



## Consumer Confidence Report For Calendar Year 2016

Este informe contiene información muy importante sobre el agua usted bebe.  
Tradúscalo ó hable con alguien que lo entienda bien.

### I. Public Water System (PWS) Information

|  |                                |                     |                       |
|--|--------------------------------|---------------------|-----------------------|
| <b>PWS ID Number</b>   | <b>PWS Name</b>                |                     |                       |
| AZ04 -04-012   | ASARCO LLC Hayden Concentrator |                     |                       |
| <b>Contact Person and Title</b>  |                                | <b>Phone Number</b> | <b>E-Mail Address</b> |
| Amy Veek – Environmental Engineer  |                                | 520-356-3296        | aveek@asarco.com      |
| <p>We want our valued customers to be informed about their water quality. If you would like to learn more about public participation or to attend any of our regularly scheduled meetings, please contact _____ at _____ for additional opportunity and meeting dates and times.</p> |                                |                     |                       |

### II. Drinking Water Sources

The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pickup substances resulting from the presence of animals or from human activity.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

|                      |                   |
|----------------------|-------------------|
| Our water source(s): | Hayden Well Field |
|----------------------|-------------------|

### III. Consecutive Connection Sources

Public Water System ID # AZ04 -04-012 , ASARCO LLC Hayden Concentrator provides a consecutive connection source of water.

### IV. Drinking Water Contaminants

Microbial contaminants, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

Pesticides and herbicides that may come from a variety of sources, such as agriculture, urban stormwater runoff, and residential uses.

Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and also may come from gas stations, urban stormwater runoff, and septic systems.

Radioactive contaminants, that can be naturally occurring or be the result of oil and gas production and mining activities.

### V. Vulnerable Population

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV-AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. For more information about contaminants and potential health effects, or to receive a copy of the U.S. Environmental Protection Agency (EPA) and the U.S. Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and microbiological contaminants call the EPA *Safe Drinking Water Hotline* at 1-800-426-4791.

### VI. Source Water Assessment

Based on the information currently available on the hydrogeologic settings and the adjacent land uses that are in the specified proximity of the drinking water source(s) of this public water system, the Arizona Department of

Environmental Quality (ADEQ) has given a high risk designation for the degree to which this public water system drinking water source(s) are protected. A designation of high risk indicates there may be additional source water protection measures which can be implemented on the local level. This does not imply that the source water is contaminated nor does it mean that contamination is imminent. Rather, it simply states that land use activities or hydrogeologic conditions exist that make the source water susceptible to possible future contamination

VII. Definitions

AL = Action Level - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements.  
MCL = Maximum Contaminant Level – The highest level of a contaminant that is allowed in drinking water.  
MCLG = Maximum Contaminant Level Goal - The level of a contaminant in drinking water below which there is no known or expected risk to health.  
MFL = Million fibers per liter.  
MRDL = Maximum Residual Disinfectant Level. The level of disinfectant added for water treatment that may not be exceeded at the consumer’s tap.  
MRDLG = Maximum Residual Disinfectant Level Goal. The level of disinfectant added for treatment at which no known or anticipated adverse effect on health of persons would occur.  
MREM = Millirems per year – a measure of radiation absorbed by the body.  
NA = Not Applicable, sampling was not completed by regulation or was not required.  
NTU = Nephelometric Turbidity Units, a measure of water clarity.  
PCi/L = Picocuries per liter - picocuries per liter is a measure of the radioactivity in water.  
PPM = Parts per million or Milligrams per liter (mg/L).  
PPB = Parts per billion or Micrograms per liter (µg/L).  
PPT = Parts per trillion or Nanograms per liter.  
PPQ = Parts per quadrillion or Picograms per liter.  
TT = Treatment Technique - A required process intended to reduce the level of a contaminant in drinking water.

|                  |
|------------------|
| ppm x 1000 = ppb |
| ppb x 1000 = ppt |
| ppt x 1000 = ppq |

VIII. Health Effects Language

**Nitrate** in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. “High nitrate levels in drinking water can cause blue baby syndrome.” Nitrate levels may rise quickly for short periods-of-time because of rainfall or agricultural activity. If you are caring for an infant, and detected nitrate levels are above 5 ppm, you should ask advice from your health care provider.

If **arsenic** is less than or equal to the MCL, your drinking water meets EPA’s standards. EPA’s standard balances the current understanding of arsenic’s possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

**LEAD:** If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. ASARCO LLC Hayden Concentrator is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

