

# FY 2023 DRY SEASON STORMWATER QUALITY MONITORING REPORT FOR NOVEMBER 2022 – FEBRUARY 2023

**MARCH 29, 2023**

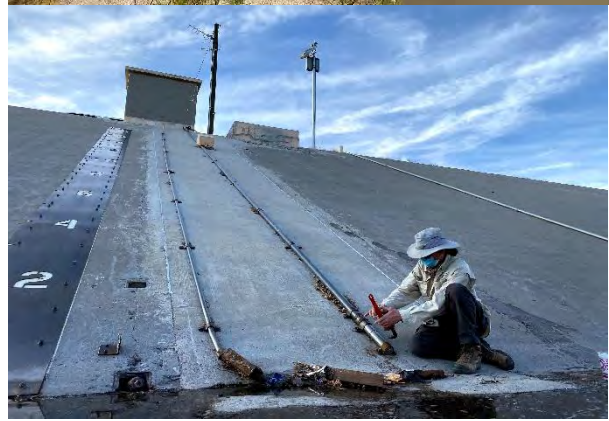
**Prepared for:**

**AMAFCA  
2600 Prospect Avenue NE  
Albuquerque, NM 87107**

**Prepared by:**

**Bohannon  Huston**

Engineering  
Spatial Data  
Advanced Technologies



**FY 2023 DRY SEASON STORMWATER QUALITY MONITORING REPORT  
FOR  
NOVEMBER 2022 – FEBRUARY 2023**

**MARCH 29, 2023**


Prepared for:

**AMAFCA  
2600 PROSPECT AVENUE NE  
ALBUQUERQUE, NM 87107**

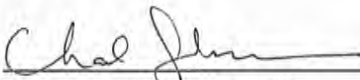
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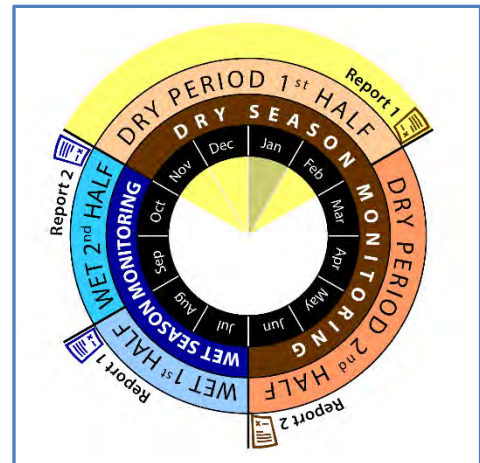
## **I. EXECUTIVE SUMMARY**

Three (3) storm events were sampled and tested for stormwater quality during the four-month period of November 2022 – February 2023. This reporting period is within the FY 2023 dry season. For the first half of the FY 2023 dry season, stormwater samples were obtained at 3 monitoring locations. The monitoring activity conducted by AMAFCA and the analysis of the stormwater quality results received for this reporting period are summarized in this report.

## **II. OVERVIEW OF STORMWATER MONITORING ACTIVITY**

Bohannon Huston, Inc. (BHI) and Daniel B. Stephens & Associates (DBS&A) assisted AMAFCA with the wet weather, dry season Stormwater Quality Monitoring Program tasks from November 1, 2022, through February 28, 2023. The monitoring conducted for this report provides continued internal stormwater quality results within AMAFCA’s jurisdiction, allowing the ability to assess Municipal Separate Storm Sewer System (MS4) program and stormwater controls. Under the 2014 Middle Rio Grande Watershed MS4 Permit, NPDES Permit No. NMR04A000 (“MS4 Permit”), stormwater compliance monitoring reporting for the MS4 Permit is not included in this report since the compliance monitoring is being conducted separately by a cooperative monitoring group.

This is the first report for the FY 2023 dry season monitoring program. The monitoring and sample collection for this report began on November 1, 2022, and the sampling from November 1, 2022 to February 28, 2023 is provided in this report. The stormwater monitoring program includes 13 monitoring locations which are listed below and shown in Figure 1, page 3.



1. ML-1 North Floodway near Alameda, also referred to as the North Diversion Channel (NDC) at Alameda
2. ML-2 South Diversion Channel (SDC)
3. ML-3 San Jose Drain at Woodward Avenue
4. ML-4 Tijeras Arroyo near Confluence with SDC
5. ML-5 San Antonio Arroyo
6. Rio Grande Downstream of MS4 at Isleta Lakes
7. Bear Arroyo at Jefferson (E. coli only)

8. Main Hahn Arroyo (E. coli only)
9. Embudo Arroyo at Monte Largo (E. coli only)
10. Lower Bear at Wyoming
11. Lower Bear at Spain
12. Black Arroyo Channel
13. North Diversion Channel (NDC) at the Equipment Crossing

Samples from sites 1 through 6, and sites 10 through 13, are analyzed using the parameter list shown in Table 1 on pages 4-5. The dry season parameters (with the exclusion of E. coli and PCBs, which are to be tested every dry season) were determined based on a decision protocol evaluating prior monitoring results with water quality standard (WQS) exceedances. Sites 7 through 9 are only sampled and analyzed for E. coli, which matches historical analysis at these monitoring locations.

This monitoring followed the MS4 Permit definition of a qualifying storm event (Part III.A.1.c) as a predicted (or actual) rainfall magnitude of a storm event that is greater than 0.25 inches. AMAFCA monitored the Wunderground.com WunderMap to determine qualifying storm events for sample collection and testing decisions. The MS4 Permit antecedent moisture condition requirement was discussed with the EPA during the water quality monitoring scheme development, and it was determined that this is no longer a monitoring requirement.

For E. coli sampling, the established sampling protocol was followed - one (1) sample would be collected and tested per site at monitoring locations 1 through 5, even if the 8-hour hold time for E. coli could not be met. After that, only E. coli samples that met the 8-hour hold time would be collected and tested from these sites. For sites 6 through 13, an E. coli sample is only collected and tested if it is going to be within the 8-hour hold time.

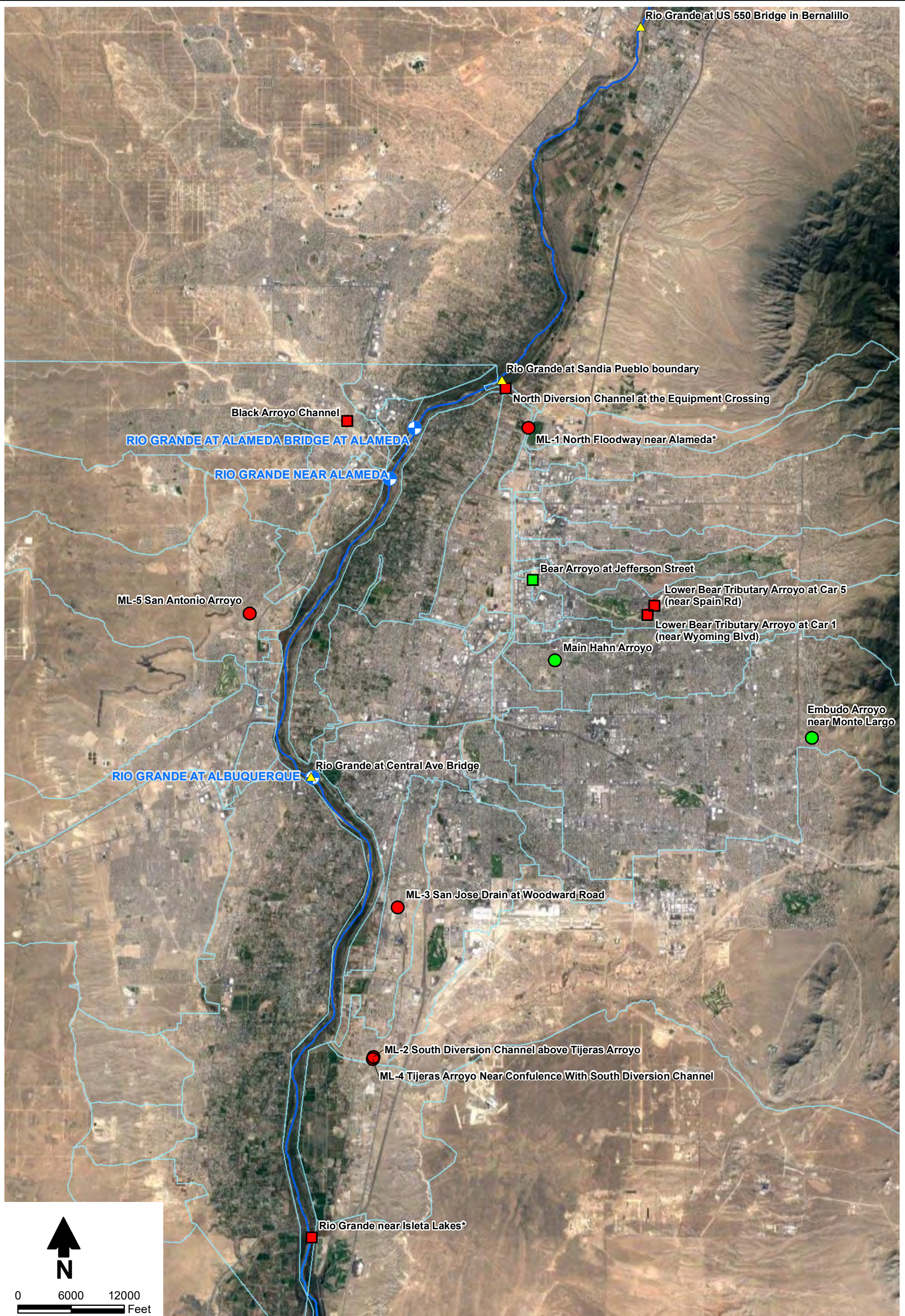


Image source: Google Earth Pro, 10/4/2020

**Explanation**

- AMAFCA watershed
- Rio Grande

- USGS flow station
- Sonde

Water quality sample location

- | Type | Analytes          |
|------|-------------------|
| Auto | Bacteria only     |
| Grab | Full analyte list |

Notes:  
\* Flow data online



3/29/2023 a Geo-Logic Company DB22.2023

**AMAFCA STORMWATER  
Water Quality Sampling  
FY2023 Dry Season**

Figure 1

**Table 1: Monitoring Locations and Parameter List**

| Monitoring Locations |  | Parameter List  |
|----------------------|--|---|
| 1                    | ML-1 North Floodway near Alameda             | E. coli<br>PCBs (Method 608)<br>Gross Alpha (adjusted)<br>Mercury (Method 1631)<br>Dissolved Copper<br>Chromium VI (Hexavalent)<br>Hardness<br>Semivolatiles<br>Benzo(a)anthracene<br>Benzo(b)fluoranthene<br>(alternate name 3, 4-Benzoflouranthene)<br>Benzo(k)fluoranthene<br>Chrysene<br>Indeno(1,2,3-cd)pyrene<br>Field Parameters |
| 2                    | ML-2 South Diversion Channel                 | E. coli<br>PCBs (Method 608)<br>Mercury (Method 1631)<br>Chromium VI (Hexavalent)<br>Field Parameters   |
| 3                    | ML-3 San Jose Drain at Woodward Avenue       | E. coli<br>PCBs (Method 608)<br>Gross Alpha (adjusted)<br>Mercury (Method 1631)<br>Chromium VI (Hexavalent)<br>Field Parameters   |
| 4                    | ML-4 Tijeras Arroyo near Confluence with SDC | E. coli<br>PCBs (Method 608)<br>Gross Alpha (adjusted)<br>Mercury (Method 1631)<br>Chromium VI (Hexavalent)<br>Field Parameters   |
| 5                    | ML-5 San Antonio Arroyo                      | E. coli<br>PCBs (Method 608)<br>Mercury (Method 1631)<br>Chromium VI (Hexavalent)<br>Field Parameters   |

Table 1 (continued)

| Monitoring Locations |   | Parameter List  |
|----------------------|---|---|
| 6                    | Rio Grande Downstream of MS4 at Isleta Lakes      | E. coli<br>PCBs (Method 608)<br>Gross Alpha (adjusted)<br>Mercury (Method 1631)<br>Chromium VI (Hexavalent)<br>Field Parameters   |
| 7                    | Bear Arroyo at Jefferson                          | E. coli<br>Field Parameters   |
| 8                    | Main Hahn Arroyo                                  | E. coli<br>Field Parameters   |
| 9                    | Embudo Arroyo at Monte Largo                      | E. coli<br>Field Parameters   |
| 10                   | Lower Bear at Wyoming                             | E. coli<br>PCBs (Method 608)<br>Mercury (Method 1631)<br>Dissolved Copper<br>Chromium VI (Hexavalent)<br>Hardness<br>Semivolatiles<br>Benzo(a)anthracene<br>Benzo(b)fluoranthene<br>(alternate name 3, 4-<br>Benzoflouranthene)<br>Benzo(k)fluoranthene<br>Chrysene<br>Field Parameters |
| 11                   | Lower Bear at Spain                               | E. coli<br>PCBs (Method 608)<br>Mercury (Method 1631)<br>Dissolved Copper<br>Chromium VI (Hexavalent)<br>Hardness<br>Field Parameters   |
| 12                   | Black Arroyo Channel                              | E. coli<br>PCBs (Method 608)<br>Mercury (Method 1631)<br>Chromium VI (Hexavalent)<br>Field Parameters   |
| 13                   | North Diversion Channel at the Equipment Crossing | E. coli<br>PCBs (Method 608)<br>Gross Alpha (adjusted)<br>Mercury (Method 1631)<br>Chromium VI (Hexavalent)<br>Field Parameters   |



## A. MONITORING ACTIVITY SUMMARY

Below is a chronological summary of the major monitoring activities completed during the first half of the FY 2023 dry season, from November 1, 2022 through February 28, 2023. AMAFCA completes the majority of the monitoring activity, with minimal support from DBS&A. AMAFCA's maintenance and monitoring log for November 1, 2022 through February 28, 2023 is provided in Appendix 1. Appendix 2 provides a copy of the "Summary of Monitoring Locations Obtained" tracking table used to facilitate the monitoring activities. Information related to the samples collected to date is summarized in Table 3, page 8.

- **December 3, 2022** – A composite sample was collected at ML-1 North Diversion Channel (NDC) at Alameda by AMAFCA on December 3, 2022 at 8:13 p.m. Eight (8) liters of stormwater were collected, and the sample was submitted to Hall Environmental Analysis Laboratory (HEAL) for the full suite parameter list. E. coli was not within holding time. Field parameters were obtained at the site during sample collection.
- **December 4, 2022** – At the South Diversion Channel (SDC) the autosampler was enabled at 1:03 a.m. and collected ten (10) liters of stormwater. The sample was composited by AMAFCA and submitted to HEAL for the full suite parameter list. E. coli was not collected within holding time. Field parameters were obtained at the site during sample collection.
- **January 17, 2023** – AMAFCA visited multiple sites to collect samples.
  - At ML-1 NDC at Alameda, the autosampler was enabled at 2:55 p.m. and collected 3 liters of stormwater. The sample was composited by AMAFCA and submitted to HEAL for an E. coli sample within hold time, as a full sample had already been obtained at this location on December 3, 2022.
  - At the Main Hahn Arroyo, a grab sample was collected by AMAFCA at 1:20 p.m. 3.5 liters of stormwater were collected and submitted to HEAL for an E. coli sample within hold time. Field parameters were obtained at the site during sample collection.

No reports of theft or vandalism occurred during this monitoring period and no complaints were received, as shown in Table 2. Table 3 summarizes the sample collection completed from November 1, 2022 through February 28, 2023 at the 13 monitoring locations for this report.

**Table 2: Summary of Theft or Vandalism at AMAFCA Monitoring Locations with AMAFCA Monitoring Equipment During FY 2023 Dry Season (November 2022 – February 2023)**

| Monitoring Locations with AMAFCA Monitoring Equipment  | Theft or Vandalism? | If Yes, Date of Theft or Vandalism |
|--|---------------------|------------------------------------|
| ML-1 North Floodway near Alameda, also referred to as North Diversion Channel (NDC) at Alameda | NO                  | —                                  |
| ML-2 South Diversion Channel (SDC)   | NO                  | —                                  |
| ML-3 San Jose Drain at Woodward Avenue   | NO                  | —                                  |
| ML-4 Tijeras Arroyo near Confluence with SDC   | NO                  | —                                  |
| ML-5 San Antonio Arroyo  | NO                  | —                                  |
| Main Hahn Arroyo (E. coli only)  | NO                  | —                                  |
| Embudo Arroyo at Monte Largo (E. coli only)  | NO                  | —                                  |

Table 3: Dry Season FY 2023 Stormwater Monitoring Status and Tracking

|                             |   | Wet Weather - Dry Season Monitoring - November 2022- June 2023 Summary |                                 |  |                      |   |                              |                                 |   |  |   |
|-----------------------------|---|--|---------------------------------|--|----------------------|---|------------------------------|---------------------------------|---|--|---|
|                             |   | Number of Full Samples   | Number of Bacteria Only Samples | Sample Type<br>1=Automated Sampler<br>2=Grab | Sample Date          | Notes -<br>see below table for note explanation | Sample Start Time / End Time | Duration of Storm Event (hours) | Rainfall Measurement or Estimate (inches) | Duration between this Event and End of Previous Measurable Event (hours) | Estimate of Total Volume of Discharge Sampled (gallons) |
| <b>Monitoring Locations</b> |   | <b>2</b>   | <b>2</b>                        |  |                      |   |                              |                                 |   |  |   |
| 1                           | ML-1 North Diversion Channel at Alameda                     | 1  | 1                               | 1,1  | 12/3/2022; 1/17/2023 |   | 19:22-20:13; 14:55-14:55     | 5.5, 2.25                       | 0.47; 0.28                                | 701; 372   | 2.1; 0.8  |
| 2                           | ML-2 South Diversion Channel (SDC)                          | 1  |                                 | 1  | 12/4/2022            |   | 00:44-01:03                  | 5.5                             | 0.53                                      | 701  | 2.6   |
| 3                           | ML-3 San Jose Drain at Woodward Ave.                        |  |                                 |  |                      |   |                              |                                 |   |  |   |
| 4                           | ML-4 Tijeras Arroyo near Confluence w/ S. Diversion Channel |  |                                 |  |                      |   |                              |                                 |   |  |   |
| 5                           | ML-5 San Antonio Arroyo                                     |  |                                 |  |                      |   |                              |                                 |   |  |   |
| 6                           | Rio Grande Downstream of MS4 at Isleta Lakes                |  |                                 |  |                      |   |                              |                                 |   |  |   |
| 7                           | Bear Arroyo at Jefferson Street                             |  |                                 |  |                      |   |                              |                                 |   |  |   |
| 8                           | Main Hahn Arroyo  |  | 1                               | 2  | 1/17/2023            |   | 13:20-13:20                  | 2.25                            | 0.28                                      | 372  | 0.8   |
| 9                           | Embudo Arroyo at Monte Largo                                |  |                                 |  |                      |   |                              |                                 |   |  |   |
| 10                          | Lower Bear at Wyoming                                       |  |                                 |  |                      |   |                              |                                 |   |  |   |
| 11                          | Lower Bear at Spain   |  |                                 |  |                      |   |                              |                                 |   |  |   |
| 12                          | Equipment Crossing  |  |                                 |  |                      |   |                              |                                 |   |  |   |
| 13                          | Black Arroyo Channel  |  |                                 |  |                      |   |                              |                                 |   |  |   |
| <b>QA/QC Samples</b>        |   |  |                                 |  |                      |   |                              |                                 |   |  |   |
|                             | Field Duplicate   |  |                                 |  |                      |   |                              |                                 |   |  |   |
|                             | Equipment Blank   |  |                                 |  |                      |   |                              |                                 |   |  |   |

Wet Season = July 1 through October 31

Dry Season = November 1 through June 30

Sample Type - 1) Automated sampler, flow proportioned composite; 2) Grab sample, flow proportioned composite.

