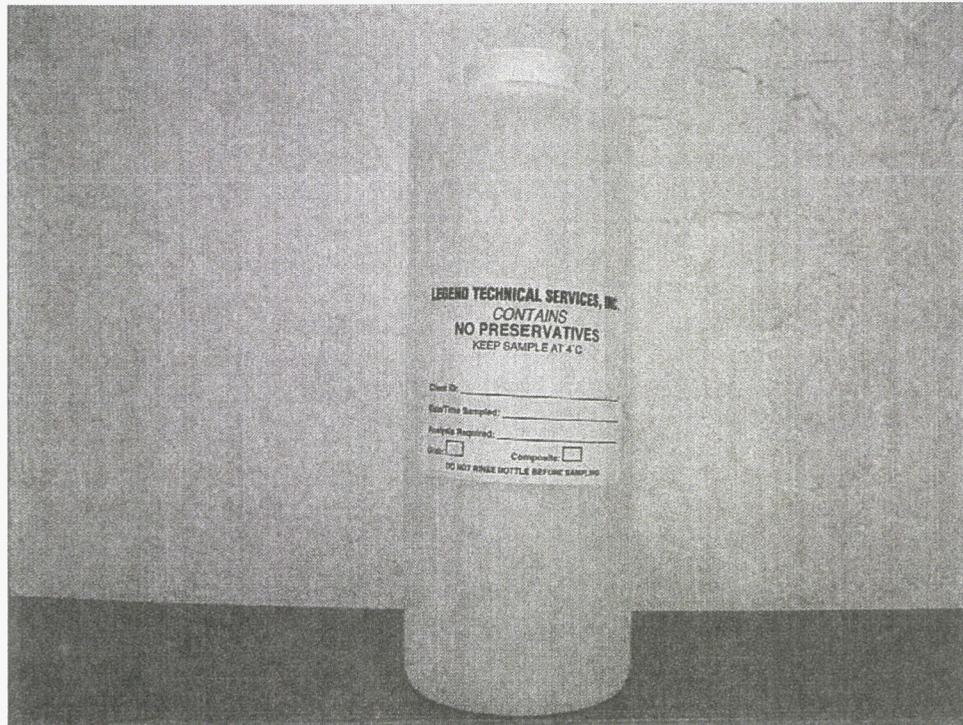
EPA/Standard Method: SM 2540 C

Container: 250/500/1000 mL plastic

Preservative: None

Instructions: Fill container to neck.

Photo:



Sample Collection Information – Drinking Water

Analyte: Metals

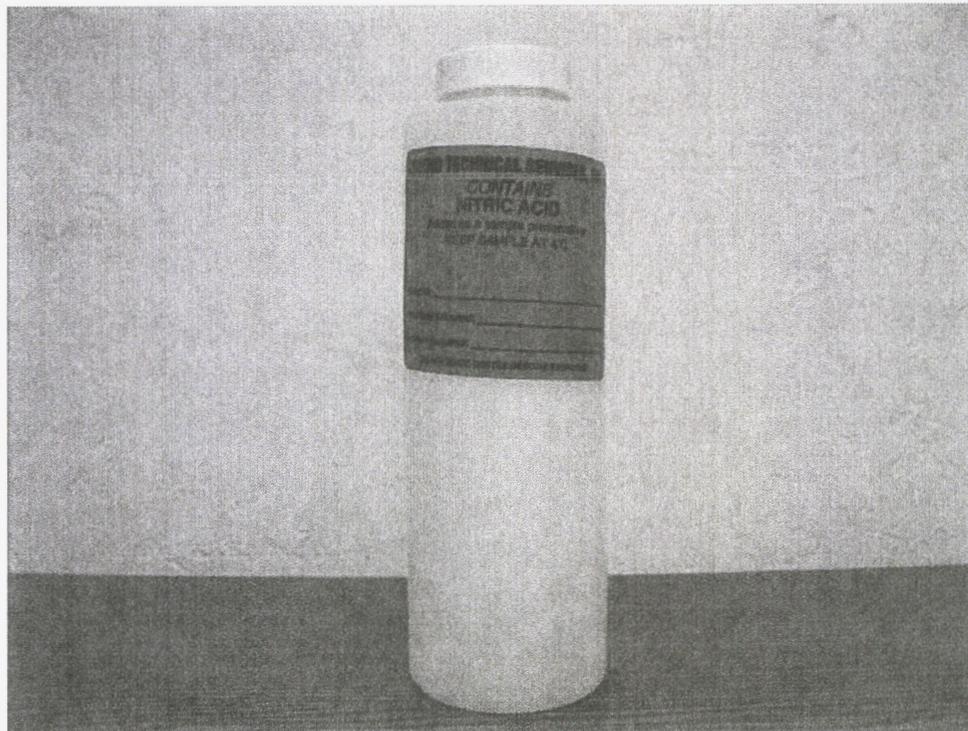
EPA/Standard Method: EPA 200.7/200.8/245.1