IX. Detected Water Quality Constituents – Ground Water

| Microbiological   | Violati on Y or N | Number of Samples Present OR Highest Level Detected | Absent (A) or Present(P) OR Range of All Samples (L-H) | MCL | MCLG | Sample Month & Year | Likely Source of Contamination   |
|---|-------------------|---|--|-----|------|---------------------|----------------------------------|
| <b>Total Coliform Bacteria</b><br>(System takes ≤ 40 monthly samples) | N                 | 0   | A  | 0   | 0    | Monthly 2016        | Naturally Present in Environment |

| Disinfectants   | Violati<br>on<br>Y or N | Running<br>Annual<br>Average<br>(RAA)  | Range of All<br>Samples (L-<br>H) | MCL         | MCLG         | Sample<br>Month<br>& Year | Likely Source<br>of<br>Contamination  |
|---|-------------------------|--|-----------------------------------|-------------|--------------|---------------------------|---|
| Chlorine (ppm)  | N                       | 0.52   | 0.2 – 0.82                        | MRDL =<br>4 | MRDLG<br>= 4 | Monthly<br>2016           | Water additive<br>used to control<br>microbes                                       |
| Disinfection By-<br>Products                                      | Violati<br>on<br>Y or N | Running<br>Annual<br>Average<br>(RAA) <u>OR</u><br>Highest<br>Level<br>Detected        | Range of All<br>Samples (L-<br>H) | MCL         | MCLG         | Sample<br>Month<br>& Year | Likely Source<br>of<br>Contamination  |
| Haloacetic Acids (ppb)<br>(HAA5)                                  | N                       | 5.1  | 3.6 – 5.1                         | 60          | n/a          | Aug<br>2016               | Byproduct of<br>drinking water<br>disinfection                                      |
| Total Trihalomethanes<br>(ppb) (TTHM)                             | N                       | 22   | 10 - 22                           | 80          | n/a          | Aug<br>2016               | Byproduct of<br>drinking water<br>disinfection                                      |
| Lead & Copper   | Violati<br>on<br>Y or N | 90 <sup>th</sup><br>Percentile<br><u>AND</u><br>Number of<br>Samples<br>Over the<br>AL | Range of All<br>Samples (L-<br>H) | AL          | ALG          | Sample<br>Month<br>& Year | Likely Source<br>of<br>Contamination  |
| Copper (ppm)  | N                       | 90 <sup>th</sup><br>Percentile<br>= 0.567  | <0.05 – 0.728                     | AL = 1.3    | ALG =<br>1.3 | Aug<br>2016               | Corrosion of<br>household<br>plumbing<br>systems;<br>erosion of<br>natural deposits |
| Lead (ppb)  | N                       | 90 <sup>th</sup><br>Percentile<br>= <0.002   | <0.002                            | AL = 15     | 0            | Aug<br>2016               | Corrosion of<br>household<br>plumbing<br>systems;<br>erosion of<br>natural deposits |
| Radionuclides   | Violati<br>on<br>Y or N | Running<br>Annual<br>Average<br>(RAA) <u>OR</u><br>Highest<br>Level<br>Detected        | Range of All<br>Samples (L-<br>H) | MCL         | MCLG         | Sample<br>Month<br>& Year | Likely Source<br>of<br>Contamination  |
| Alpha emitters (pCi/L)<br>( <i>this is Gross Alpha<br/>4002</i> ) | N                       | 6.1 ± 0.5  | 6.1                               | 15          | 0            | Nov<br>2016               | Erosion of<br>natural deposits  |
| Inorganic Chemicals<br>(IOC)                                      | Violati<br>on<br>Y or N | Running<br>Annual<br>Average<br>(RAA) <u>OR</u><br>Highest<br>Level<br>Detected        | Range of All<br>Samples (L-<br>H) | MCL         | MCLG         | Sample<br>Month<br>& Year | Likely Source<br>of<br>Contamination  |
| Antimony (ppb)  | N                       | 1.6  | <0.001 – 1.6                      | 6           | 6            | Mar<br>2013               | Discharge from<br>petroleum<br>refineries; fire<br>retardants;                      |

|                       |   |        |                 |     |     |          |   |
|-----------------------|---|--------|-----------------|-----|-----|----------|---|
|                       |   |        |                 |     |     |          | ceramics, electronics and solder  |
| <b>Arsenic (ppb)</b>  | N | 6.1    | 5 – 6.1         | 10  | 0   | Nov 2016 | Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes                    |
| <b>Barium (ppm)</b>   | N | 0.0047 | 0.0043 – 0.0047 | 2   | 2   | Nov 2016 | Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits                                |
| <b>Chromium (ppb)</b> | N | 2.3    | <1 – 2.3        | 100 | 100 | Nov 2016 | Discharge from steel and pulp mills; Erosion of natural deposits  |
| <b>Fluoride (ppm)</b> | N | 1.7    | 1.6 -1.7        | 4   | 4   | Nov 2016 | Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories |
| <b>Nitrate (ppm)</b>  | N | 3.1    | 0.89 – 3.1      | 10  | 10  | Nov 2016 | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits                               |
| <b>Selenium (ppb)</b> | N | 12     | 5.7 - 12        | 50  | 50  | Nov 2016 | Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines                          |
| <b>Sodium (ppm)</b>   | N | 170    | 170             | N/A | N/A | Nov 2016 | N/A   |

#### XI. Violations

| Type / Description                      | Compliance Period      | Corrective Actions taken by PWS                           |
|---|------------------------|---|
| Notification / Missing Coliform Samples | July and December 2016 | Samples had been taken and results were submitted to ADEQ |

Violations were issued by ADEQ for late submittal of coliform and chlorine sample analysis. The failure to submit analysis to ADEQ on a timely basis from the contract laboratory was corrected in 2016. All required sampling was completed and reviewed by the environmental department within the regulatory time frame.