**III. STORMWATER MONITORING DATA SUMMARY**

This report provides AMAFCA with stormwater quality screening results within its jurisdiction to facilitate assessment of the MS4 program and stormwater controls. For this report, from November 2022 through February 2023 (first half of the FY 2023 dry season), samples were obtained at 3 of the 13 monitoring locations; refer to Table 4 below. During sampling, a more detailed tracking table, similar to Table 3, is utilized by the team; the sampling tracking table is provided in Appendix 2.

**Table 4: Summary of Samples Obtained at Monitoring Locations  
(November 2022 – February 2023)**

| Monitoring Locations |  | E. coli Within Hold Time | Full Sample |
|----------------------|--|--------------------------|-------------|
| 1                    | ML-1 North Floodway near Alameda, also referred to as North Diversion Channel (NDC) at Alameda | YES                      | YES         |
| 2                    | ML-2 South Diversion Channel (SDC)   | NO                       | YES         |
| 3                    | ML-3 San Jose Drain at Woodward Avenue   | NO                       | NO          |
| 4                    | ML-4 Tijeras Arroyo near Confluence with SDC   | NO                       | NO          |
| 5                    | ML-5 San Antonio Arroyo  | NO                       | NO          |
| 6                    | Rio Grande downstream of MS4 at Isleta Lakes   | NO                       | NO          |
| 7                    | Bear Arroyo at Jefferson (E. coli only)  | NO                       | ---         |
| 8                    | Main Hahn Arroyo (E. coli only)  | YES                      | ---         |
| 9                    | Embudo Arroyo at Monte Largo (E. coli only)  | NO                       | ---         |
| 10                   | Lower Bear at Wyoming  | NO                       | NO          |
| 11                   | Lower Bear at Spain  | NO                       | NO          |
| 12                   | Black Arroyo Channel   | NO                       | NO          |
| 13                   | NDC at Equipment Crossing  | NO                       | NO          |
| --                   | Field Duplicate Sample   | NO                       | NO          |
| --                   | Equipment Blank  | NO                       | NO          |

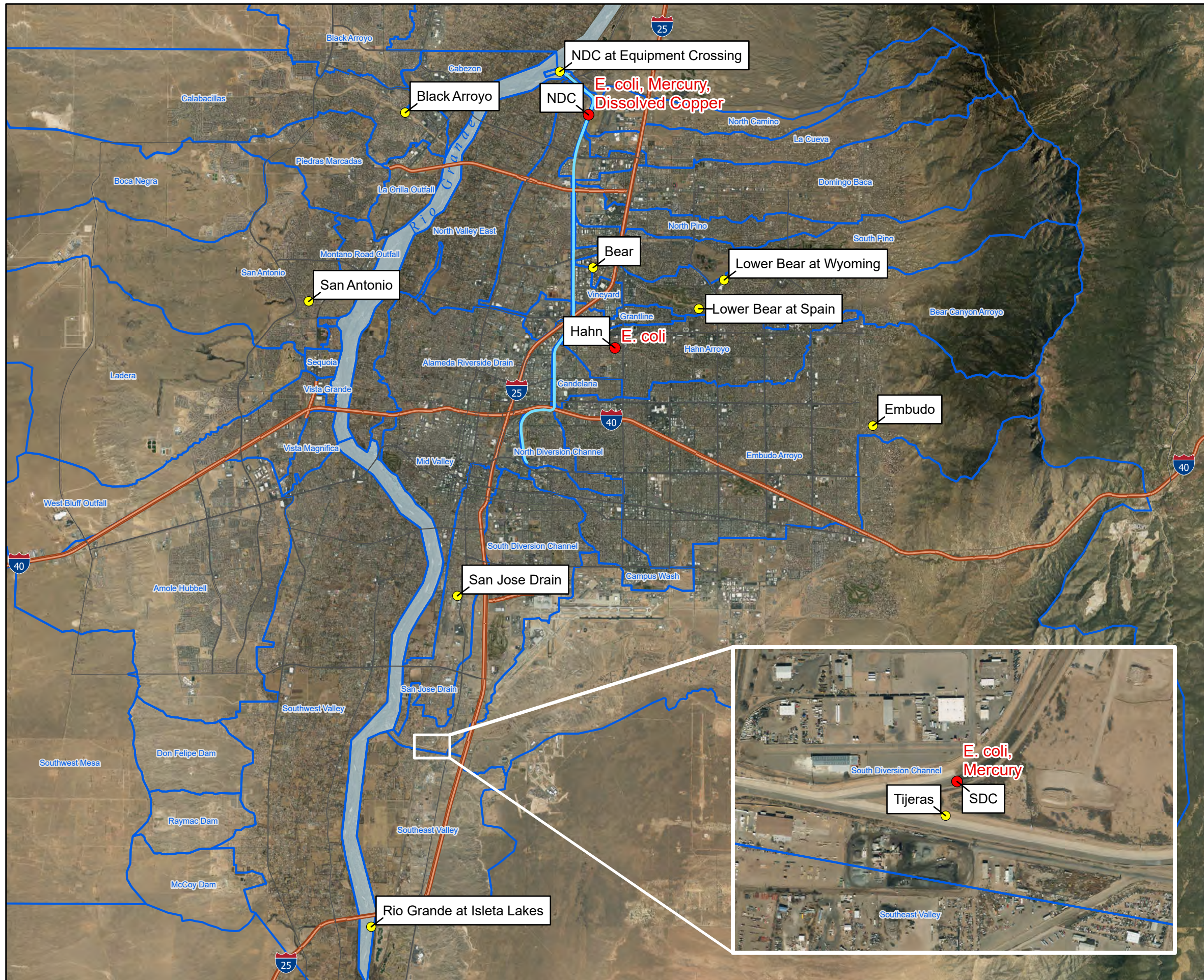
The HEAL reports for the sampling done for the FY 2023 dry season, along with the field data, are included in Appendix 3 to this report. The lab results have been added to an Excel database in accordance with the project scope for the AMAFCA water quality on-call project, which is related to this current monitoring report. All lab data entered is marked in the project excel database as “P” (Provisional). All lab data will be Verified and Validated at the end of the FY 2023 dry season.

Analysis results have been compared to applicable surface water quality standards (WQSs) found in New Mexico Administrative Code (NMAC) 20.6.4, as well as in Pueblo of Isleta and Pueblo of Sandia WQSs. An exceedance of a WQS is not a violation of the MS4 Permit, as the permit does not have numeric discharge limitations. Several parameter results were detected above the in-stream WQSs at the AMAFCA watershed monitoring locations during this monitoring period. These are summarized in Table 5 and shown in Figure 2.

**Table 5: Parameters Detected Above or Outside of Applicable Water Quality Standards**

| Sampling Date and Location                      | Parameters, Applicable Water Quality Standard (WQS), and Results Exceeding or Outside of Applicable WQS |   |  |
|---|---|---|--|
|   | E. coli   | Mercury   | Dissolved Copper   |
|   | WQS: 88 MPN (CFU/100 mL)<br>Pueblo of Isleta Primary Contact Ceremonial & Recreational                  | WQS: 0.012 ug/L<br>Pueblo of Isleta Fresh Water Aquatic Life Chronic Toxicity<br>WQS: 0.0011 ug/L<br>Pueblo of Isleta Wildlife Criteria | WQS:<br>Acute = 8 ug/L<br>Aquatic Life Acute/Chronic<br>Values are based on Hardness for Pueblo of Isleta, Pueblo of Sandia, and New Mexico WQSs |
| 12/3/2022<br>North Diversion Channel at Alameda | *2,247 MPN (CFU/100 mL)   | 0.0698 ug/L   | 11 ug/L  |
| 12/4/2022<br>South Diversion Channel            | *1,467 MPN (CFU/100 mL)   | 0.0299 ug/L   | Not Tested   |
| 1/17/2023<br>North Diversion Channel at Alameda | 2,987 MPN (CFU/100 mL)  | Not Tested  | Not Tested   |
| 1/17/2023<br>Main Hahn Arroyo                   | 10,462 MPN (CFU/100 mL)   | Not Tested  | Not Tested   |

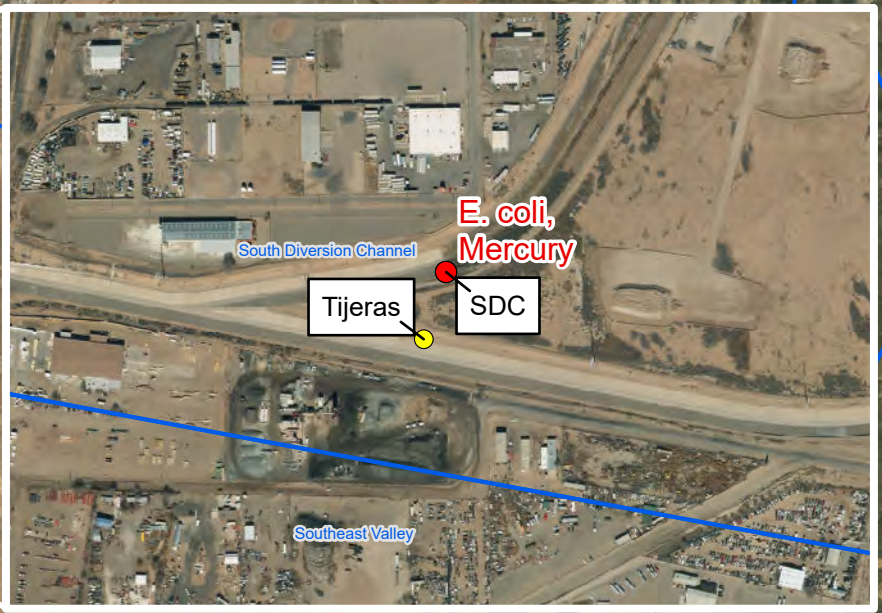
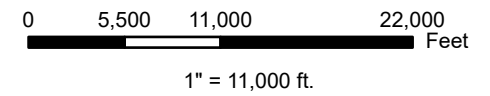
\* E. coli was not tested within the 8-hour hold time.



- North Diversion Channel
- Watershed
- AMAFCA Monitoring Locations**
- Not Collected
- Collected, Lab Report Not Yet Received
- In-Stream WQS Exceeded

**Sample Results Exceeding  
In-Stream WQS at AMAFCA  
Monitoring Locations  
FY 2023 Dry Season  
(November 2022 - February 2023)**

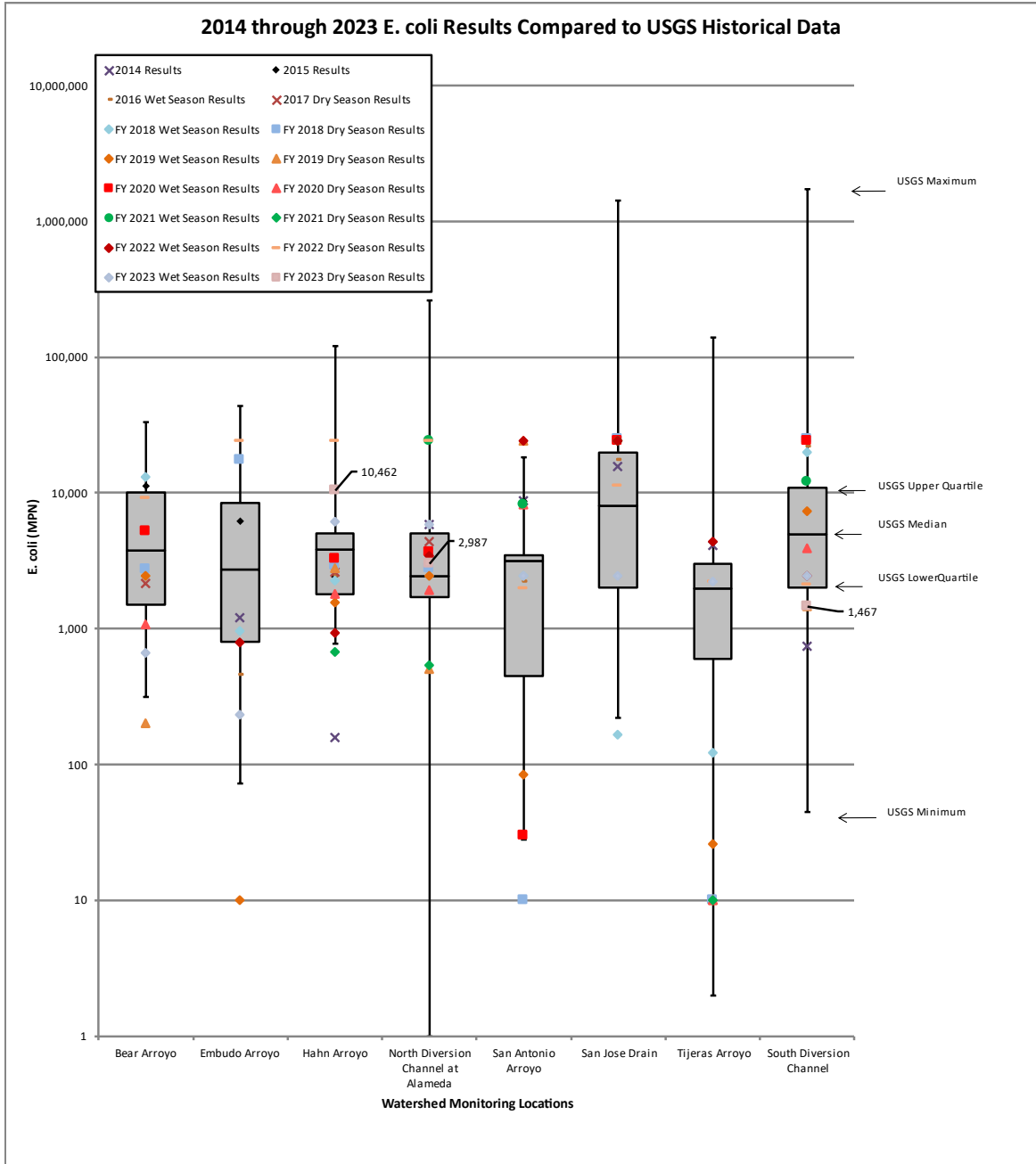
Figure 2



**Bohannon & Huston**  
www.bhinc.com 800.877.5332

**A. E. COLI DATA FOR FY 2023 DRY SEASON**

A box and whisker plot of the E. coli data received for the FY 2023 dry season (November 2022 – February 2023), compared to historical values (collected by the USGS from 2003 to 2012) and previous AMAFCA monitoring sample results, is provided in Figure 3. An interactive figure showing the results for all historical E. coli data collected for both wet and dry seasons at the AMAFCA monitoring locations is provided in Figure 4.