Container/Preservative: 500 mL, plastic; Nitric Acid

Holding Time: 6 months; 28 days for Mercury

Instructions: Fill container to neck. Do not rinse out preservative.

Photo:





Sample Collection Information – Drinking Water

Analyte: Volatile Organic Compounds or Total Trihalomethanes (THMs)

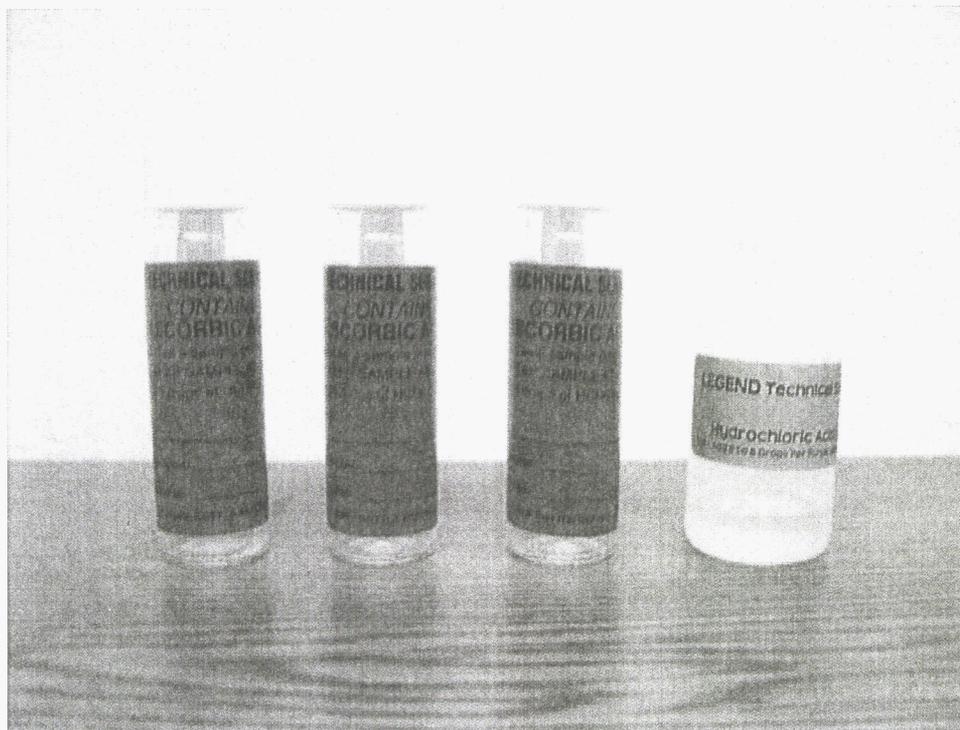
EPA/Standard Method: EPA 524.2

Container/Preservative: 3-40 mL Vials plus 2 Travel Blanks; Ascorbic Acid;
Hydrochloric Acid – Field Preservation

Holding Time: 14 days

Instructions: Fill vials until meniscus forms at mouth of the vial, but do not overflow. Add five (5) drops of Hydrochloric Acid to the vial. Screw on the lid. Some water may overflow as you screw on the lid. If you turn the vial upside down, there should be no air bubbles/headspace. If there are air bubbles, unscrew the cap and continue adding drops of water until there are no more bubbles. Do not rinse out preservative. Transport samples on ice.

