# Lab Report

## Upper Guadalupe River Authority

**Date:** *06-Oct-16*

**125 Lehmann Dr. Suite 100, Kerrville, TX 78028**
**(830) 896-5445**
**TCEQ State Lab ID: 48145**

**CLIENT:** Bear Springs Trails Water
PO Box 63479
Pipe Creek , TX 78063
awatson@vaughnconstruction.com
**Ph:** 2818314489

**Lab Order:** 1609290

**Project:** Pb Cu Bear Springs Trails Water
**System ID No:** 0100076

**Lab ID:** 1609290-001
**Sample Site:** see below
**Sampled By:**

**Collection Date/Time:**
**Source:**
**Sample Type:**
**Field Cl2 Residual:** NA

| Analyses | Result | LOQ | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **SUBCONTRACTED TESTING WAS PERFORMED** | **Method : SUBCONTRACTED TESTING** | | | | | |
| Subcontracted tests, see original report | see below | 0 | | | 1 | 10/5/2016 |

**Signature:**

**Amy Bryant, Lab Manager**

Test Methods: Standard Methods of the Examination of Water and Wastewater; EPA Methods for Water and Wastewater; ASTM Int'l Standard Test Methods; Hach Methods

NELAP Accredited by TCEQ – Certificate No: T104704283
Visit: www.ugra.org/geninfo.html for a list of Fields of Accreditation and current NELAP certificate

**Confidentiality Statement:** This is a confidential report for use by the addressed customer or authorized agent. This report may not be reproduced except in full.

**Compliance Statement:** All laboratory analyses performed in connection with the generation of the data set forth in this report were undertaken in accordance with requirements applicable to the laboratory methods used, unless otherwise noted in an attached Case Narrative. Any known problems/ anomalies observed by this laboratory (and if applicable, laboratories subcontracted through this laboratory) that might affect the quality of the data have been identified in the Case Narrative. Results shown relate only to the samples tested. Any known problems associated with the quality of the samples have been identified in the Case Narrative. All required Quality Control associated with the samples was acceptable unless the result is qualified with a "Q" flag or otherwise noted in the Case Narrative. The use of the measured values in this report for regulatory compliance purposes must be evaluated by, and is solely the responsibility of, the customer.

**Quality Control sample results available upon request.**

**Suffix :** (N) - NELAP Accredited Analysis

**Qualifiers:** Q - Data qualified: see Case Narrative. All required Quality Control was acceptable unless the result is flagged with a "Q" or otherwise noted in the Case Narrative.

## Upper Guadalupe River Authority

**Date:** *06-Oct-16*

**CLIENT:** Bear Springs Trails Water
**Project:** Pb Cu Bear Springs Trails Water
**Lab Order:** 1609290

# CASE NARRATIVE

Analysis of the following test(s) was performed by A and B Environmental Services Houston (NELAP Certificate No. T104704213-16-14 exp 3-31-2017, TCEQ Lab Approval ID TX275): Lead and Copper
The original report from the lab that performed the subcontracted testing follows this case narrative.

# Laboratory Analysis Report

Total Number of Pages: 7

Job ID : 16100052

10100 East Freeway, Suite 100, Houston, TX 77029 tel: 713-453-6060, fax: 713-453-6091, http://www.ablabs.com

**Client Project Name :**
**PWS ID# 0100076 / Bear Springs Trail Water**

| | | | |
|---|---|---|---|
| **Report To :** | Client Name: | UGRA - Upper Guadalupe River Authority | P.O.#.: |
| | Attn: | Amy Bryant | Sample Collected By: Andy Watson |
| | Client Address: | 125 Lehmann Dr. Suite 100 | Date Collected: 09/24/16 |
| | City, State, Zip: | Kerrville, Texas, 78028 | |