**Figure 3: Plot of E. coli Data from Watershed Locations Compared to Historical Data**

# Historic E. coli Results at AMAFCA Monitoring Locations FY 2014 - 2023

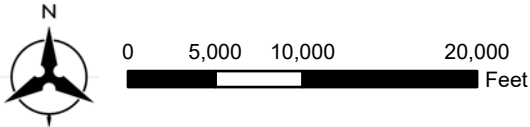
— North Diversion Channel  
 Watershed

**E. coli (CFU/100mL)**  
● Not Collected  
● 0 - 88 (Meets WQS)  
● 89 - 4,000  
● 4,001 - 8,000  
● > 8,000

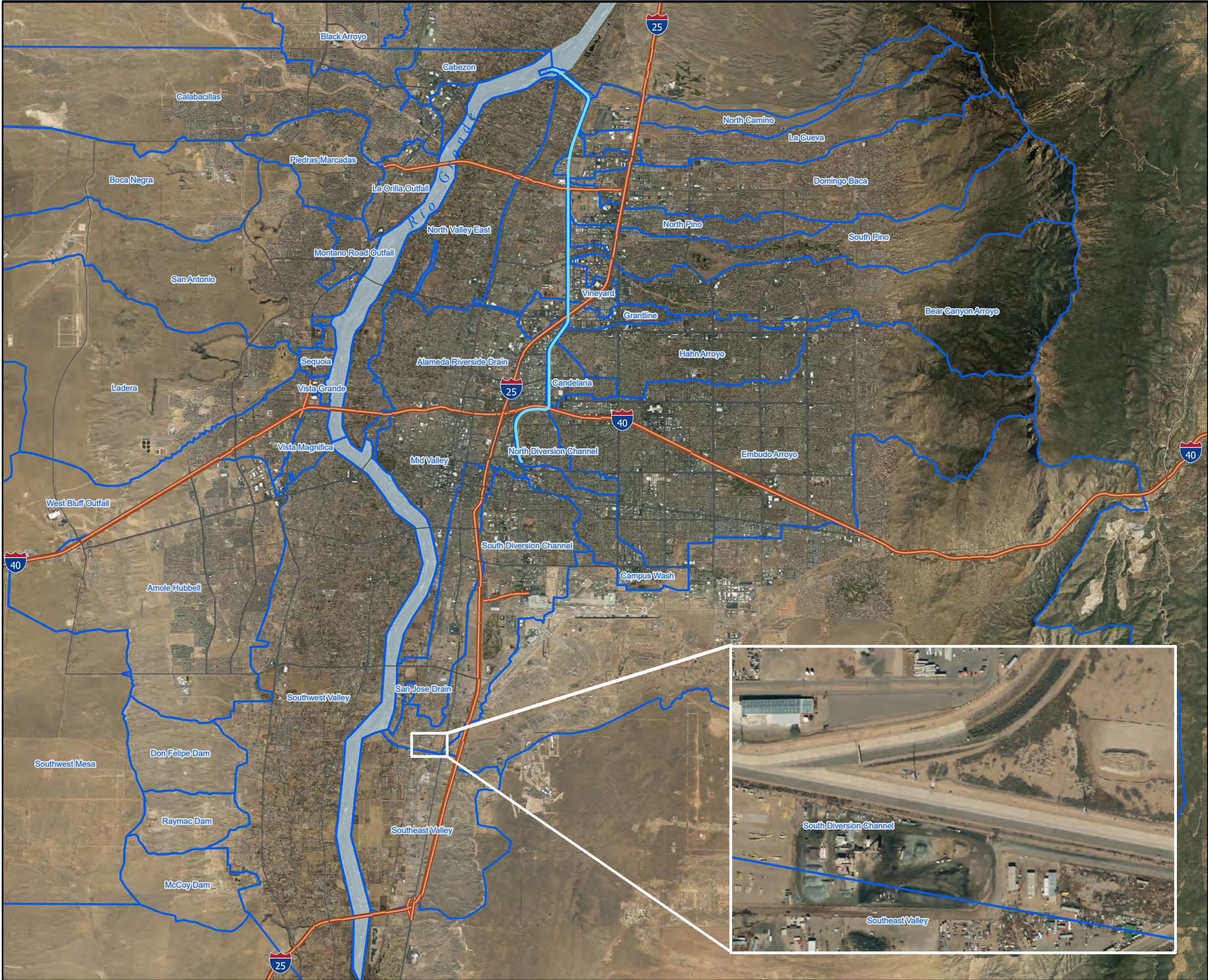
**Dry Season:**  
 November - June  
  
**Wet Season:**  
 July - October

*Interactive map: select text below to view each map*

- [FY 2014 - Dry Season](#)
- [FY 2015 - Wet Season](#)
- [FY 2015 - Dry Season](#)
- [FY 2016 - Wet Season](#)
- [FY 2016 - Dry Season](#)
- [FY 2017 - Wet Season](#)
- [FY 2017 - Dry Season](#)
- [FY 2018 - Wet Season](#)
- [FY 2018 - Dry Season](#)
- [FY 2019 - Wet Season](#)
- [FY 2019 - Dry Season](#)
- [FY 2020 - Wet Season](#)
- [FY 2020 - Dry Season](#)
- [FY 2021 - Wet Season](#)
- [FY 2021 - Dry Season](#)
- [FY 2022 - Wet Season](#)
- [FY 2022 - Dry Season](#)
- [FY 2023 - Wet Season](#)
- [FY 2023 - Dry Season](#)



**Figure 4**





**B. PCB, GROSS ALPHA, ADJUSTED, AND MERCURY DATA FOR FY 2023 DRY SEASON**

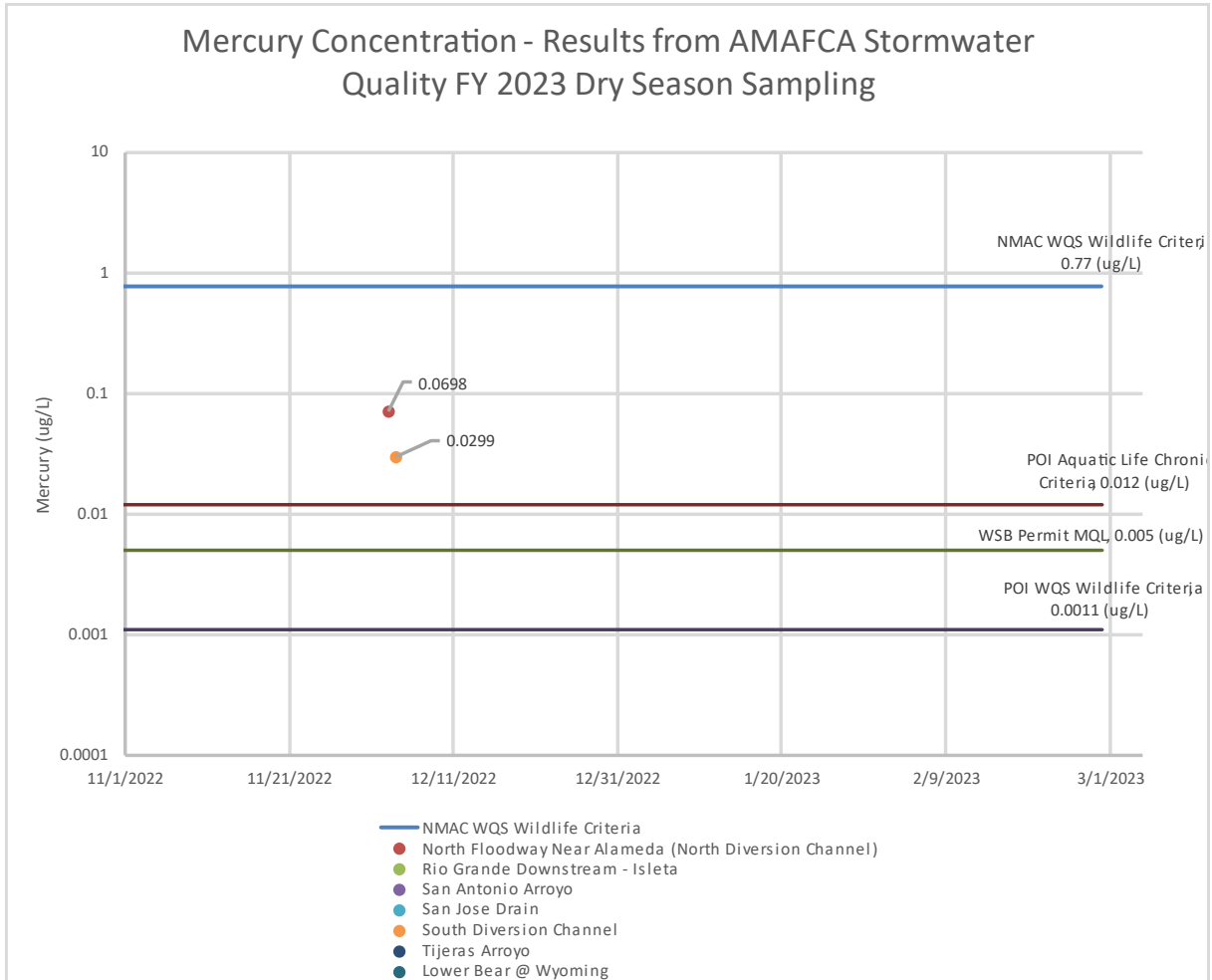
During the FY 2023 dry season, November 2022 – February 2023, stormwater sample results were received from 2 monitoring locations that were screened for PCBs using EPA Method 608. All PCB screening results that were obtained were reported as not detected (ND).

Gross alpha, adjusted results were tested and received from 1 monitoring location. The analysis result obtained at the NDC at Alameda requires follow up with the lab. An interactive figure showing the results for all historical Gross Alpha data collected for both wet and dry seasons at the AMAFCA monitoring locations is provided in Figure 6.

Mercury levels reported as exceeding applicable in-stream WQS values relate to ‘Wildlife Usage’ WQSs for the Pueblo of Isleta; this WQS value is an order of magnitude lower than other mercury WQSs. During the FY 2023 dry season, November 2022 – February 2023, stormwater samples from 2 monitoring locations were screened and had results reported for Mercury using EPA Method 1631. All Mercury screening results received for the FY 2023 dry season exceeded the Pueblo of Isleta ‘Wildlife Usage’ WQS, and the Pueblo of Isleta & Sandia, Fresh Water Aquatic Life Chronic Toxicity WQS. Refer to Table 6 below for a summary of the various Mercury WQSs applicable to the Middle Rio Grande. Figure 5 on page 15 shows the Mercury results for the FY 2023 dry season related to the WQSs for the State of NM ‘Wildlife Habitat’ criteria (0.77 ug/L), the WQSs for the Pueblo of Isleta and Pueblo of Sandia ‘Fresh Water Aquatic Life Chronic Toxicity’ (0.012 ug/L), the minimum quantification limit (0.005 ug/L) required by the MS4 Permit, and the WQSs for Pueblo of Isleta ‘Wildlife Usage’ criteria (0.0011 ug/L). An interactive figure showing the results for all historical Mercury data collected for both wet and dry seasons at the AMAFCA monitoring locations is provided in Figure 7.

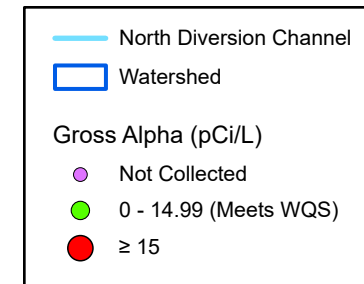
**Table 6: Water Quality Standards for Mercury for the Middle Rio Grande**

| <b>Mercury</b>                             | <b>Mercury</b>  | <b>Mercury</b>  | <b>Mercury</b>   | <b>Mercury</b>  |
|--|---|---|--|---|
| <b>Pueblo of Isleta<br/>Wildlife Usage</b> | <b>Pueblo of Isleta<br/>&amp; Sandia,<br/>Fresh Water<br/>Aquatic Life<br/>Chronic Toxicity</b> | <b>State of NM<br/>NMAC 20.6.4<br/>Wildlife Habitat</b> | <b>State of NM<br/>NMAC 20.6.4<br/>Drinking Water<br/>Supply</b> | <b>Pueblo of Isleta<br/>&amp; Sandia,<br/>Fresh Water<br/>Aquatic Life<br/>Acute Toxicity</b> |
| WQS: 0.0011<br>ug/L                        | WQS: 0.012<br>ug/L  | WQS: 0.77<br>ug/L                                       | WQS: 2<br>ug/L   | WQS: 2.4<br>ug/L  |



**Figure 5: Plot of Mercury Results Compared to the NMAC and Pueblo of Isleta WQSs (November 2022 – February 2023)**

# Historic Gross Alpha Results at AMAFCA Monitoring Locations FY 2016 - 2023



Dry Season:  
 November - June  
  
 Wet Season:  
 July - October

Interactive map: select text below to view each map

- [FY 2016 - Wet Season](#)
- [FY 2016 - Dry Season](#)
- [FY 2017 - Wet Season](#)
- [FY 2017 - Dry Season](#)
- [FY 2018 - Wet Season](#)
- [FY 2018 - Dry Season](#)
- [FY 2019 - Wet Season](#)
- [FY 2019 - Dry Season](#)
- [FY 2020 - Wet Season](#)
- [FY 2020 - Dry Season](#)
- [FY 2021 - Wet Season](#)
- [FY 2021 - Dry Season](#)
- [FY 2022 - Wet Season](#)
- [FY 2022 - Dry Season](#)
- [FY 2023 - Wet Season](#)
- [FY 2023 - Dry Season](#)

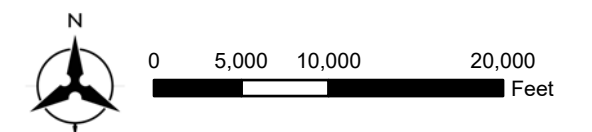
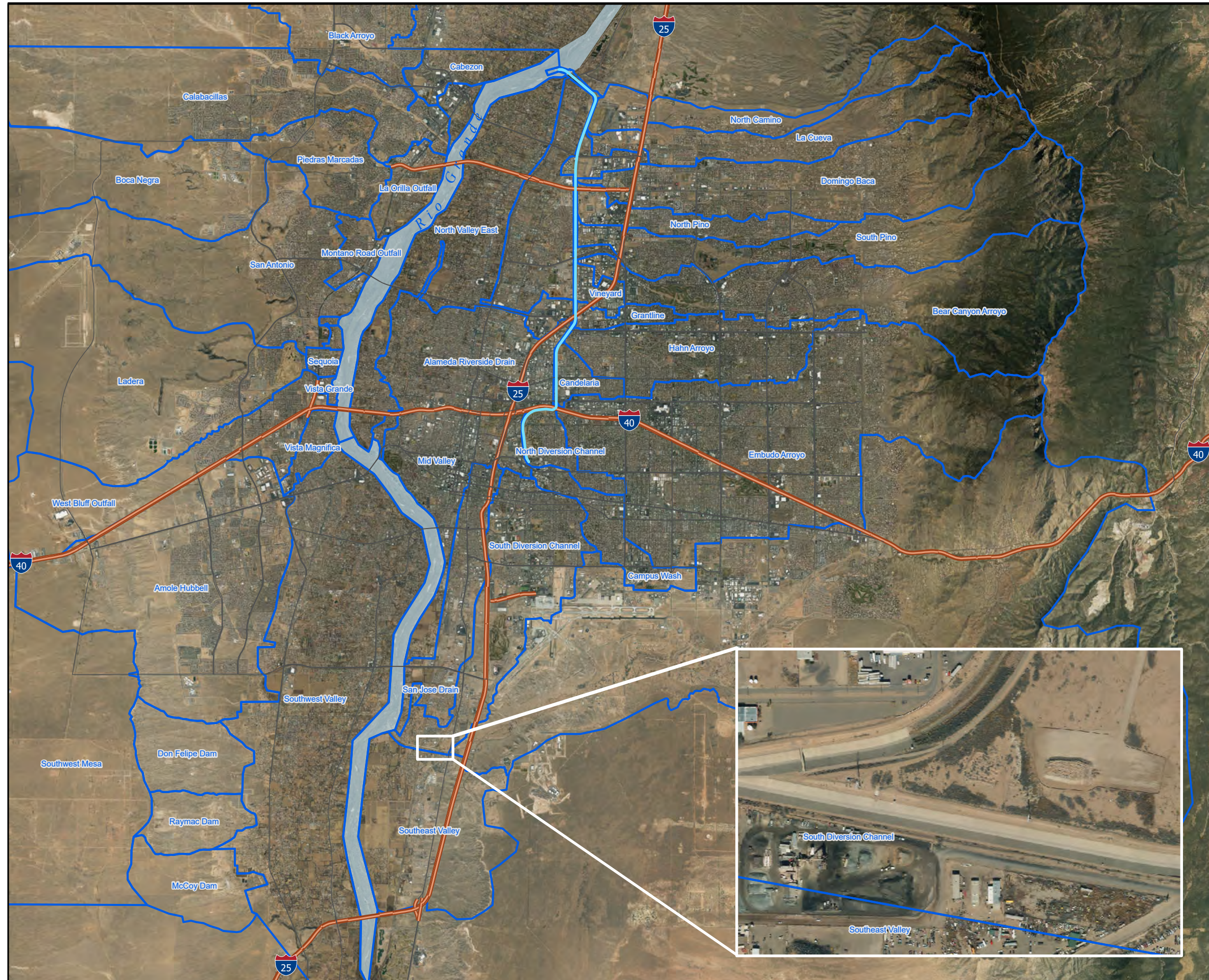
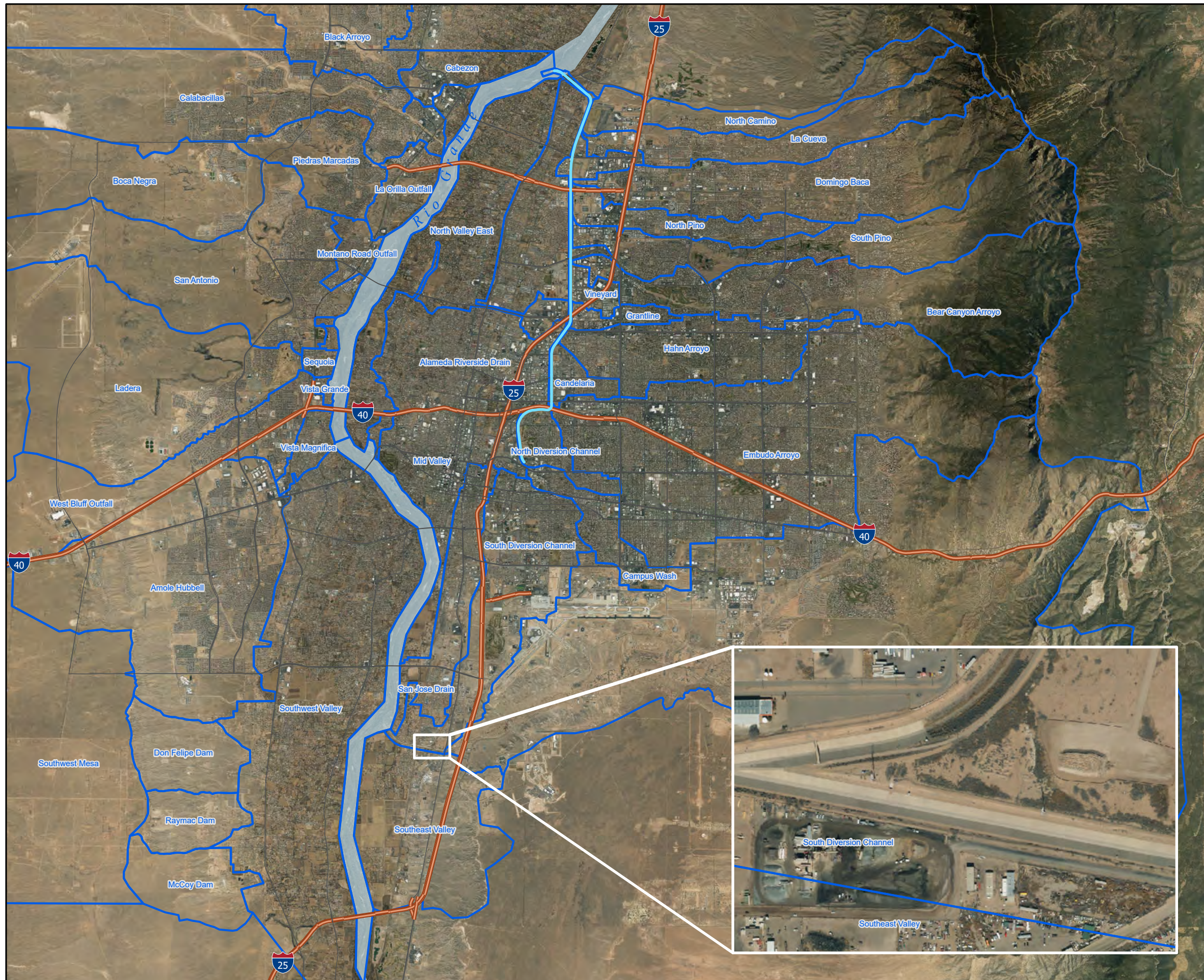


Figure 6





# Historic Mercury Results at AMAFCA Monitoring Locations FY 2016 - 2023

Dry Season: November - June  
Wet Season: July - October

— North Diversion Channel  
 Watershed

Mercury (µg/l)

- Not Collected
- 0 - 0.0010 (Meets all WQS)
- 0.0011 - 0.011 (Pueblo of Isleta, wildlife usage)
- 0.012 - 0.76 (Pueblo of Isleta & Sandia, fresh water/aquatic life/chronic toxicity)
- 0.77 - 1.99 (State of NM, NMAC 20.6.4, wildlife habitat)
- 2.00 - 2.39 (State of NM, NMAC 20.6.4, drinking supply)
- > 2.39 (Pueblo of Isleta & Sandia, fresh water/aquatic life/acute toxicity)

*Interactive map: select text below to view each map*

- [FY 2016 - Wet Season](#)
- [FY 2016 - Dry Season](#)
- [FY 2017 - Wet Season](#)
- [FY 2017 - Dry Season](#)
- [FY 2018 - Wet Season](#)
- [FY 2018 - Dry Season](#)
- [FY 2019 - Wet Season](#)
- [FY 2019 - Dry Season](#)
- [FY 2020 - Wet Season](#)
- [FY 2020 - Dry Season](#)
- [FY 2021 - Wet Season](#)
- [FY 2021 - Dry Season](#)
- [FY 2022 - Wet Season](#)
- [FY 2022 - Dry Season](#)
- [FY 2023 - Wet Season](#)
- [FY 2023 - Dry Season](#)



0 5,000 10,000 20,000 Feet

Figure 7

#### **IV. SUMMARY**

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This is the first of two reports for the FY 2023 dry season, wet weather monitoring program. During the first half of the FY 2023 dry season monitoring period (November 2022 – February 2023), stormwater samples were obtained at 3 of the 13 monitoring locations. This report summarizes the monitoring activity and stormwater sample results for the first half of the FY 2023 dry season, November 2022 through February 2023.