Photo:





Sample Collection Information – Drinking Water

Analyte: Semi-Volatile Organic Compounds

EPA/Standard Method: EPA 525.2

Container/Preservative: 2-1 liter glass bottles; Sodium Sulfite and HCl (chlorinated source only); HCl (non-chlorinated)

Holding Time: 14 days; 30 days for analysis following extraction

Instructions: Fill containers to neck. For chlorinated samples, add the entire contents of the small glass vial labeled HCl (or 30 drops HCl if you have a vial). Fill bottle to top with sample so that no air remains when capped. If the source is not chlorinated, it is not necessary to add the HCl. Do not rinse out preservative. Transport samples on ice.

Photo:





Sample Collection Information – Drinking Water

Analyte: Haloacetic Acids (HAA5)

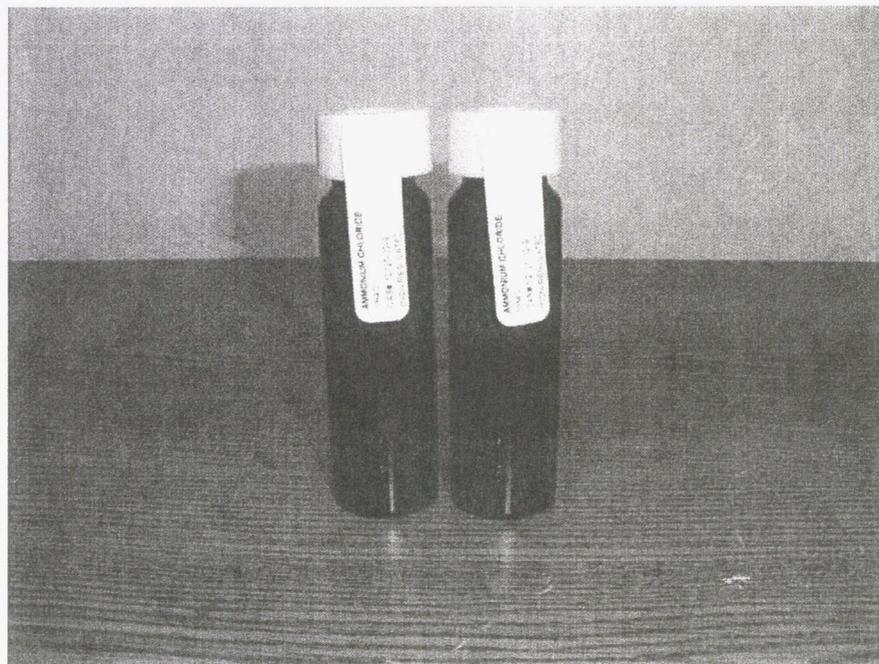
EPA/Standard Method: EPA 552.2

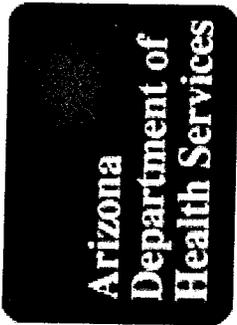
Container/Preservative: 2-40 mL Ammonium Chloride

Holding Time: 14 days; 14 days for analysis following extraction.

Instructions: Fill vials until meniscus forms at mouth of the vial, but do not overflow. Screw on the lid. Some water may overflow as you screw on the lid. If you turn the vial upside down, there should be no air bubbles/headspace. If there are air bubbles, unscrew the cap and continue adding drops of water until there are no more bubbles. Do not rinse out preservative. Transport samples on ice.

Photo:





Arizona Department of Health Services

ARIZONA WATER ASSOCIATION
RURAL WATER ASSOCIATION OF ARIZONA
ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
and
ARIZONA DEPARTMENT OF HEALTH SERVICES
(Bureau of Laboratory Services)

AWARDS

3.0 PDHs

To

Greg Brown

for attending the

DRINKING WATER FIELD METHOD TRAINING

October 17, 2012 – Phoenix

Steve Baker
Chief, Office of Laboratory Licensure and Certification
Arizona Department of Health Services