**A&B Labs has analyzed the following samples...**

| Client Sample ID | Matrix | A&B Sample ID |
|---|---|---|
| LCR001 / 1154 Bear Springs Trail | Drinking Water | 16100052.01 |
| LCR002 / 180 Twisted Oak | Drinking Water | 16100052.02 |
| LCR003 / 551 Bear Springs Trail | Drinking Water | 16100052.03 |
| LCR004 / 997 Bear Springs Trail | Drinking Water | 16100052.04 |
| LCR005 / 1452 Bear Springs Trail | Drinking Water | 16100052.05 |

Shantall Carpenter

Released By: Shantall Carpenter
Title: Senior Project Manager
Date: 10/5/2016

This Laboratory is NELAP (T104704213-16-14) accredited. Effective: 04/01/2016; Expires: 03/31/2017
Scope: Non-Potable Water, Drinking Water, Air, Solid, Biological Tissue, Hazardous Waste

I am the laboratory manager, or his/her designee, and I am responsible for the release of this data package. This laboratory data package has been reviewed and is complete and technically compliant with the requirements of the methods used, except where noted in the attached exception reports. I affirm, to the best of my knowledge that all problems/anomalies observed by this laboratory (and if applicable, any and all laboratories subcontracted through this laboratory) that might affect the quality of the data, have been identified in the Laboratory Review Checklist, and that no information or data have been knowingly withheld that would affect the quality of the data.



Date Received : 09/30/2016 09:30

Job ID : 16100052 Date : 10/5/2016

CLIENT Name : UGRA - Upper Guadalupe River Authority ATTN : Amy Bryant
PROJECT Name : PWS ID# 0100076 / Bear Springs Trail Water

| Method | ClientSampleID<br>Parameter | Result | Units | Matrix | D.F | Rpt Limit | Reg Limit | Collection DateTime | Analysis DateTime | Analyst | SampleID | Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **LCR001 / 1154 Bear Springs Trail<br>Metals by ICP-MS** | | | | | | | | | | | |
| EPA 200.8 | Copper | 0.0654 | mg/L | Drinking Water | 1 | 0.0004 | 1.3 | 09/24/16 07:45 | 10/05/16 14:50 | GG | 16100052.01 | |
| | Lead | 0.0015 | mg/L | Drinking Water | 1 | 0.0004 | 0.015 | 09/24/16 07:45 | 10/05/16 14:50 | GG | 16100052.01 | |
| | **LCR002 / 180 Twisted Oak<br>Metals by ICP-MS** | | | | | | | | | | | |
| EPA 200.8 | Copper | 0.0442 | mg/L | Drinking Water | 1 | 0.0004 | 1.3 | 09/24/16 07:30 | 10/05/16 14:52 | GG | 16100052.02 | |
| | Lead | BRL | mg/L | Drinking Water | 1 | 0.0004 | 0.015 | 09/24/16 07:30 | 10/05/16 14:52 | GG | 16100052.02 | |
| | **LCR003 / 551 Bear Springs Trail<br>Metals by ICP-MS** | | | | | | | | | | | |
| EPA 200.8 | Copper | 0.0495 | mg/L | Drinking Water | 1 | 0.0004 | 1.3 | 09/24/16 07:20 | 10/05/16 15:02 | GG | 16100052.03 | |
| | Lead | 0.0005 | mg/L | Drinking Water | 1 | 0.0004 | 0.015 | 09/24/16 07:20 | 10/05/16 15:02 | GG | 16100052.03 | |
| | **LCR004 / 997 Bear Springs Trail<br>Metals by ICP-MS** | | | | | | | | | | | |
| EPA 200.8 | Copper | 0.0275 | mg/L | Drinking Water | 1 | 0.0004 | 1.3 | 09/24/16 07:50 | 10/05/16 15:04 | GG | 16100052.04 | |
| | Lead | 0.0017 | mg/L | Drinking Water | 1 | 0.0004 | 0.015 | 09/24/16 07:50 | 10/05/16 15:04 | GG | 16100052.04 | |
| | **LCR005 / 1452 Bear Springs Trail<br>Metals by ICP-MS** | | | | | | | | | | | |
| EPA 200.8 | Copper | 0.0318 | mg/L | Drinking Water | 1 | 0.0004 | 1.3 | 09/24/16 07:00 | 10/05/16 15:06 | GG | 16100052.05 | |
| | Lead | BRL | mg/L | Drinking Water | 1 | 0.0004 | 0.015 | 09/24/16 07:00 | 10/05/16 15:06 | GG | 16100052.05 | |