## **APPENDICES**

**Appendix 1 – AMAFCA Maintenance & Monitoring Log**

**Appendix 2 – FY 2023 Dry Season Summary of**

**Samples Obtained at Monitoring**

**Locations, dated February 28, 2023**

**Appendix 3 – Hall Environmental Analysis Laboratory**

**Reports and Field Data for November**

**2022 – February 2023**

**APPENDIX 1: AMAFCA MAINTENANCE &  
MONITORING LOG**

AMAFCA Maintenance and Monitoring Log for FY 23 Dry Season (November 2022 - February 2023)

**North Diversion Channel**

| Date       | Active | In-active | Inspection Result | Work Order # | Sample Collected | Sample Name  | Liters Collected | Notes   |
|------------|--------|-----------|-------------------|--------------|------------------|--------------|------------------|---|
| 11/15/2022 | X      |           | Pass              | 4863         |                  |              |                  |   |
| 12/5/2022  | X      |           | Pass              | 4926         | Yes              | NDC-20221203 | 8                | Sample collected 12/3/2022 @ 20:13. Full analyte list submitted except E. coli within holding time. |
| 12/20/2022 | X      |           | Pass              | 5086         |                  |              |                  |   |
| 1/4/2023   | X      |           | Pass              | 5241         | Yes              |              | 7                | Sample collected 1/2/2023 @ 1:32. Sample dumped because of E. coli holding time.                    |
| 1/17/2023  | X      |           | Pass              | 5319         | Yes              | NDC-20230117 | 3                | Autosampler collected E. coli sample at 14:55.  |

**South Diversion Channel**

| Date       | Active | In-active | Inspection Result | Work Order # | Sample Collected | Sample Name  | Liters collected | Notes   |
|------------|--------|-----------|-------------------|--------------|------------------|--------------|------------------|---|
| 11/1/2022  | X      |           | Pass              | 4756         |                  |              |                  | 2023 Dry Season Checklist Inspection completed  |
| 11/21/2022 | X      |           | Pass              | 4881         |                  |              |                  |   |
| 12/5/2022  | X      |           | Pass              | 4930         | Yes              | SDC-20221204 | 10               | Sample collected 12/4/2022 @ 01:03. Full analyte list submitted except E. coli within holding time. |
| 12/19/2022 | X      |           | Pass              | 5081         |                  |              |                  |   |
| 1/10/2023  | X      |           | Pass              | 5256         |                  |              |                  |   |
| 2/28/2023  | X      |           | Pass              | 5396         |                  |              |                  |   |

**Tijeras**

| Date       | Active | In-active | Inspection Result | Work Order # | Sample Collected | Sample Name | Liters collected | Notes  |
|------------|--------|-----------|-------------------|--------------|------------------|-------------|------------------|--|
| 11/1/2022  | X      |           | Pass              | 4757         |                  |             |                  | 2023 Dry Season Checklist Inspection completed. Replaced actuator cable. |
| 11/21/2022 | X      |           | Pass              | 4880         |                  |             |                  |  |
| 12/5/2022  | X      |           | Pass              | 4929         |                  |             |                  |  |
| 12/12/2022 | X      |           | Pass              | 4954         |                  |             |                  | Trickle charger installed.   |
| 12/19/2022 | X      |           | Pass              | 5080         |                  |             |                  |  |
| 1/10/2023  | X      |           | Pass              | 5255         |                  |             |                  |  |
| 2/28/2023  | X      |           | Pass              | 5395         |                  |             |                  |  |

**San Jose**

| Date       | Active | In-active | Inspection Result | Work Order # | Sample Collected | Sample Name | Liters Collected | Notes                                     |
|------------|--------|-----------|-------------------|--------------|------------------|-------------|------------------|---|
| 11/21/2022 | X      |           | Pass              | 4882         |                  |             |                  |   |
| 12/5/2022  | X      |           | Pass              | 4928         |                  |             |                  |   |
| 12/19/2022 | X      |           | Pass              | 5079         |                  |             |                  |   |
| 1/10/2023  | X      |           | Pass              | 5254         |                  |             |                  |   |
| 2/28/2023  | X      |           | Pass              | 5397         |                  |             |                  | Back-up batteries replaced in pump alarm. |



AMAFCA Maintenance and Monitoring Log for FY 23 Dry Season (November 2022 - February 2023)

**San Antonio**

| Date       | Active | In-active | Inspection Result | Work Order # | Sample Collected | Sample Name | Liters Collected | Notes |
|------------|--------|-----------|-------------------|--------------|------------------|-------------|------------------|-------|
| 11/22/2022 | X      |           | Pass              | 4886         |                  |             |                  |       |
| 12/5/2022  | X      |           | Pass              | 4927         |                  |             |                  |       |
| 12/20/2022 | X      |           | Pass              | 5085         |                  |             |                  |       |
| 12/28/2022 | X      |           | Pass              | 5225         |                  |             |                  |       |
| 1/11/2023  | X      |           | Pass              | 5268         |                  |             |                  |       |
| 2/7/2023   | X      |           | Pass              | 5369         |                  |             |                  |       |

**Hahn**

| Date       | Active | In-active | Inspection Result | Work Order # | Sample Collected | Sample Name   | Liters Collected | Notes   |
|------------|--------|-----------|-------------------|--------------|------------------|---------------|------------------|---|
| 11/21/2022 | X      |           | Pass              | 4883         |                  |               |                  |   |
| 12/19/2022 | X      |           | Pass              | 5078         |                  |               |                  |   |
| 1/9/2023   | X      |           | Pass              | 5250         |                  |               |                  |   |
| 1/17/2023  | X      |           | Pass              | 5318         | Yes              | Hahn-20230117 | 6                | Grab sample collected at 13:20. E. coli within holdin time submitted. |

**Embudo**

| Date       | Active | In-active | Inspection Result | Work Order # | Sample Collected | Sample Name | Liters Collected | Notes |
|------------|--------|-----------|-------------------|--------------|------------------|-------------|------------------|-------|
| 11/21/2022 | X      |           | Pass              | 4884         |                  |             |                  |       |
| 12/12/2022 | X      |           | Pass              | 4955         |                  |             |                  |       |
| 1/9/2023   | X      |           | Pass              | 5251         |                  |             |                  |       |

**APPENDIX 2: FY 2023 DRY SEASON SUMMARY OF  
SAMPLES OBTAINED AT MONITORING LOCATIONS,  
DATED FEBRUARY 28, 2023**

**AMAFCA**  
**FY 2023 Dry Season Monitoring**  
**Summary of Monitoring Location Samples Obtained (November 2022 – June 2023)**  
**February 28, 2023**

| No. | Monitoring Site Locations  | Autosampler ISCO Model # | Cellular Alarm – Solar or Outlet | Parameters  | Autosampler On/Off | Cellular Alarm On/Off | Cellular Alarm Phone # | E. coli NOT within Hold Time       | E. coli within Hold Time | Full Sample   |
|-----|--|--------------------------|----------------------------------|---|--------------------|-----------------------|------------------------|------------------------------------|--------------------------|---------------|
| 1   | ML-1 North Floodway near Alameda, also referred to as North Diversion Channel (NDC) at Alameda | ISCO 3700R               | Outlet                           | Field Parameters<br>E. coli<br>PCBs (Method 608)<br>Gross Alpha (adjusted)<br>Mercury (Method 1631)<br>Dissolved Copper<br>Chromium VI (Hexavalent)<br>Hardness<br>Semivolatiles:<br>Benzo(a)anthracene<br>Benzo(b)fluoranthene (alternate name 3, 4-Benzofluoranthene)<br>Benzo(k)fluoranthene<br>Chrysene<br>Indeno(1,2,3-cd)pyrene | OFF                | OFF                   | 588-543-3528           | Yes (12/3/22)                      | Yes (1/17/23)            | YES (12/3/22) |
| 2   | ML-2 South Diversion Channel (SDC)   | ISCO 6712                | Outlet; May be Tied to Solar     | Field Parameters<br>E. coli<br>PCBs (Method 608)<br>Mercury (Method 1631)<br>Chromium VI (Hexavalent)   | ON                 | ON                    | 500-209-2653           | Yes (12/4/22)                      | No                       | YES (12/4/22) |
| 3   | ML-3 San Jose Drain at Woodward Avenue   | ISCO 6712                | Outlet                           | Field Parameters<br>E. coli<br>PCBs (Method 608)<br>Gross Alpha (adjusted)<br>Mercury (Method 1631)<br>Chromium VI (Hexavalent)   | ON                 | ON                    | 588-522-5512           | No                                 | No                       | No            |
| 4   | ML-4 Tijeras Arroyo near Confluence with SDC   | ISCO 6712                | Outlet; May be Tied to Solar     | Field Parameters<br>E. coli<br>PCBs (Method 608)<br>Gross Alpha (adjusted)<br>Mercury (Method 1631)<br>Chromium VI (Hexavalent)   | ON                 | ON                    | 588-663-9088           | No                                 | No                       | No            |
| 5   | ML-5 San Antonio Arroyo  | ISCO 6712                | Solar                            | Field Parameters<br>E. coli<br>PCBs (Method 608)<br>Mercury (Method 1631)<br>Chromium VI (Hexavalent)   | ON                 | ON                    | 500-208-8375           | No                                 | No                       | No            |
| 6   | Rio Grande downstream of MS4 at Isleta Lakes   | N/A                      | N/A                              | Field Parameters<br>E. coli<br>PCBs (Method 608)<br>Gross Alpha (adjusted)<br>Mercury (Method 1631)<br>Chromium VI (Hexavalent)   | N/A                | N/A                   | N/A                    | N/A – only sample within hold time | No                       | No            |
| 7   | Bear Arroyo at Jefferson (E. coli only)  | N/A                      | N/A                              | Field Parameters<br>E. coli   | N/A                | N/A                   | N/A                    | N/A – only sample within hold time | No                       | ---           |
| 8   | Main Hahn Arroyo (E. coli only)  | ISCO 6712                | Solar                            | Field Parameters<br>E. coli   | OFF                | OFF                   | 588-557-0201           | N/A – only sample within hold time | Yes (1/17/23)            | ---           |
| 9   | Embudo Arroyo at Monte Largo (E. coli only)  | ISCO 6712                | Solar                            | Field Parameters<br>E. coli   | ON                 | ON                    | 500-212-2193           | N/A – only sample within hold time | No                       | ---           |
| 10  | Lower Bear at Wyoming (Car 1)  | N/A                      | N/A                              | Field Parameters<br>PCBs (Method 608)<br>Mercury (Method 1631)<br>Dissolved Copper<br>Chromium VI (Hexavalent)<br>Hardness<br>Semivolatiles:<br>Benzo(a)anthracene<br>Benzo(b)fluoranthene (alternate name 3, 4-Benzofluoranthene)<br>Benzo(k)fluoranthene<br>Chrysene  | N/A                | N/A                   | N/A                    | N/A – only sample within hold time | No                       | No            |

**AMAFCA**  
**FY 2023 Dry Season Monitoring**  
**Summary of Monitoring Location Samples Obtained (November 2022 – June 2023)**  
**February 28, 2023**

| No. | Monitoring Site Locations   | Autosampler ISCO Model #                                     | Cellular Alarm – Solar or Outlet | Parameters   | Autosampler On/Off | Cellular Alarm On/Off | Cellular Alarm Phone # | E. coli <b>NOT</b> within Hold Time | E. coli within Hold Time | Full Sample |
|-----|-----------------------------|--|----------------------------------|--|--------------------|-----------------------|------------------------|-------------------------------------|--------------------------|-------------|
| 11  | Lower Bear at Spain (Car 5) | N/A  | N/A                              | Field Parameters<br>PCBs (Method 608)<br>Mercury (Method 1631)<br>Dissolved Copper<br>Chromium VI (Hexavalent)<br>Hardness   | N/A                | N/A                   | N/A                    | N/A – only sample within hold time  | No                       | No          |
| 12  | Black Arroyo Channel        | N/A  | N/A                              | Field Parameters<br>E. coli<br>PCBs (Method 608)<br>Mercury (Method 1631)<br>Chromium VI (Hexavalent)  | N/A                | N/A                   | N/A                    | N/A – only sample within hold time  | No                       | No          |
| 13  | NDC at Equipment Crossing   | N/A  | N/A                              | Field Parameters<br>E. coli<br>PCBs (Method 608)<br>Gross Alpha (adjusted)<br>Mercury (Method 1631)<br>Chromium VI (Hexavalent)  | N/A                | N/A                   | N/A                    | N/A – only sample within hold time  | No                       | No          |
| 14  | Field Duplicate             | N/A<br>Field Duplicate at NDC at Equipment Crossing          | N/A                              | Field Duplicate at NDC at Equipment Crossing:<br>Field Parameters<br>E. coli<br>PCBs (Method 608)<br>Gross Alpha (adjusted)<br>Mercury (Method 1631)<br>Chromium VI (Hexavalent) | N/A                | N/A                   | N/A                    | N/A – only sample within hold time  | No                       | No          |
| 15  | Equipment Blank             | Location TBD & Parameter List will be Determined by Location | N/A                              | Field Parameters<br>E. coli<br>Remaining Parameter List TBD by Location of Equipment Blank Sample  | N/A                | N/A                   | N/A                    | N/A – only sample within hold time  | No                       | No          |

**APPENDIX 3: HALL ENVIRONMENTAL ANALYSIS  
LABORATORY REPORTS AND FIELD DATA FOR  
NOVEMBER 2022 - FEBRUARY 2023**

Sampler Esqui Padilla

## AMAFCA Dry Season 2023 Sampling Data Sheet

Site Identification: **ML-1 North Diversion Channel**

ISCO Programming Dates    24 hour start:                      Time restricted start:                      Shut off:

Full Suite Sample Date and Time:    12/3/22 @ 20:13

Full Sample identification:            NDC-20221203

E. coli (in holding time) Sample Date and Time:

E. coli (in holding time) Sample Identification:

QC Samples:            Duplicate/None                      QC Sample ID:

QC Sample Time:

|                              |                     |                        |                                |
|------------------------------|---------------------|------------------------|--------------------------------|
| Full Suite Collection Point: | <u>ISCO Sampler</u> | Grab                   | Other:                         |
| E. coli Collection Point:    | ISCO Sampler        | Grab                   | Other:                         |
| Full Suite Sample Volume:    | <u>8 Lit.</u>       | Collection Time Start: | <u>19:22</u> End: <u>20:13</u> |
| E. coli Sample Volume:       |                     | Collection Time Start: | End:                           |

Field Parameters (measured every sampling event)

| Date           | Time        | Temp (°C)    | pH          | Specific Conductance (µS/cm) | Dissolved Oxygen (mg/L) | Clarity, Odor, Other |
|----------------|-------------|--------------|-------------|------------------------------|-------------------------|----------------------|
| <u>12/5/22</u> | <u>7:47</u> | <u>10.02</u> | <u>8.68</u> | <u>130</u>                   | <u>7.62</u>             |                      |
|                |             |              |             |                              |                         |                      |

Turbid Water     Color dark brown/black     Oil/Sheen     Foam     Odor

|   |  |
|---|--|
| Qualifying Source: <u>Colo Ra HS</u>                  | Station Name/#: <u>NM-BR-407: Albugnergne 4.0 NE</u>   |
| Gauge Catch: <u>.47</u>                               | Observation Date/Time: <u>12/4/22 @ 07:00</u>  |
| Qualifying Source: <u>Colo Ra HS</u>                  | Station Name/#: <u>NM-BR-130: Albugnergne 4.7 E</u>  |
| Gauge Catch: <u>.54</u>                               | Observation Date/Time: <u>12/4/22 @ 06:00</u>  |
| Pump alarm alert date/time: <u>#1 12/3/22 @ 19:42</u> | Sensor 1: <input checked="" type="checkbox"/> Sensor 2: <input checked="" type="checkbox"/><br><u>#2 12/3/22 @ 20:33</u> |

Notes:

↳ Full suite sample, submitted with E. coli sample not within holding time







# Chain-of-Custody Record

Client: AMHFCM

Mailing Address: 2010 Prospect Ave  
Albuquerque NM 87117

Phone #: 505 282 3128

email or Fax#: amhfc@amhfc.org

QA/QC Package: level 4 @ amhfc.org

Standard  Level 4 (Full Validation)

Accreditation:  Az Compliance

NELAC  Other

EDD (Type) level 4 @ amhfc.org

Turn-Around Time:

Standard  Rush

Project Name:

Project #:

Project Manager:

Sampler: ESOUI 3/21/12

On Ice:  Yes  No

# of Coolers: 1

Cooler Temp (including CF): 5 (±0.1 - 0.7) (°C)

| Date     | Time | Matrix | Sample Name     | Container Type and # | Preservative Type | HEAL No. |
|----------|------|--------|-----------------|----------------------|-------------------|----------|
| 12/15/12 | 8:12 |        | NO36 2012 12 03 |                      |                   |          |
|          |      |        |                 |                      |                   |          |
|          |      |        |                 |                      |                   |          |
|          |      |        |                 |                      |                   |          |
|          |      |        |                 |                      |                   |          |
|          |      |        |                 |                      |                   |          |
|          |      |        |                 |                      |                   |          |
|          |      |        |                 |                      |                   |          |
|          |      |        |                 |                      |                   |          |
|          |      |        |                 |                      |                   |          |
|          |      |        |                 |                      |                   |          |
|          |      |        |                 |                      |                   |          |
|          |      |        |                 |                      |                   |          |
|          |      |        |                 |                      |                   |          |
|          |      |        |                 |                      |                   |          |
|          |      |        |                 |                      |                   |          |
|          |      |        |                 |                      |                   |          |

Date: 12/15/12 Time: 8:12 Relinquished by: [Signature]

Received by: [Signature] Via: JAO Date: 12/15/12 Time: 8:42

Date: \_\_\_\_\_ Time: \_\_\_\_\_ Relinquished by: \_\_\_\_\_

Received by: \_\_\_\_\_ Via: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_



# HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

## Analysis Request

| BTEX / MTBE / TMB's (8021) | TPH:8015D(GRO / DRO / MRO) | 8081 Pesticides/8082 PCB's | EDB (Method 504.1) | PAHs by 8310 or 8270SIMS | RCRA 8 Metals | Cl, F, Br, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> | 8260 (VOA) | 8270 (Semi-VOA) | Total Coliform (Present/Absent) |
|----------------------------|----------------------------|----------------------------|--------------------|--------------------------|---------------|--|------------|-----------------|---------------------------------|
|                            |                            |                            |                    |                          |               |  |            |                 |                                 |
|                            |                            |                            |                    |                          |               |  |            |                 | <u>E-coli</u>                   |
|                            |                            |                            |                    |                          |               |  |            |                 | <u>PCB's (method 808)</u>       |
|                            |                            |                            |                    |                          |               |  |            |                 | <u>gross High/L adjusted</u>    |
|                            |                            |                            |                    |                          |               |  |            |                 | <u>increased (method 808)</u>   |
|                            |                            |                            |                    |                          |               |  |            |                 | <u>Dissolved Copper</u>         |
|                            |                            |                            |                    |                          |               |  |            |                 | <u>*see remarks</u>             |

Remarks: Chromium VI (Hexavalent)  
address  
Semi-volatiles: Benzofuran, thiophene,  
Benzofuran, thiophene, furan, pyrene, anthracene, chrysene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(e)fluoranthene, benzo(k)fluoranthene, benzo(a)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly noted on the analytical report.



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

January 10, 2023

Patrick Chavez  
AMAFCA  
2600 Prospect Ave NE  
Albuquerque, NM 87107  
TEL: (505) 884-2215  
FAX:

12/3/2022 full suite sample  
from the North Diversion  
Channel at Alameda. E.  
coli not within hold time.

RE: Dry Season 2023

OrderNo.: 2212171

Dear Patrick Chavez:

Hall Environmental Analysis Laboratory received 1 sample(s) on 12/5/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

Field Parameters  
North Diversion Channel -  
Temp = 10.02°C  
pH = 8.68 Conductivity (uS/cm=umho/cm)  
= 130  
Dissolved Oxygen (mg/L) = 7.62

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2212171

Date Reported: 1/10/2023

**CLIENT:** AMAFCA

**Client Sample ID:** NDC-20221203

**Project:** Dry Season 2023

**Collection Date:** 12/3/2022 8:13:00 PM

**Lab ID:** 2212171-001

**Matrix:** AQUEOUS

**Received Date:** 12/5/2022 8:42:00 AM

| Analyses                                     | Result | MDL     | RL     | Qual | Units   | DF | Date Analyzed         | Batch ID |
|--|--------|---------|--------|------|---------|----|-----------------------|----------|
| <b>EPA METHOD 200.7: METALS</b>              |        |         |        |      |         |    | Analyst: <b>VP</b>    |          |
| Calcium                                      | 23     | 0.11    | 1.0    |      | mg/L    | 1  | 12/13/2022 9:37:26 PM | 72027    |
| Magnesium                                    | 2.6    | 0.10    | 1.0    |      | mg/L    | 1  | 12/13/2022 9:37:26 PM | 72027    |
| <b>EPA 200.8: DISSOLVED METALS</b>           |        |         |        |      |         |    | Analyst: <b>bcv</b>   |          |
| Copper                                       | 0.011  | 0.00037 | 0.0010 |      | mg/L    | 1  | 12/7/2022 4:55:50 PM  | A93091   |
| <b>SM2340B: HARDNESS</b>                     |        |         |        |      |         |    | Analyst: <b>VP</b>    |          |
| Hardness as CaCO3                            | 68     | 2.5     | 6.6    |      | mg/L    | 1  | 12/13/2022 4:05:00 PM | R93246   |
| <b>SM 9223B FECAL INDICATOR: E. COLI MPN</b> |        |         |        |      |         |    | Analyst: <b>SMS</b>   |          |
| E. Coli                                      | 2247   | 10.00   | 10.00  | H    | MPN/100 | 10 | 12/6/2022 4:26:00 PM  | 71853    |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |     |   |    |   |
|--------------------|-----|---|----|---|
| <b>Qualifiers:</b> | *   | Value exceeds Maximum Contaminant Level.                                      | B  | Analyte detected in the associated Method Blank |
|                    | D   | Sample Diluted Due to Matrix  | E  | Above Quantitation Range/Estimated Value        |
|                    | H   | Holding times for preparation or analysis exceeded                            | J  | Analyte detected below quantitation limits      |
|                    | ND  | Not Detected at the Reporting Limit   | P  | Sample pH Not In Range                          |
|                    | PQL | Practical Quantitative Limit  | RL | Reporting Limit                                 |
|                    | S   | % Recovery outside of standard limits. If undiluted results may be estimated. |    |   |

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**Client:** Hall Environmental Analysis Lab  
**Address:** 4901 Hawkins NE Suite D  
Albuquerque, NM 87109  
**Attn:** Andy Freeman

**Work Order:** MCL0150  
**Project:** 2212171  
**Reported:** 1/9/2023 11:28

## Analytical Results Report

**Sample Location:** 2212171-001E (NDC-20221203)  
**Lab/Sample Number:** MCL0150-01      **Collect Date:** 12/03/22 20:13  
**Date Received:** 12/06/22 13:11      **Collected By:**  
**Matrix:** Water

| Analyte        | Result | Units | MDL     | PQL     | Analyzed      | Analyst | Method     | Qualifier |
|----------------|--------|-------|---------|---------|---------------|---------|------------|-----------|
| <b>Mercury</b> |        |       |         |         |               |         |            |           |
| Mercury        | 0.0698 | ug/L  | 0.00200 | 0.00500 | 12/8/22 15:05 | BSM     | EPA 1631 E | D1        |

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## Analytical Results Report

(Continued)

Sample Location: 2212171-001F (NDC-20221203)  
 Lab/Sample Number: MCL0150-02 Collect Date: 12/03/22 20:13  
 Date Received: 12/06/22 13:11 Collected By:  
 Matrix: Water

| Analyte | Result | Units | MDL | PQL | Analyzed | Analyst | Method | Qualifier |
|---------|--------|-------|-----|-----|----------|---------|--------|-----------|
|---------|--------|-------|-----|-----|----------|---------|--------|-----------|

### Semivolatiles

|                         |    |      |         |        |              |     |           |   |
|-------------------------|----|------|---------|--------|--------------|-----|-----------|---|
| 4,4'-DDD                | ND | ug/L | 0.00100 | 0.0100 | 12/9/22 4:08 | GPB | EPA 608.3 | U |
| 4,4'-DDE                | ND | ug/L | 0.00400 | 0.0100 | 12/9/22 4:29 | GPB | EPA 608.3 | U |
| 4,4'-DDT                | ND | ug/L | 0.00400 | 0.0100 | 12/9/22 4:29 | GPB | EPA 608.3 | U |
| Aldrin                  | ND | ug/L | 0.00400 | 0.0100 | 12/9/22 4:29 | GPB | EPA 608.3 | U |
| alpha-BHC               | ND | ug/L | 0.00200 | 0.0100 | 12/9/22 4:29 | GPB | EPA 608.3 | U |
| Aroclor 1016 (PCB-1016) | ND | ug/L | 0.0500  | 0.200  | 12/9/22 4:08 | GPB | EPA 608.3 | U |
| Aroclor 1221 (PCB-1221) | ND | ug/L | 0.0500  | 0.200  | 12/9/22 4:08 | GPB | EPA 608.3 | U |
| Aroclor 1232 (PCB-1232) | ND | ug/L | 0.0500  | 0.200  | 12/9/22 4:08 | GPB | EPA 608.3 | U |
| Aroclor 1242 (PCB-1242) | ND | ug/L | 0.0500  | 0.200  | 12/9/22 4:08 | GPB | EPA 608.3 | U |
| Aroclor 1248 (PCB-1248) | ND | ug/L | 0.0500  | 0.200  | 12/9/22 4:08 | GPB | EPA 608.3 | U |
| Aroclor 1254 (PCB-1254) | ND | ug/L | 0.0500  | 0.200  | 12/9/22 4:08 | GPB | EPA 608.3 | U |
| Aroclor 1260 (PCB-1260) | ND | ug/L | 0.0500  | 0.200  | 12/9/22 4:08 | GPB | EPA 608.3 | U |
| beta-BHC                | ND | ug/L | 0.00200 | 0.0100 | 12/9/22 4:08 | GPB | EPA 608.3 | U |
| Chlordane               | ND | ug/L | 0.0500  | 0.100  | 12/9/22 4:08 | GPB | EPA 608.3 | U |
| delta-BHC               | ND | ug/L | 0.00200 | 0.0100 | 12/9/22 4:29 | GPB | EPA 608.3 | U |
| Dieldrin                | ND | ug/L | 0.00300 | 0.0100 | 12/9/22 4:29 | GPB | EPA 608.3 | U |
| Endosulfan I            | ND | ug/L | 0.00200 | 0.0100 | 12/9/22 4:29 | GPB | EPA 608.3 | U |
| Endosulfan II           | ND | ug/L | 0.00300 | 0.0100 | 12/9/22 4:08 | GPB | EPA 608.3 | U |
| Endosulfan sulfate      | ND | ug/L | 0.00400 | 0.0100 | 12/9/22 4:29 | GPB | EPA 608.3 | U |
| Endrin                  | ND | ug/L | 0.00200 | 0.0100 | 12/9/22 4:08 | GPB | EPA 608.3 | U |
| Endrin aldehyde         | ND | ug/L | 0.00100 | 0.0100 | 12/9/22 4:08 | GPB | EPA 608.3 | U |
| Endrin ketone           | ND | ug/L | 0.00400 | 0.0100 | 12/9/22 4:08 | GPB | EPA 608.3 | U |
| gamma-BHC (Lindane)     | ND | ug/L | 0.00100 | 0.0100 | 12/9/22 4:08 | GPB | EPA 608.3 | U |
| Heptachlor              | ND | ug/L | 0.00300 | 0.0100 | 12/9/22 4:08 | GPB | EPA 608.3 | U |
| Heptachlor epoxide      | ND | ug/L | 0.00800 | 0.0100 | 12/9/22 4:29 | GPB | EPA 608.3 | U |
| Methoxychlor            | ND | ug/L | 0.00500 | 0.0100 | 12/9/22 4:08 | GPB | EPA 608.3 | U |
| Toxaphene               | ND | ug/L | 0.0500  | 0.100  | 12/9/22 4:08 | GPB | EPA 608.3 | U |

|                        |       |      |        |       |              |     |           |   |
|------------------------|-------|------|--------|-------|--------------|-----|-----------|---|
| <i>Surrogate: DCB</i>  | 97.7% |      | 40-130 |       | 12/9/22 4:29 | GPB | EPA 608.3 |   |
| Benzo[a]anthracene     | ND    | ug/L | 0.100  | 0.500 | 1/4/23 5:05  | MAH | EPA 625.1 | U |
| Benzo[b]fluoranthene   | ND    | ug/L | 0.100  | 0.500 | 1/4/23 5:05  | MAH | EPA 625.1 | U |
| Benzo[k]fluoranthene   | ND    | ug/L | 0.100  | 0.500 | 1/4/23 5:05  | MAH | EPA 625.1 | U |
| Chrysene               | ND    | ug/L | 0.100  | 0.500 | 1/4/23 5:05  | MAH | EPA 625.1 | U |
| Indeno[1,2,3-cd]pyrene | ND    | ug/L | 0.100  | 0.500 | 1/4/23 5:05  | MAH | EPA 625.1 | U |

Authorized Signature,



Justin Doty For Todd Taruscio, Laboratory Manager

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---

|        |  |
|--------|--|
| D1     | Sample required dilution due to matrix   |
| J      | The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit. |
| U      | Compound was analyzed for but not detected   |
| PQL    | Practical Quantitation Limit   |
| ND     | Not Detected   |
| MDL    | Method Detection Limit   |
| Dry    | Sample results reported on a dry weight basis  |
| *      | Not a state-certified analyte  |
| RPD    | Relative Percent Difference  |
| %REC   | Percent Recovery   |
| Source | Sample that was spiked or duplicated.  |

This report shall not be reproduced except in full, without the written approval of the laboratory  
The results reported related only to the samples indicated.

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## Quality Control Data

### Mercury

| Analyte                                | Result  | Qual | Reporting Limit | Units | Spike Level                    | Source Result | %REC                           | %REC Limits | RPD  | RPD Limit |
|--|---------|------|-----------------|-------|--------------------------------|---------------|--------------------------------|-------------|------|-----------|
| <b>Batch: BCL0232 - Hg Trace</b>       |         |      |                 |       |                                |               |                                |             |      |           |
| <b>Blank (BCL0232-BLK1)</b>            |         |      |                 |       |                                |               |                                |             |      |           |
|  |         |      |                 |       | Prepared & Analyzed: 12/8/2022 |               |                                |             |      |           |
| Mercury                                | ND      | U    | 0.000500        | ug/L  |                                |               |                                |             |      |           |
| <b>LCS (BCL0232-BS1)</b>               |         |      |                 |       |                                |               |                                |             |      |           |
|  |         |      |                 |       | Prepared & Analyzed: 12/8/2022 |               |                                |             |      |           |
| Mercury                                | 0.00474 |      | 0.000500        | ug/L  | 0.00500                        |               | 94.7                           | 77-123      |      |           |
| <b>Matrix Spike (BCL0232-MS1)</b>      |         |      |                 |       |                                |               |                                |             |      |           |
|  |         |      |                 |       | Source: MCL0027-02             |               | Prepared & Analyzed: 12/8/2022 |             |      |           |
| Mercury                                | 0.00498 |      | 0.000500        | ug/L  | 0.00500                        | 0.000697      | 85.7                           | 71-125      |      |           |
| <b>Matrix Spike Dup (BCL0232-MSD1)</b> |         |      |                 |       |                                |               |                                |             |      |           |
|  |         |      |                 |       | Source: MCL0027-02             |               | Prepared & Analyzed: 12/8/2022 |             |      |           |
| Mercury                                | 0.00530 |      | 0.000500        | ug/L  | 0.00500                        | 0.000697      | 92.1                           | 71-125      | 6.22 | 24        |

## Quality Control Data

### Semivolatiles

| Analyte                            | Result | Qual | Reporting Limit | Units | Spike Level                            | Source Result | %REC | %REC Limits | RPD  | RPD Limit |
|------------------------------------|--------|------|-----------------|-------|--|---------------|------|-------------|------|-----------|
| <b>Batch: BCL0195 - SVOC Water</b> |        |      |                 |       |  |               |      |             |      |           |
| <b>Blank (BCL0195-BLK1)</b>        |        |      |                 |       |  |               |      |             |      |           |
|                                    |        |      |                 |       | Prepared: 12/6/2022 Analyzed: 1/4/2023 |               |      |             |      |           |
| Benzo[b]fluoranthene               | ND     | U    | 0.500           | ug/L  |  |               |      |             |      |           |
| Benzo[k]fluoranthene               | ND     | U    | 0.500           | ug/L  |  |               |      |             |      |           |
| Chrysene                           | ND     | U    | 0.500           | ug/L  |  |               |      |             |      |           |
| Indeno(1,2,3-cd)pyrene             | ND     | U    | 0.500           | ug/L  |  |               |      |             |      |           |
| Benzo[a]anthracene                 | ND     | U    | 0.500           | ug/L  |  |               |      |             |      |           |
| <b>LCS (BCL0195-BS1)</b>           |        |      |                 |       |  |               |      |             |      |           |
|                                    |        |      |                 |       | Prepared: 12/6/2022 Analyzed: 1/3/2023 |               |      |             |      |           |
| Benzo[a]anthracene                 | 5.20   |      | 0.500           | ug/L  | 5.00                                   |               | 104  | 70-120      |      |           |
| Benzo[b]fluoranthene               | 5.09   |      | 0.500           | ug/L  | 5.00                                   |               | 102  | 70-120      |      |           |
| Benzo[k]fluoranthene               | 5.52   |      | 0.500           | ug/L  | 5.00                                   |               | 110  | 70-122      |      |           |
| Chrysene                           | 4.99   |      | 0.500           | ug/L  | 5.00                                   |               | 99.8 | 70-120      |      |           |
| Indeno(1,2,3-cd)pyrene             | 5.17   |      | 0.500           | ug/L  | 5.00                                   |               | 103  | 67-120      |      |           |
| <b>LCS Dup (BCL0195-BSD1)</b>      |        |      |                 |       |  |               |      |             |      |           |
|                                    |        |      |                 |       | Prepared: 12/6/2022 Analyzed: 1/3/2023 |               |      |             |      |           |
| Chrysene                           | 4.59   |      | 0.500           | ug/L  | 5.00                                   |               | 91.8 | 70-120      | 8.35 | 25        |
| Benzo[a]anthracene                 | 4.86   |      | 0.500           | ug/L  | 5.00                                   |               | 97.2 | 70-120      | 6.76 | 25        |
| Benzo[k]fluoranthene               | 4.91   |      | 0.500           | ug/L  | 5.00                                   |               | 98.2 | 70-122      | 11.7 | 25        |
| Indeno(1,2,3-cd)pyrene             | 4.87   |      | 0.500           | ug/L  | 5.00                                   |               | 97.4 | 67-120      | 5.98 | 25        |
| Benzo[b]fluoranthene               | 4.58   |      | 0.500           | ug/L  | 5.00                                   |               | 91.6 | 70-120      | 10.5 | 25        |