# LABORATORY QUALITY CONTROL CERTIFICATE

A&B Job ID : 16100052

Date : 10/5/2016

**QCType: LCS and LCSD**

| Parameter | Method | | Spike Added | LCS Result | LCSD Result | LCS Rec % | LCSD Rec % | RPD | % RPD CLimits | % Rec CLimits | QCBatchID | | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Copper | EPA 200.8 | | 0.05 | 0.0507 | 0.0509 | 101 | 102 | 0.4 | 20 | 85-115 | Qb16100592 | | |
| Lead | EPA 200.8 | | 0.05 | 0.0482 | 0.0482 | 96.3 | 96.5 | 0.2 | 20 | 85-115 | Qb16100592 | | |

**QCType: MS and MSD**

| Parameter | Method | Sample Result | Spike Added | MS Result | MSD Result | MS Rec % | MSD Rec % | RPD | % RPD CLimits | % Rec CLimits | QCBatchID | QCSampleID | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Copper | EPA 200.8 | 0.0654 | 0.1 | 0.1607 | | 95.3 | | | | 75-125 | Qb16100592 | 16100052.01 | |
| Lead | EPA 200.8 | 0.0015 | 0.1 | 0.0957 | | 94.2 | | | | 75-125 | Qb16100592 | 16100052.01 | |

**QCType: Method Blank**

| Parameter | Method | CAS # | Result | Units | D.F. | Rpt Limit | | QCBatchID | | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Copper | EPA 200.8 | 7440-50-8 | BRL | mg/L | 1 | 0.0004 | | Qb16100592 | | |
| Lead | EPA 200.8 | 7439-92-1 | BRL | mg/L | 1 | 0.0004 | | Qb16100592 | | |

Refer to the Definition page for terms.

# LABORATORY TERM AND QUALIFIER DEFINITION REPORT

Job ID : 16100052 Date: 10/5/2016

## General Term Definition

| | | | |
|---|---|---|---|
| Back-Wt | Back Weight | Post-Wt | Post Weight |
| BRL | Below Reporting Limit | ppm | parts per million |
| cfu | colony-forming units | Pre-Wt | Previous Weight |
| Conc. | Concentration | Q | Qualifier |
| D.F. | Dilution Factor | RegLimit | Regulatory Limit |
| Front-Wt | Front Weight | RPD | Relative Percent Difference |
| LCS | Laboratory Check Standard | RptLimit | Reporting Limit |
| LCSD | Laboratory Check Standard Duplicate | SDL | Sample Detection Limit |
| MS | Matrix Spike | surr | Surrogate |
| MSD | Matrix Spike Duplicate | T | Time |
| MW | Molecular Weight | TNTC | Too numerous to count |

## Qualifier Definition

# A & B Labs — *Chain of Custody*

The Chain of Custody is a Legal Document

Page 1 of 1



10100 East Fwy (I-10)
Suite 100
Houston, TX 77029
713-453-6060
1-877-478-6060 Toll Free
713-453-6091 Fax
ablabs.com

A&B JOB ID # 14100052

5. Project # 1609290

**1. REPORT TO:**
Company: Upper Guadalupe River Auth
Address: 125 Lehmann Dr Ste 100
Kerrville, TX 78028
Contact: Amy Bryant
Phone: (830) 896-5445
Fax: ☐
E-mail: abryant@ugra.org

**2. INVOICE TO:**
Company: UGRA
Address: 125 Lehmann Dr Ste 100
Kerrville, TX 78028
Contact: Tammy Thompson
Phone: (830) 896-5445
Fax: ☐
E-mail: tthompson@ugra.org