### Batch: BCL0233 - Pesticides

|                             |    |   |       |      |   |  |  |  |  |  |
|-----------------------------|----|---|-------|------|---|--|--|--|--|--|
| <b>Blank (BCL0233-BLK1)</b> |    |   |       |      |   |  |  |  |  |  |
|                             |    |   |       |      | Prepared: 12/8/2022 Analyzed: 12/9/2022 |  |  |  |  |  |
| Arochlor 1016 (1)           | ND | U | 0.200 | ug/L |   |  |  |  |  |  |
| Arochlor 1221 (1)           | ND | U | 0.200 | ug/L |   |  |  |  |  |  |

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## Quality Control Data (Continued)

### Semivolatiles (Continued)

| Analyte | Result | Qual | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC | %REC<br>Limits | RPD | RPD<br>Limit |
|---------|--------|------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|
|---------|--------|------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|

### Batch: BCL0233 - Pesticides (Continued)

#### Blank (BCL0233-BLK1)

Prepared: 12/8/2022 Analyzed: 12/9/2022

|                   |    |   |       |      |  |  |  |  |  |  |
|-------------------|----|---|-------|------|--|--|--|--|--|--|
| Arochlor 1232 (1) | ND | U | 0.200 | ug/L |  |  |  |  |  |  |
| Arochlor 1242 (1) | ND | U | 0.200 | ug/L |  |  |  |  |  |  |
| Arochlor 1248 (1) | ND | U | 0.200 | ug/L |  |  |  |  |  |  |
| Arochlor 1254 (1) | ND | U | 0.200 | ug/L |  |  |  |  |  |  |
| Arochlor 1260 (1) | ND | U | 0.200 | ug/L |  |  |  |  |  |  |





| SUB CONTRACTOR: <b>Anatek ID</b>          |              | COMPANY: <b>Anatek Labs, Inc.</b> |             | PHONE: <b>(208) 883-2839</b> | FAX: <b>(208) 882-9246</b> |              |                        |
|---|--------------|-----------------------------------|-------------|------------------------------|----------------------------|--------------|------------------------|
| ADDRESS: <b>1282 Alturas Dr</b>           |              |                                   |             | ACCOUNT #:                   | EMAIL:                     |              |                        |
| CITY, STATE, ZIP: <b>Moscow, ID 83843</b> |              |                                   |             |                              |                            |              |                        |
| ITEM                                      | SAMPLE       | CLIENT SAMPLE ID                  | BOTTLE TYPE | MATRIX                       | COLLECTION DATE            | # CONTAINERS | ANALYTICAL COMMENTS    |
| 1   | 2212171-001E | NDC-20221203                      | 250ML CLEAR | Aqueous                      | 12/3/2022 8:13:00 PM       | 1            | 1631 Hg                |
| 2   | 2212171-001F | NDC-20221203                      | 1LAMGU      | Aqueous                      | 12/3/2022 8:13:00 PM       | 1            | 608, 625- See attached |

**SPECIAL INSTRUCTIONS / COMMENTS:**

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

|   |                        |                      |                         |                      |                      |   |
|---|------------------------|----------------------|-------------------------|----------------------|----------------------|---|
| Relinquished By: <i>SC</i>  | Date: <b>12/5/2022</b> | Time: <b>2:00 PM</b> | Received By: <i>JKF</i> | Date: <b>12/6/22</b> | Time: <b>12/6/22</b> | REPORT TRANSMITTAL DESIRED:<br><input type="checkbox"/> HARD COPY (extra cost) <input type="checkbox"/> FAX <input type="checkbox"/> EMAIL <input type="checkbox"/> ONLINE<br><br>FOR LAB USE ONLY<br><br>Temp of samples _____ °C    Attempt to Cool? _____<br><br>Comments: _____ |
| Relinquished By:  | Date:                  | Time:                | Received By:            | Date:                | Time:                |   |
| Relinquished By:  | Date:                  | Time:                | Received By:            | Date:                | Time:                |   |
| TAT:    Standard <input checked="" type="checkbox"/> RUSH    Next BD <input type="checkbox"/> 2nd BD <input type="checkbox"/> 3rd BD <input type="checkbox"/> |                        |                      |                         |                      |                      |   |

Attached Sheet – 625

MCL0150



Due: 12/20/22

Benzo(a)anthracene

Benzo(b)fluoranthene

Benzo(k)fluoranthene

Chrysene

Indeno(1,2,3-cd)pyrene



Sample Receipt and Preservation Form

Client Name: Hall

TAT: Normal RUSH: \_\_\_\_\_ days

Samples Received From: FedEx UPS USPS Client Courier Other: \_\_\_\_\_

Custody Seal on Cooler/Box: Yes No Custody Seals Intact: Yes No N/A

Number of Coolers/Boxes: 1 Type of Ice: Wet Ice Ice Packs Dry Ice None

Packing Material: Bubble Wrap Bags Foam/Peanuts Paper None Other: \_\_\_\_\_

Cooler Temp As Read (°C): 1.9 Cooler Temp Corrected (°C): - Thermometer Used: JW-5

Samples Received Intact? Yes No N/A  
 Chain of Custody Present/Complete? Yes No N/A  
 Labels and Chains Agree? Yes No N/A  
 Samples Received Within Hold Time? Yes No N/A  
 Correct Containers Received? Yes No N/A  
 Anatek Bottles Used? Yes No Unknown  
 Total Number of Sample Bottles Received: 2

Comments:

|  |
|--|
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |

Samples Properly Preserved? Yes No N/A  
*If No, record preservation and pH-after details*  
 VOC Vials Free of Headpace (<6mm)? Yes No N/A  
 VOC Trip Blanks Present? Yes No N/A

Initial pH: pH Paper ID:

|    |    |  |
|----|----|--|
| <2 | or |  |
|    |    |  |
|    |    |  |
|    |    |  |

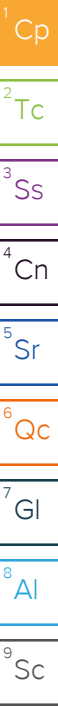
Record preservatives (and lot numbers, if known) for containers below:

HCl - 1631 - g 250ml

Notes, comments, etc. (also use this space if contacting the client - record names and date/time)

608/025 (see attached) - g 1L

Received/Inspected By: JWT Date/Time: 12/16/22 13:11



## Hall Environmental Analysis Laboratory

Sample Delivery Group: L1564375

Samples Received: 12/06/2022

Project Number:

Description:

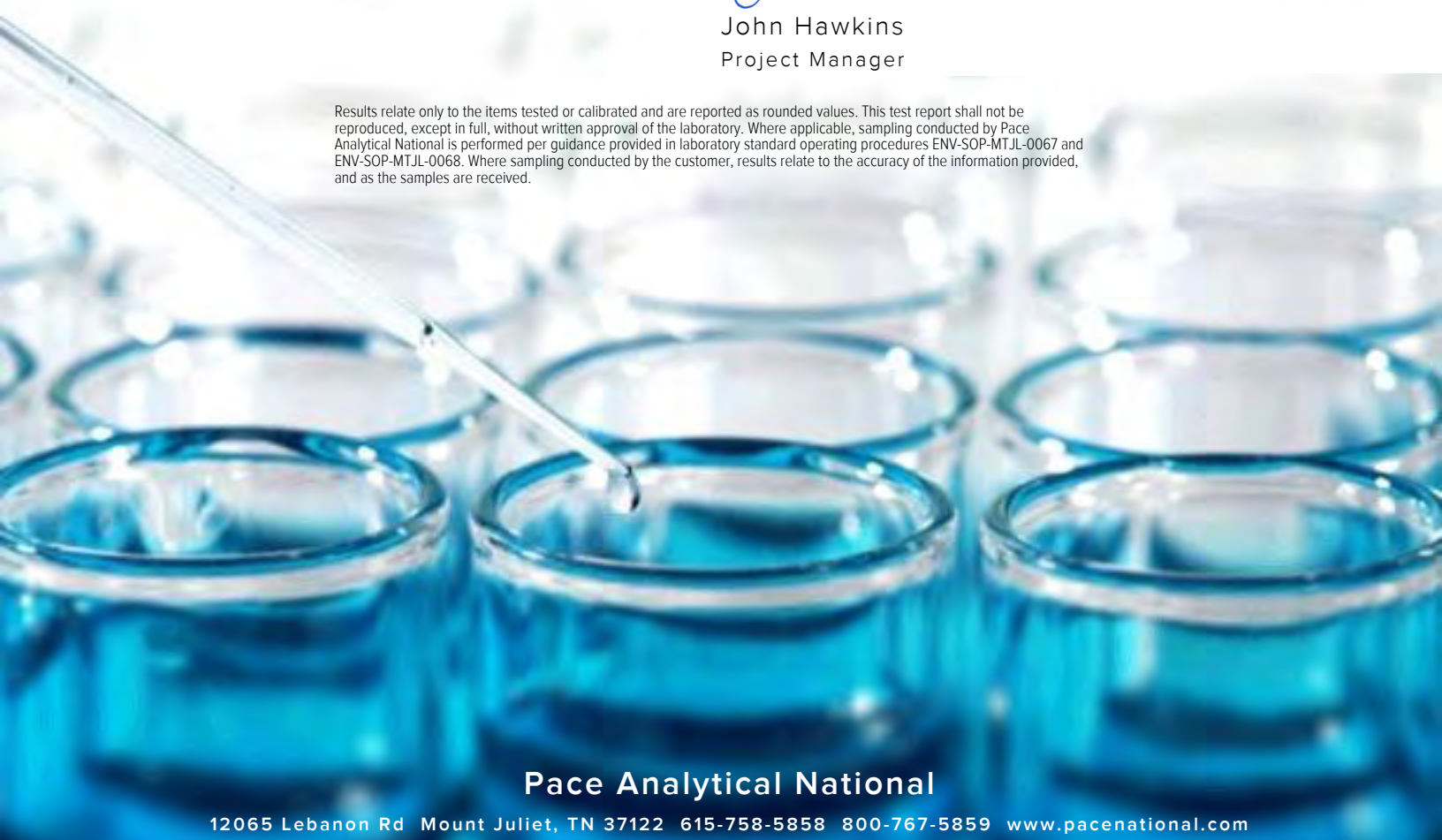
Report To: Andy Freeman  
4901 Hawkins NE  
Albuquerque, NM 87109

Entire Report Reviewed By:



John Hawkins  
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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| <b>Cn: Case Narrative</b>                 | 4 |   |
| <b>Sr: Sample Results</b>                 | 5 |   |
| 2212171-001H NDC-20221203 L1564375-01     | 5 |   |
| <b>Qc: Quality Control Summary</b>        | 6 |   |
| Wet Chemistry by Method 3500Cr C-2011     | 6 |   |
| <b>Gl: Glossary of Terms</b>              | 7 |   |
| <b>Al: Accreditations &amp; Locations</b> | 8 |   |
| <b>Sc: Sample Chain of Custody</b>        | 9 |  |

# SAMPLE SUMMARY

2212171-001H NDC-20221203 L1564375-01 GW

Collected by

Collected date/time

Received date/time

12/03/22 20:13

12/06/22 09:00

| Method                                | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 3500Cr C-2011 | WG1970941 | 1        | 12/08/22 05:15        | 12/08/22 05:15     | VSS     | Mt. Juliet, TN |

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

# CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins  
Project Manager

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Wet Chemistry by Method 3500Cr C-2011

| Analyte             | Result | Qualifier | RDL      | Dilution | Analysis date / time | Batch                     |
|---------------------|--------|-----------|----------|----------|----------------------|---------------------------|
| Hexavalent Chromium | 0.0531 |           | 0.000500 | 1        | 12/08/2022 05:15     | <a href="#">WG1970941</a> |

- <sup>1</sup>Cp
- <sup>2</sup>Tc
- <sup>3</sup>Ss
- <sup>4</sup>Cn
- <sup>5</sup>Sr
- <sup>6</sup>Qc
- <sup>7</sup>Gl
- <sup>8</sup>Al
- <sup>9</sup>Sc



Method Blank (MB)

(MB) R3869454-1 12/08/22 04:19

| Analyte             | MB Result<br>mg/l | MB Qualifier | MB MDL<br>mg/l | MB RDL<br>mg/l |
|---------------------|-------------------|--------------|----------------|----------------|
| Hexavalent Chromium | U                 |              | 0.000150       | 0.000500       |

L1564480-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1564480-01 12/08/22 05:23 • (DUP) R3869454-3 12/08/22 05:30

| Analyte             | Original Result<br>mg/l | DUP Result<br>mg/l | Dilution | DUP RPD<br>% | DUP Qualifier | DUP RPD<br>Limits |
|---------------------|-------------------------|--------------------|----------|--------------|---------------|-------------------|
| Hexavalent Chromium | ND                      | ND                 | 1        | 0.000        |               | 20                |

Laboratory Control Sample (LCS)

(LCS) R3869454-2 12/08/22 04:29

| Analyte             | Spike Amount<br>mg/l | LCS Result<br>mg/l | LCS Rec.<br>% | Rec. Limits<br>% | LCS Qualifier |
|---------------------|----------------------|--------------------|---------------|------------------|---------------|
| Hexavalent Chromium | 0.00200              | 0.00211            | 106           | 90.0-110         |               |

L1564581-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1564581-01 12/08/22 06:19 • (MS) R3869454-4 12/08/22 06:29 • (MSD) R3869454-5 12/08/22 06:37

| Analyte             | Spike Amount<br>mg/l | Original Result<br>mg/l | MS Result<br>mg/l | MSD Result<br>mg/l | MS Rec.<br>% | MSD Rec.<br>% | Dilution | Rec. Limits<br>% | MS Qualifier | MSD Qualifier | RPD<br>% | RPD Limits<br>% |
|---------------------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Hexavalent Chromium | 0.0500               | ND                      | 0.0496            | 0.0499             | 99.1         | 99.7          | 1        | 90.0-110         |              |               | 0.630    | 20              |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

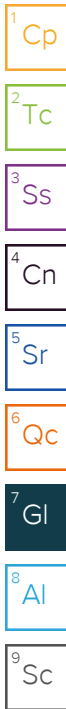
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

### Abbreviations and Definitions

|                              |  |
|------------------------------|--|
| MDL                          | Method Detection Limit.  |
| ND                           | Not detected at the Reporting Limit (or MDL where applicable).   |
| RDL                          | Reported Detection Limit.  |
| Rec.                         | Recovery.  |
| RPD                          | Relative Percent Difference.   |
| SDG                          | Sample Delivery Group.   |
| U                            | Not detected at the Reporting Limit (or MDL where applicable).   |
| Analyte                      | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.   |
| Dilution                     | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.  |
| Limits                       | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.  |
| Original Sample              | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.  |
| Qualifier                    | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.  |
| Result                       | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma.   |
| Case Narrative (Cn)          | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.  |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.  |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.  |
| Sample Results (Sr)          | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.   |
| Sample Summary (Ss)          | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.  |

### Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.



# ACCREDITATIONS & LOCATIONS

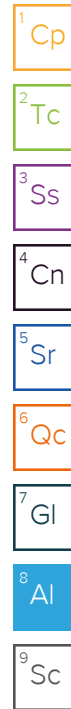
## Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

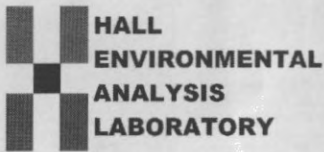
|                               |             |                             |                  |
|-------------------------------|-------------|-----------------------------|------------------|
| Alabama                       | 40660       | Nebraska                    | NE-OS-15-05      |
| Alaska                        | 17-026      | Nevada                      | TN000032021-1    |
| Arizona                       | AZ0612      | New Hampshire               | 2975             |
| Arkansas                      | 88-0469     | New Jersey–NELAP            | TN002            |
| California                    | 2932        | New Mexico <sup>1</sup>     | TN00003          |
| Colorado                      | TN00003     | New York                    | 11742            |
| Connecticut                   | PH-0197     | North Carolina              | Env375           |
| Florida                       | E87487      | North Carolina <sup>1</sup> | DW21704          |
| Georgia                       | NELAP       | North Carolina <sup>3</sup> | 41               |
| Georgia <sup>1</sup>          | 923         | North Dakota                | R-140            |
| Idaho                         | TN00003     | Ohio–VAP                    | CL0069           |
| Illinois                      | 200008      | Oklahoma                    | 9915             |
| Indiana                       | C-TN-01     | Oregon                      | TN200002         |
| Iowa                          | 364         | Pennsylvania                | 68-02979         |
| Kansas                        | E-10277     | Rhode Island                | LA000356         |
| Kentucky <sup>1,6</sup>       | KY90010     | South Carolina              | 84004002         |
| Kentucky <sup>2</sup>         | 16          | South Dakota                | n/a              |
| Louisiana                     | AI30792     | Tennessee <sup>1,4</sup>    | 2006             |
| Louisiana                     | LA018       | Texas                       | T104704245-20-18 |
| Maine                         | TN00003     | Texas <sup>5</sup>          | LAB0152          |
| Maryland                      | 324         | Utah                        | TN000032021-11   |
| Massachusetts                 | M-TN003     | Vermont                     | VT2006           |
| Michigan                      | 9958        | Virginia                    | 110033           |
| Minnesota                     | 047-999-395 | Washington                  | C847             |
| Mississippi                   | TN00003     | West Virginia               | 233              |
| Missouri                      | 340         | Wisconsin                   | 998093910        |
| Montana                       | CERT0086    | Wyoming                     | A2LA             |
| A2LA – ISO 17025              | 1461.01     | AIHA-LAP,LLC EMLAP          | 100789           |
| A2LA – ISO 17025 <sup>5</sup> | 1461.02     | DOD                         | 1461.01          |
| Canada                        | 1461.01     | USDA                        | P330-15-00234    |
| EPA–Crypto                    | TN00003     |                             |                  |

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> Wastewater n/a Accreditation not applicable

\* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

\* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

Hall Environmental Analysis Laboratory  
 4901 Hawkins NE  
 Albuquerque, NM 87109  
 TEL: 505-345-3975  
 FAX: 505-345-4107  
 website: www.hallenvironmental.com

H124

| SUB CONTRACTOR: <b>Pace TN</b>                |              | COMPANY: <b>PACE TN</b> |             | PHONE: <b>(800) 767-5859</b> | FAX: <b>(615) 758-5859</b> |              |                           |
|---|--------------|-------------------------|-------------|------------------------------|----------------------------|--------------|---------------------------|
| ADDRESS: <b>12065 Lebanon Rd</b>              |              |                         |             | ACCOUNT #:                   | EMAIL:                     |              |                           |
| CITY, STATE, ZIP: <b>Mt. Juliet, TN 37122</b> |              |                         |             |                              |                            |              |                           |
| ITEM  | SAMPLE       | CLIENT SAMPLE ID        | BOTTLE TYPE | MATRIX                       | COLLECTION DATE            | # CONTAINERS | ANALYTICAL COMMENTS       |
| 1   | 2212171-001H | NDC-20221203            | 120mL       | Aqueous                      | 12/3/2022 8:13:00 PM       | 1            | HEXAVALENT CHROMIUM<br>-0 |

L1564375

Sample Receipt Checklist

COC Seal Present/Intact:  Y  N If Applicable

COC Signed/Accurate:  Y  N VOA Zero Headspace:  Y  N

Bottles arrive intact:  Y  N Pres. Correct/Check:  Y  N

Correct bottles used:  Y  N

Sufficient volume sent:  Y  N

RAD Screen <0.5 mR/hr:  Y  N

7706 8121 2380  
MSA2  
2.1 to 2.1

**SPECIAL INSTRUCTIONS / COMMENTS:**  
 Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

|                            |                 |               |                                 |               |            |   |
|----------------------------|-----------------|---------------|---------------------------------|---------------|------------|---|
| Relinquished By: <i>AL</i> | Date: 12/5/2022 | Time: 1:16 PM | Received By: <i>[Signature]</i> | Date: 12/6/22 | Time: 9:00 | REPORT TRANSMITTAL DESIRED:<br><input type="checkbox"/> HARDCOPY (extra cost) <input type="checkbox"/> FAX <input type="checkbox"/> EMAIL <input type="checkbox"/> ONLINE<br><br>FOR LAB USE ONLY<br><br>Temp of samples _____ C    Attempt to Cool? _____<br><br>Comments: _____ |
| Relinquished By:           | Date:           | Time:         | Received By:                    | Date:         | Time:      |   |
| Relinquished By:           | Date:           | Time:         | Received By:                    | Date:         | Time:      |   |

TAT: Standard  RUSH    Next BD     2nd BD     3rd BD

December 29, 2022

Andy Freeman  
Hall Environmental  
4901 Hawkins NE  
Albuquerque, NM 87109

RE: Project: 2212171  
Pace Project No.: 30543590

Dear Andy Freeman:

Enclosed are the analytical results for sample(s) received by the laboratory on December 06, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Carla Cmar  
carla.cmar@pacelabs.com  
(724)850-5600  
Project Manager

Enclosures

cc: Ms. Jackie Ball, Hall Environmental  
Michelle Garcia, Hall Environmental  
1845-Hall Reporting



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 2212171  
Pace Project No.: 30543590

### **Pace Analytical Services Pennsylvania**

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

ANAB DOD-ELAP Rad Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification #: PA01547

Connecticut Certification #: PH-0694

Delaware Certification

EPA Region 4 DW Rad

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Florida: Cert E871149 SEKS WET

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: KY90133

KY WW Permit #: KY0098221

KY WW Permit #: KY0000221

Louisiana DHH/TNI Certification #: LA180012

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: 2017020

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification #: 9991

Missouri Certification #: 235

Montana Certification #: Cert0082

Nebraska Certification #: NE-OS-29-14

Nevada Certification #: PA014572018-1

New Hampshire/TNI Certification #: 297617

New Jersey/TNI Certification #: PA051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Ohio EPA Rad Approval: #41249

Oregon/TNI Certification #: PA200002-010

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: 02867

Texas/TNI Certification #: T104704188-17-3

Utah/TNI Certification #: PA014572017-9

USDA Soil Permit #: P330-17-00091

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Approve List for Rad

Wyoming Certification #: 8TMS-L

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: 2212171  
Pace Project No.: 30543590

| <b>Lab ID</b> | <b>Sample ID</b>          | <b>Matrix</b> | <b>Date Collected</b> | <b>Date Received</b> |
|---------------|---------------------------|---------------|-----------------------|----------------------|
| 30543590001   | 2212171-001G_NDC-20221203 | Water         | 12/03/22 08:13        | 12/06/22 10:15       |

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 2212171  
Pace Project No.: 30543590

| Lab ID      | Sample ID                 | Method        | Analysts | Analytes Reported | Laboratory |
|-------------|---------------------------|---------------|----------|-------------------|------------|
| 30543590001 | 2212171-001G_NDC-20221203 | EPA 900.0     | SVM      | 1                 | PASI-PA    |
|             |                           | EPA 900.0     | LAL      | 1                 | PASI-PA    |
|             |                           | ASTM D5174-97 | PS1      | 1                 | PASI-PA    |

PASI-PA = Pace Analytical Services - Greensburg

### REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 2212171  
Pace Project No.: 30543590

---

**Method:** EPA 900.0  
**Description:** 900.0 Gross Alpha/Beta  
**Client:** Hall Environmental  
**Date:** December 29, 2022

**General Information:**

1 sample was analyzed for EPA 900.0 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 2212171  
Pace Project No.: 30543590

---

**Method:** EPA 900.0  
**Description:** Adjusted Gross Alpha  
**Client:** Hall Environmental  
**Date:** December 29, 2022

**General Information:**

1 sample was analyzed for EPA 900.0 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 2212171  
Pace Project No.: 30543590

---

**Method:** ASTM D5174-97  
**Description:** D517497 Total Uranium KPA  
**Client:** Hall Environmental  
**Date:** December 29, 2022

**General Information:**

1 sample was analyzed for ASTM D5174-97 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

This data package has been reviewed for quality and completeness and is approved for release.

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2212171  
Pace Project No.: 30543590

**Sample:** 2212171-001G\_NDC-20221203      **Lab ID:** 30543590001      Collected: 12/03/22 08:13      Received: 12/06/22 10:15      Matrix: Water

PWS:      Site ID:      Sample Type:

| Parameters           | Method                                | Act ± Unc (MDC) Carr Trac               | Units | Analyzed       | CAS No.    | Qual |
|----------------------|---------------------------------------|---|-------|----------------|------------|------|
|                      | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Gross Alpha          | EPA 900.0                             | <b>-90.1 ± 49.7 (111)</b><br>C:NA T:NA  | pCi/L | 12/27/22 18:59 | 12587-46-1 |      |
|                      | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Adjusted Gross Alpha | EPA 900.0                             | <b>-90.1 ± 49.7 (111)</b><br>C:NA T:NA  | pCi/L | 12/29/22 23:13 |            |      |
|                      | Pace Analytical Services - Greensburg |   |       |                |            |      |
| Total Uranium        | ASTM D5174-97                         | <b>1.00 ± 0.057 (32.3)</b><br>C:NA T:NA | ug/L  | 12/15/22 14:16 | 7440-61-1  |      |

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: 2212171  
Pace Project No.: 30543590

|                            |   |
|----------------------------|---|
| QC Batch: 552016           | Analysis Method: EPA 900.0                        |
| QC Batch Method: EPA 900.0 | Analysis Description: 900.0 Gross Alpha/Beta      |
|                            | Laboratory: Pace Analytical Services - Greensburg |

Associated Lab Samples: 30543590001

METHOD BLANK: 2681193 Matrix: Water

Associated Lab Samples: 30543590001

| Parameter   | Act ± Unc (MDC) Carr Trac       | Units | Analyzed       | Qualifiers |
|-------------|---------------------------------|-------|----------------|------------|
| Gross Alpha | -0.288 ± 0.723 (2.18) C:NA T:NA | pCi/L | 12/29/22 08:49 |            |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: 2212171  
Pace Project No.: 30543590

|                                |   |
|--------------------------------|---|
| QC Batch: 553231               | Analysis Method: ASTM D5174-97                    |
| QC Batch Method: ASTM D5174-97 | Analysis Description: D5174.97 Total Uranium KPA  |
|                                | Laboratory: Pace Analytical Services - Greensburg |

Associated Lab Samples: 30543590001

|                       |               |
|-----------------------|---------------|
| METHOD BLANK: 2687509 | Matrix: Water |
|-----------------------|---------------|

Associated Lab Samples: 30543590001

| Parameter     | Act ± Unc (MDC) Carr Trac       | Units | Analyzed       | Qualifiers |
|---------------|---------------------------------|-------|----------------|------------|
| Total Uranium | 0.067 ± 0.002 (0.323) C:NA T:NA | ug/L  | 12/15/22 12:54 |            |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: 2212171  
Pace Project No.: 30543590

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: For Safe Drinking Water Act (SDWA) analyses, the reported Unc. is the calculated Count Uncertainty (95% confidence interval) using a coverage factor of 1.96. For all other matrices (non-SDWA), the reported Unc. is the calculated Expanded Uncertainty (aka Combined Standard Uncertainty, CSU), reported at the 95% confidence interval using a coverage factor of 1.96.

Gamma Spec: The Unc. reported for all gamma-spectroscopy analyses (EPA 901.1), is the calculated Expanded Uncertainty (CSU) at the 95.4% confidence interval, using a coverage factor of 2.0.

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.

| SUB CONTRACTOR: <b>Pace-Greensburg</b>        |              | COMPANY: <b>Pace Analytical Services, Inc.</b> |             | PHONE: <b>(724) 850-5600</b> | FAX: <b>(724) 850-5601</b> |              |   |
|---|--------------|--|-------------|------------------------------|----------------------------|--------------|---|
| ADDRESS: <b>1638 Roseytown Rd Ste 2,3,4</b>   |              |  |             | ACCOUNT #:                   | EMAIL:                     |              |   |
| CITY, STATE, ZIP: <b>Greensburg, PA 15601</b> |              |  |             |                              |                            |              |   |
| ITEM  | SAMPLE       | CLIENT SAMPLE ID                               | BOTTLE TYPE | MATRIX                       | COLLECTION DATE            | # CONTAINERS | ANALYTICAL COMMENTS   |
| 1   | 2212171-001G | NDC-20221203                                   | 1LHDPEHNO   | Aqueous                      | 12/3/2022 8:13:00 PM       | 2            | Adjusted Gross Alpha <span style="float: right;">801</span> |

**WO# : 30543590**



**SPECIAL INSTRUCTIONS / COMMENTS:**

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

|   |                 |               |                                 |                      |                    |   |
|---|-----------------|---------------|---------------------------------|----------------------|--------------------|---|
| Relinquished By: <i>402</i>   | Date: 12/5/2022 | Time: 2:04 PM | Received By:                    | Date:                | Time:              | REPORT TRANSMITTAL DESIRED:<br><input type="checkbox"/> HARDCOPY (extra cost) <input type="checkbox"/> FAX <input type="checkbox"/> EMAIL <input type="checkbox"/> ONLINE<br><br>FOR LAB USE ONLY<br><br>Temp of samples _____ °C    Attempt to Cool ? _____<br><br>Comments: _____ |
| Relinquished By:  | Date:           | Time:         | Received By:                    | Date:                | Time:              |   |
| Relinquished By:  | Date:           | Time:         | Received By: <i>Rup 12/5/22</i> | Date: <i>12/6/22</i> | Time: <i>10:15</i> |   |
| TAT:    Standard <input checked="" type="checkbox"/> RUSH    Next BD <input type="checkbox"/> 2nd BD <input type="checkbox"/> 3rd BD <input type="checkbox"/> |                 |               |                                 |                      |                    |   |





Effective Date: 10/03/2022

WO#: 30543590

PM: CMC Due Date: 12/28/22  
CLIENT: HALL ENVIRON

Client Name: Hall

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace  Other

Tracking Number: 5344 4102 8050

Examined By PS  
Labeled By PS  
Temped By

Custody Seal on Cooler/Box Present:  Yes  No Seals Intact:  Yes  No

Thermometer Used: \_\_\_\_\_ Type of Ice: Wet Blue (None)

Cooler Temperature: Observed Temp \_\_\_\_\_ °C Correction Factor: \_\_\_\_\_ °C Final Temp: \_\_\_\_\_ °C  
Temp should be above freezing to 6°C

| Comments:   | Yes | No | NA | pH paper Lot#              | D.P.D. Residual Chlorine Lot #       |
|---|-----|----|----|----------------------------|--------------------------------------|
|   |     |    |    | 10DZZZ1                    |                                      |
| Chain of Custody Present  | /   |    |    | 1.                         |                                      |
| Chain of Custody Filled Out:<br>-Were client corrections present on COC   | /   |    |    | 2.                         |                                      |
| Chain of Custody Relinquished   | /   |    |    | 3.                         |                                      |
| Sampler Name & Signature on COC:  | /   |    |    | 4.                         |                                      |
| Sample Labels match COC:<br>-Includes date/time/ID<br>Matrix: WT  | /   |    |    | 5.                         |                                      |
| Samples Arrived within Hold Time:   | /   |    |    | 6.                         |                                      |
| Short Hold Time Analysis (<72hr remaining):   |     | /  |    | 7.                         |                                      |
| Rush Turn Around Time Requested:  |     | /  |    | 8.                         |                                      |
| Sufficient Volume:  | /   |    |    | 9.                         |                                      |
| Correct Containers Used:<br>-Pace Containers Used   | /   |    |    | 10.                        |                                      |
| Containers Intact:  | /   |    |    | 11.                        |                                      |
| Orthophosphate field filtered:  |     |    | /  | 12.                        |                                      |
| Hex Cr Aqueous samples field filtered:  |     |    | /  | 13.                        |                                      |
| Organic Samples checked for dechlorination  |     |    | /  | 14.                        |                                      |
| Filtered volume received for dissolved tests:   |     |    | /  | 15.                        |                                      |
| All containers checked for preservation:<br>exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix | /   |    |    | 16.                        |                                      |
| All containers meet method preservation requirements:   | /   |    |    | Initial when completed PS  | Date/Time of Preservation            |
|   |     |    |    | Lot# of added Preservative |                                      |
| Headspace in VOA Vials (>6mm):  |     |    | /  | 17.                        |                                      |
| Trip Blank Present:   |     | /  |    | 18.                        |                                      |
| Trip Blank Custody Seals Present  |     | /  |    |                            |                                      |
| Rad Samples Screened <0.5 mrem/hr.  | /   |    |    | Initial when completed PS  | Date: 12/16/22 Survey Meter SN: 1563 |

Comments:

Note: For NC compliance samples with discrepancies, a copy of this form must be sent to the DEHNR Certification office. PM Review is documented electronically in LIMS through the SRF Review schedule in the Workorder Edit Screen.

Client \_\_\_\_\_

Profile Number 1845

Site 2212171

Notes \_\_\_\_\_

| Sample Line Item | Matrix | AG1H | AG1S | AG1T | AG2U | AG3S | AG3U | AG5U | AG5T | BG1U | BG2U | BP1N | BP1U | BP2S | BP2U | BP3C | BP3N | BP3S | BP3U | DG9S | GCUB | VG9H | VG9T | VG9U | VOAK | WGFU | WGKU | ZPLC |  |
|------------------|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|
| 1                | WT     |      |      |      |      |      |      |      |      |      |      | 2    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |
| 2                |        |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |
| 3                |        |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |
| 4                |        |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |
| 5                |        |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |
| 6                |        |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |
| 7                |        |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |
| 8                |        |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |
| 9                |        |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |
| 10               |        |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |
| 11               |        |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |
| 12               |        |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |

**WO# : 30543590**  
 PM: CMC Due Date: 12/28/22  
 CLIENT: HALL ENVIRON

Container Codes

| Glass |                                  |      |                                    |
|-------|----------------------------------|------|------------------------------------|
| GJN   | 1 Gallon Jug with HNO3           | DG9S | 40mL amber VOA vial H2SO4          |
| AG5U  | 100mL amber glass unpreserved    | VG9U | 40mL clear VOA vial                |
| AG5T  | 100mL amber glass Na Thiosulfate | VG9T | 40mL clear VOA vial Na Thiosulfate |
| GJN   | 1 Gallon Jug                     | VG9H | 40mL clear VOA vial HCl            |
| AG1S  | 1L amber glass H2SO4             | JGFU | 4oz amber wide jar                 |
| AG1H  | 1L amber glass HCl               | WGFU | 4oz wide jar unpreserved           |
| AG1T  | 1L amber glass Na Thiosulfate    | BG2U | 500mL clear glass unpreserved      |
| BG1U  | 1L clear glass unpreserved       | AG2U | 500mL amber glass unpreserved      |
| AG3S  | 250mL amber glass H2SO4          | WGKU | 8oz wide jar unpreserved           |
| AG3U  | 250mL amber glass unpreserved    |      |                                    |

| Plastic / Misc. |                               |
|-----------------|-------------------------------|
| GCUB            | 1 Gallon Cubitainer           |
| 12GN            | 1/2 Gallon Cubitainer         |
| SP5T            | 120mL Coliform Na Thiosulfate |
| BP1N            | 1L plastic HNO3               |
| BP1U            | 1L plastic unpreserved        |
| BP3S            | 250mL plastic H2SO4           |
| BP3N            | 250mL plastic HNO3            |
| BP3U            | 250mL plastic unpreserved     |
| BP3C            | 250ml plastic NAOH            |
| BP2S            | 500mL plastic H2SO4           |
| BP2U            | 500mL plastic unpreserved     |

|      |                        |
|------|------------------------|
| EZ1  | 5g Encore              |
| VOAK | Kit for Volatile Solid |
| I    | Wipe/Swab              |
| ZPLC | Ziploc Bag             |

|    |                    |
|----|--------------------|
| WT | Water              |
| SL | Solid              |
| OL | Non-aqueous liquid |
| WP | Wipe               |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2212171