3. PO # ~~2810~~ 3-9-16
3a. A&B Quote #
4. Turnaround Time (Business Days)
☐ 1 Day* ☐ Other:
☐ 2 Days*
☐ 3 Days* *Surcharge applies
☒ 7 Days - Standard

6. Project Name/Location: Bear Springs Trail Water 0100076 Lead and Copper

7. Reporting Requirements:
☐ TRRP Limits only ☐ TRRP Rpt. Package ☐ See Attached ☐ Standard Level II ☐ PST ☐ MDL ☐ EDD

8. Sampler's Name & Company (PLEASE PRINT) Sampler's Signature & Date

13. 14. Containers* P
15. Preservatives**
16. PH-Lab Only

| LAB USE ONLY | 9. Sample ID and Description | 10. Sampling Date | Time 24 Hr | 11. Comp. | Grab | 12. Matrix: Water | Soil | Sludge | Oil | Drinking Water | Air | Other | No. of Containers | 17. Analyses/Methods: Lead Copper 2005 | 18. REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | See attached | | | | | | | | | X | | | 5 | X | Lead and Copper Rule |

Page 5 of 7

| 19. RELINQUISHED BY | DATE | TIME | 20. RECEIVED BY | DATE | TIME |
|---|---|---|---|---|---|
| 1 Amy Bryant Fed Ex | 9-29-16 | | | | |
| 2 | | | | 9-30-16 | 0930 |
| 3 | | | | | |

21. KNOWN HAZARDS/COMMENTS

Temperature: 19.5 °C
Thermometer ID ~
Intact: Y or N Initials AH

A&B cannot accept verbal changes
Please FAX written changes to 713-453-6091

Samples will be disposed of after 30 days
A&B reserves the right to return samples

*Containers: VOA - 40 ml vial; 4 oz/8 oz - glass wide mouth; A/G - Amber/Glass 1 Liter; P/O - Plastic/other

**Preservatives: C - Cool; H - HCl; N - $HNO_3$; S - $H_2SO_4$; OH - NaOH; T - $NA_2S_2O_3$; X - Other

METHOD OF SHIPMENT: Fed Ex

BILL OF LADING/TRACKING # 8104 2572 7410

LAB USE ONLY SAMPLING _____ RENTAL _____ P/U _____

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ)

# LEAD AND COPPER RULE – CHAIN OF CUSTODY FORM 20683

| | | | |
|---|---|---|---|
| PWS ID #: 0100076 | ☑ COMPLIANCE SAMPLES ☐ NON-COMPLIANCE SAMPLES | LAB ID #: TX275 | LAB PHONE: 713.453.0000 |
| PWS NAME: Bear Springs Trail Water | | LAB NAME: ATB Labs | |
| PWS / CONTACT NAME: Andy Watson | PWS / CONTACT PHONE: 281-831-4489 | LAB CONTACT NAME: (for questions about analysis) | |
| # OF PAGES SUBMITTED: 1 | | Original Lab Accreditation ID#: | Original Lab Sample ID #: / Original Collection Date/Time: |

| Sample Point ID (example: DS01 - LCR001 or EP001) | Sample Location (example: 123 Main Street, kitchen sink for First Draw Samples or location of entry point for non-first draw samples. | Water Last Used Date (MMDDYY) | Water Last Used Time (HHMM) | Sample Collected Date (MMDDYY) | Sample Collected Time (HHMM) | Lab Preservation Date/Time | Lab Analysis Date/Time | Lab Sample ID # | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| LCR001 | 1154 Bear Springs Trail | 9-23-16 | 11:00 PM | 9-24-16 | 7:15 A.M. | 9-30-1620 | | 1616100052 | 0 | 1 | A |
| LCR002 | 180 Twisted Oak | 9-23-16 | 9:45 P.M. | 9-24-16 | 7:30 A.M. | ″ | ″ | ″ | 0 | 2 | A |
| LCR003 | 551 Bear Spring Trail | 9-23-16 | 10:45 P.M. | 9-24-16 | 7:20 A.M. | ″ | ″ | ″ | 0 | 3 | A |
| LCR004 | 997 Bear Springs Trail | 9-23-16 | 10:00 P.M. | 9-24-16 | 7:50 A.M. | ″ | ″ | ″ | 0 | 4 | A |
| LCR005 | 1452 Bear Springs Trail | 9-23-16 | 10:25 P.M. | 9-24-16 | 7:00 A.M. | ″ | ″ | ″ | 0 | 5 | A |

I acknowledge that the information on this form is true and correct and sites selected for sampling follow the approved Texas Commission on Environmental Quality Form 20467 and the PWS Monitoring Plan.

ANDY WATSON (Name) — Signature — 9/24/16 (Date)

Bottles: ☒ 1 L labeled plastic bottles

Conditions Upon Receipt: ☐ Ice ☒ Temperature Upon Receipt 9.5 °C; ☐ Ambient ☒ Unpreserved ☐ Preserved; ☒ Date Preserved 9-30-16

| Relinquished By (Name & Signature) | Date | Time | Received by (Name & Signature) | Date | Time |
|---|---|---|---|---|---|
| | 9-26-16 | 9:06 A.M. | Katie Willis | 9/26/16 | 9:09a |
| | | | | 9-30-16 | 0930 |

(For TCEQ use only)

☐ QA/QC: _____ _____ ☐ Accepted Date: Initials ☐ Rejected

Comments: _____

**IMPORTANT: THIS FORM MUST ACCOMPANY THE SAMPLE BOTTLES WHEN THEY ARE SENT TO A LABORATORY FOR ANALYZING. SAMPLES EXPIRE 14 (24-Hour periods) DAYS AFTER COLLECTION IF NOT PRESERVED. THE LABORATORY IS INSTRUCTED TO REJECT INCOMPLETE FORMS.**

# Sample Condition Checklist

| | | |
|---|---|---|
| A&B JobID : **16100052** | Date Received : **09/30/2016** | Time Received : **9:30AM** |
| Client Name : **UGRA - Upper Guadalupe River Authority** | | |
| Temperature : **19.5°C** | Sample pH : **7** | |
| Thermometer ID : **n/a** | pH Paper ID : **67279** | |

| | Check Points | Yes | No | N/A |
|---|---|---|---|---|
| 1. | **Cooler seal present and signed.** | | | X |
| 2. | **Sample(s) in a cooler.** | | X | |
| 3. | **If yes, ice in cooler.** | | | X |
| 4. | **Sample(s) received with chain-of-custody.** | X | | |
| 5. | **C-O-C signed and dated.** | X | | |
| 6. | **Sample(s) received with signed sample custody seal.** | | X | |
| 7. | **Sample containers arrived intact. (If no comment).** | X | | |
| 8. | **Matrix :** **Water** ☑ **Soil** ☐ **Liquid** ☐ **Sludge** ☐ **Solid** ☐ **Cassette** ☐ **Tube** ☐ **Bulk** ☐ **Badge** ☐ **Food** ☐ **Other** ☐ | | | |
| 9. | **Sample(s) were received in appropriate container(s).** | X | | |
| 10. | **Sample(s) were received with proper preservative** | | | X |
| 11. | **All samples were logged or labeled.** | X | | |
| 12. | **Sample ID labels match C-O-C ID's** | X | | |
| 13. | **Bottle count on C-O-C matches bottles found.** | X | | |
| 14. | **Sample volume is sufficient for analyses requested.** | X | | |
| 15. | **Samples were received within the hold time.** | X | | |
| 16. | **VOA vials completely filled.** | | | X |
| 17. | **Sample accepted.** | X | | |
| 18 | **Has client been contacted about sub-out** | | | X |

**Comments : Include actions taken to resolve discrepancies/problem:**

Preserved w/6mL HNO3 LT#67308(9-30-16 @ 19:20); pH <2. -ANH 10-3-16.

Received by : SJustus

Check in by/date : AHall / 10/03/2016