10-Jan-23

**Client:** AMAFCA  
**Project:** Dry Season 2023

| Sample ID: <b>MB-72027</b>   | SampType: <b>MBLK</b>            | TestCode: <b>EPA Method 200.7: Metals</b> |                    |             |      |          |           |      |          |      |
|------------------------------|----------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: <b>PBW</b>        | Batch ID: <b>72027</b>           | RunNo: <b>93245</b>                       |                    |             |      |          |           |      |          |      |
| Prep Date: <b>12/12/2022</b> | Analysis Date: <b>12/13/2022</b> | SeqNo: <b>3360583</b>                     | Units: <b>mg/L</b> |             |      |          |           |      |          |      |
| Analyte                      | Result                           | PQL                                       | SPK value          | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Calcium                      | ND                               | 1.0                                       |                    |             |      |          |           |      |          |      |
| Magnesium                    | ND                               | 1.0                                       |                    |             |      |          |           |      |          |      |

| Sample ID: <b>LCSLL-72027</b> | SampType: <b>LCSLL</b>           | TestCode: <b>EPA Method 200.7: Metals</b> |                    |             |      |          |           |      |          |      |
|-------------------------------|----------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: <b>BatchQC</b>     | Batch ID: <b>72027</b>           | RunNo: <b>93245</b>                       |                    |             |      |          |           |      |          |      |
| Prep Date: <b>12/12/2022</b>  | Analysis Date: <b>12/13/2022</b> | SeqNo: <b>3360584</b>                     | Units: <b>mg/L</b> |             |      |          |           |      |          |      |
| Analyte                       | Result                           | PQL                                       | SPK value          | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Calcium                       | 0.53                             | 1.0                                       | 0.5000             | 0           | 105  | 50       | 150       |      |          | J    |
| Magnesium                     | 0.53                             | 1.0                                       | 0.5000             | 0           | 106  | 50       | 150       |      |          | J    |

| Sample ID: <b>LCS-72027</b>  | SampType: <b>LCS</b>             | TestCode: <b>EPA Method 200.7: Metals</b> |                    |             |      |          |           |      |          |      |
|------------------------------|----------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: <b>LCSW</b>       | Batch ID: <b>72027</b>           | RunNo: <b>93245</b>                       |                    |             |      |          |           |      |          |      |
| Prep Date: <b>12/12/2022</b> | Analysis Date: <b>12/13/2022</b> | SeqNo: <b>3360585</b>                     | Units: <b>mg/L</b> |             |      |          |           |      |          |      |
| Analyte                      | Result                           | PQL                                       | SPK value          | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Calcium                      | 50                               | 1.0                                       | 50.00              | 0           | 99.7 | 85       | 115       |      |          |      |
| Magnesium                    | 51                               | 1.0                                       | 50.00              | 0           | 102  | 85       | 115       |      |          |      |

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2212171

10-Jan-23

**Client:** AMAFCA  
**Project:** Dry Season 2023

| Sample ID: <b>MB</b>  | SampType: <b>MBLK</b>           | TestCode: <b>EPA 200.8: Dissolved Metals</b> |                    |             |      |          |           |      |          |      |
|-----------------------|---------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: <b>PBW</b> | Batch ID: <b>A93091</b>         | RunNo: <b>93091</b>                          |                    |             |      |          |           |      |          |      |
| Prep Date:            | Analysis Date: <b>12/7/2022</b> | SeqNo: <b>3352964</b>                        | Units: <b>mg/L</b> |             |      |          |           |      |          |      |
| Analyte               | Result                          | PQL  | SPK value          | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Copper                | ND                              | 0.0010                                       |                    |             |      |          |           |      |          |      |

| Sample ID: <b>LCSLL</b>   | SampType: <b>LCSLL</b>          | TestCode: <b>EPA 200.8: Dissolved Metals</b> |                    |             |      |          |           |      |          |      |
|---------------------------|---------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: <b>BatchQC</b> | Batch ID: <b>A93091</b>         | RunNo: <b>93091</b>                          |                    |             |      |          |           |      |          |      |
| Prep Date:                | Analysis Date: <b>12/7/2022</b> | SeqNo: <b>3352965</b>                        | Units: <b>mg/L</b> |             |      |          |           |      |          |      |
| Analyte                   | Result                          | PQL  | SPK value          | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Copper                    | 0.00089                         | 0.0010                                       | 0.001000           | 0           | 89.5 | 50       | 150       |      |          | J    |

| Sample ID: <b>LCS</b>  | SampType: <b>LCS</b>            | TestCode: <b>EPA 200.8: Dissolved Metals</b> |                    |             |      |          |           |      |          |      |
|------------------------|---------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: <b>LCSW</b> | Batch ID: <b>A93091</b>         | RunNo: <b>93091</b>                          |                    |             |      |          |           |      |          |      |
| Prep Date:             | Analysis Date: <b>12/7/2022</b> | SeqNo: <b>3352966</b>                        | Units: <b>mg/L</b> |             |      |          |           |      |          |      |
| Analyte                | Result                          | PQL  | SPK value          | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Copper                 | 0.023                           | 0.0010                                       | 0.02500            | 0           | 91.7 | 85       | 115       |      |          |      |

**Qualifiers:**

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.                                      | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix  | E Above Quantitation Range/Estimated Value        |
| H Holding times for preparation or analysis exceeded                            | J Analyte detected below quantitation limits      |
| ND Not Detected at the Reporting Limit  | P Sample pH Not In Range                          |
| PQL Practical Quantitative Limit  | RL Reporting Limit                                |
| S % Recovery outside of standard limits. If undiluted results may be estimated. |   |

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212171

10-Jan-23

**Client:** AMAFCA  
**Project:** Dry Season 2023

| Sample ID: <b>MB-71853</b>  | SampType: <b>MBLK</b>           | TestCode: <b>SM 9223B Fecal Indicator: E. coli MPN</b> |           |             |                         |          |           |      |          |      |
|-----------------------------|---------------------------------|--|-----------|-------------|-------------------------|----------|-----------|------|----------|------|
| Client ID: <b>PBW</b>       | Batch ID: <b>71853</b>          | RunNo: <b>93086</b>                                    |           |             |                         |          |           |      |          |      |
| Prep Date: <b>12/5/2022</b> | Analysis Date: <b>12/6/2022</b> | SeqNo: <b>3352628</b>                                  |           |             | Units: <b>MPN/100mL</b> |          |           |      |          |      |
| Analyte                     | Result                          | PQL  | SPK value | SPK Ref Val | %REC                    | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| E. Coli                     | <1                              | 1.000  |           |             |                         |          |           |      |          |      |

## Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank  
E Above Quantitation Range/Estimated Value  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit



Sample Log-In Check List

Client Name: AMAFCA

Work Order Number: 2212171

RcptNo: 1

Received By: Juan Rojas

12/5/2022 8:42:00 AM

[Handwritten signature]

Completed By: Sean Livingston

12/5/2022 11:13:42 AM

[Handwritten signature]

Reviewed By: JR 12/5/22

@ 1:30

Chain of Custody

1. Is Chain of Custody complete? Yes [checked] No [ ] Not Present [ ]

2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes [checked] No [ ] NA [ ]

4. Were all samples received at a temperature of >0° C to 6.0° C Yes [checked] No [ ] NA [ ]

5. Sample(s) in proper container(s)? Yes [checked] No [ ]

6. Sufficient sample volume for indicated test(s)? Yes [checked] No [ ]

7. Are samples (except VOA and ONG) properly preserved? Yes [checked] No [ ]

8. Was preservative added to bottles? Yes [ ] No [checked] NA [ ]

9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes [ ] No [ ] NA [checked]

10. Were any sample containers received broken? Yes [ ] No [checked]

11. Does paperwork match bottle labels? Yes [checked] No [ ]

(Note discrepancies on chain of custody)

12. Are matrices correctly identified on Chain of Custody? Yes [checked] No [ ]

13. Is it clear what analyses were requested? Yes [checked] No [ ]

14. Were all holding times able to be met? Yes [checked] No [ ]

(If no, notify customer for authorization.)

# of preserved bottles checked for pH: 4 (<2 or >12 unless noted) Adjusted? NO Checked by: KPL 12.05.22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes [ ] No [ ] NA [checked]

Person Notified: [ ] Date: [ ] By Whom: [ ] Via: [ ] eMail [ ] Phone [ ] Fax [ ] In Person [ ] Regarding: [ ] Client Instructions: [ ]

16. Additional remarks:

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 5.7, Good, [ ], [ ], [ ], [ ]

# Chain-of-Custody Record

Client: AMAFCA

Mailing Address: 2600 Prospect Ave

Albuquerque, NM, 87107

Phone #: 505-218-2798

email or Fax#: pchavez@amafca.org

QA/QC Package: epadilla@amafca.org

Standard  Level 4 (Full Validation)

Accreditation:  Az Compliance  NELAC  Other

EDD (Type) excel spreadsheet

Turn-Around Time:  
 Standard  Rush

Project Name: Dry Season '23

Project #:

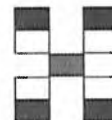
Project Manager: PJ Chavez

Sampler: Esgui Padilla

On Ice:  Yes  No

# of Coolers: 1

Cooler Temp (including CF): 5.6+6.1=5.7 (°C)



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

### Analysis Request

| Date    | Time  | Matrix | Sample Name  | Container Type and # | Preservative Type | HEAL No. | BTEX / MTBE / TMB's (8021) | TPH:8015D(GRO / DRO / MRO) | 8081 Pesticides/8082 PCB's | EDB (Method 504.1) | PAHs by 8310 or 8270SIMS | RCRA 8 Metals | Cl, F, Br, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> | 8260 (VOA) | 8270 (Semi-VOA) | Total Coliform (Present/Absent) | Remarks |         |   |                   |   |                        |   |                       |   |                  |   |             |  |
|---------|-------|--------|--------------|----------------------|-------------------|----------|----------------------------|----------------------------|----------------------------|--------------------|--------------------------|---------------|--|------------|-----------------|---------------------------------|---------|---------|---|-------------------|---|------------------------|---|-----------------------|---|------------------|---|-------------|--|
|         |       |        |              |                      |                   |          |                            |                            |                            |                    |                          |               |  |            |                 |                                 |         |         |   |                   |   |                        |   |                       |   |                  |   |             |  |
| 12/5/22 | 20:13 |        | NDC-20221203 |                      |                   | 2212171  |                            |                            |                            |                    |                          |               |  |            |                 |                                 | X       | E. coli | X | PCBs (method 608) | X | Gross Alpha (adjusted) | X | Mercury (method 1631) | X | Dissolved Copper | X | see remarks |  |
|         |       |        |              |                      |                   |          |                            |                            |                            |                    |                          |               |  |            |                 |                                 |         |         |   |                   |   |                        |   |                       |   |                  |   |             |  |

Date: 12/5/22 Time: 8:42 Relinquished by: [Signature]

Received by: [Signature] Via: OOO Date: 12/5/22 Time: 8:42

Remarks: Chromium VI (Hexavalent)  
Hardness  
Semivolatiles: Benzo (a) anthracene, Benzo (b) Fluoranthene, Benzo (k) Fluoranthene, Chrysene, Indeno 1,2,3-cd pyrene

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Attached Sheet – 625

Benzo(a)anthracene

Benzo(b)fluoranthene

Benzo(k)fluoranthene

Chrysene

Indeno(1,2,3-cd)pyrene



Sampler Esgui Padilla

## AMAFCA Dry Season 2023 Sampling Data Sheet

Site Identification: **ML-2 South Diversion Channel**

ISCO Programming Dates    24 hour start:                      Time restricted start:                      Shut off:

Full Suite Sample Date and Time:                      12/4/22 @ 01:03

Full Sample identification:                      SDC-20221204

E. coli (in holding time) Sample Date and Time:

E. coli (in holding time) Sample Identification:

QC Samples:                      Duplicate/None                      QC Sample ID:

QC Sample Time:

|                              |                     |                        |                   |
|------------------------------|---------------------|------------------------|-------------------|
| Full Suite Collection Point: | <u>ISCO Sampler</u> | Grab                   | Other:            |
| E. coli Collection Point:    | ISCO Sampler        | Grab                   | Other:            |
| Full Suite Sample Volume:    | <u>10 Lit.</u>      | Collection Time Start: | End: <u>01:03</u> |
| E. coli Sample Volume:       |                     | Collection Time Start: | End:              |

Field Parameters (measured every sampling event)

| Date           | Time         | Temp (°C)  | pH          | Specific Conductance (µS/cm) | Dissolved Oxygen (mg/L) | Clarity, Odor, Other |
|----------------|--------------|------------|-------------|------------------------------|-------------------------|----------------------|
| <u>12/5/22</u> | <u>10:55</u> | <u>8.8</u> | <u>8.02</u> | <u>120</u>                   | <u>8.86</u>             |                      |
|                |              |            |             |                              |                         |                      |

Turbid Water     Color brown     Oil/Sheen     Foam     Odor \_\_\_\_\_

|                                      |   |
|--------------------------------------|---|
| Qualifying Source: <u>Colo Ra HS</u> | Station Name/#: <u>NM-BR-292: Albuguergne S.S S</u>                   |
| Gauge Catch: <u>.52</u>              | Observation Date/Time: <u>12/4/22 @ 07:06</u>                         |
| Qualifying Source: <u>Colo Ra HS</u> | Station Name/#: <u>NM-BR-360: Albuguergne 3.4 SSE</u>                 |
| Gauge Catch: <u>.54</u>              | Observation Date/Time: <u>12/4/22 @ 07:00</u>                         |
| Pump alarm alert date/time:          | Sensor 1: <input type="checkbox"/> Sensor 2: <input type="checkbox"/> |

Notes:  
↳ Full suite sample submitted with E. coli sample not within holding time





# Chain-of-Custody Record

Client: AmAFA

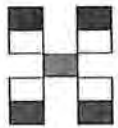
Mailing Address: 21090 Prospect Ave

Phone #: 505-218-2778

QA/QC Package: PPM-110 @ amfa.com  
 Standard  Level 4 (Full Validation)

Accreditation:  Az Compliance  
 NELAC  Other  
 EDD (Type) 21091 prospect

Turn-Around Time:  
 Standard  Rush  
 Project Name: Dun Season 23  
 Project #:  
 Project Manager: P (Wave 3)  
 Sampler: Spri Padilla  
 On Ice:  Yes  No  
 # of Coolers: 1  
 Cooler Temp (including CF): 57 and 58 (°C)



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

### Analysis Request

| Container Type and # | Preservative Type | HEAL No. |
|----------------------|-------------------|----------|
|----------------------|-------------------|----------|

| BTEX / MTBE / TMB's (8021) | TPH:8015D(GRO / DRO / MRO) | 8081 Pesticides/8082 PCB's | EDB (Method 504.1) | PAHs by 8310 or 8270SIMS | RCRA 8 Metals | Cl, F, Br, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> | 8260 (VOA) | 8270 (Semi-VOA) | Total Coliform (Present/Absent) |
|----------------------------|----------------------------|----------------------------|--------------------|--------------------------|---------------|--|------------|-----------------|---------------------------------|
|                            |                            |                            |                    |                          |               |  |            |                 | E. coli                         |
|                            |                            |                            |                    |                          |               |  |            |                 | PLBSI method 608                |
|                            |                            |                            |                    |                          |               |  |            |                 | Mercuru / method 631            |
|                            |                            |                            |                    |                          |               |  |            |                 | Chlorine II (hexavalent)        |

| Date    | Time | Matrix | Sample Name  |
|---------|------|--------|--------------|
| 12/1/22 | 9:05 |        | SDP-20221204 |

|                     |                    |                                     |                                 |                 |                      |                    |
|---------------------|--------------------|-------------------------------------|---------------------------------|-----------------|----------------------|--------------------|
| Date: <u>2/5/23</u> | Time: <u>12:10</u> | Relinquished by: <u>[Signature]</u> | Received by: <u>[Signature]</u> | Via: <u>air</u> | Date: <u>12/5/22</u> | Time: <u>12:10</u> |
| Date:               | Time:              | Relinquished by:                    | Received by:                    | Via:            | Date:                | Time:              |

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

December 21, 2022

Patrick Chavez

AMAFCA

2600 Prospect Ave NE

Albuquerque, NM 87107

TEL: (505) 884-2215

FAX

12/4/2022 full suite sample  
from the South Diversion  
Channel. E. coli not within  
hold time.

RE: Dry Season 23

OrderNo.: 2212179

Dear Patrick Chavez:

Hall Environmental Analysis Laboratory received 1 sample(s) on 12/5/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman'.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Field Parameters  
South Diversion Channel -  
Temp = 8.8°C  
pH = 8.02  
Conductivity (uS/cm=umho/cm) = 120  
Dissolved Oxygen (mg/L) = 8.86

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 2212179

Date Reported: 12/21/2022

**CLIENT:** AMAFCA

**Client Sample ID:** SDC-20221204

**Project:** Dry Season 23

**Collection Date:** 12/4/2022 1:03:00 AM

**Lab ID:** 2212179-001

**Matrix:** AQUEOUS

**Received Date:** 12/5/2022 12:10:00 PM

| Analyses                                     | Result | MDL   | RL    | Qual | Units   | DF | Date Analyzed        | Batch ID |
|--|--------|-------|-------|------|---------|----|----------------------|----------|
| <b>SM 9223B FECAL INDICATOR: E. COLI MPN</b> |        |       |       |      |         |    | Analyst: SMS         |          |
| E. Coli                                      | 1467   | 10.00 | 10.00 | H    | MPN/100 | 10 | 12/6/2022 4:26:00 PM | 71853    |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

|                    |     |   |    |   |
|--------------------|-----|---|----|---|
| <b>Qualifiers:</b> | *   | Value exceeds Maximum Contaminant Level.                                      | B  | Analyte detected in the associated Method Blank |
|                    | D   | Sample Diluted Due to Matrix  | E  | Above Quantitation Range/Estimated Value        |
|                    | H   | Holding times for preparation or analysis exceeded                            | J  | Analyte detected below quantitation limits      |
|                    | ND  | Not Detected at the Reporting Limit   | P  | Sample pH Not In Range                          |
|                    | PQL | Practical Quantitative Limit  | RL | Reporting Limit                                 |
|                    | S   | % Recovery outside of standard limits. If undiluted results may be estimated. |    |   |

# Anatek Labs, Inc.

1282 Alturas Drive - Moscow, ID 83843 - (208) 883-2839 - Fax (208) 8829246 - email moscow@anateklabs.com  
504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - fax (509) 838-4433 - email spokane@anateklabs.com

**Client:** Hall Environmental Analysis Lab  
**Address:** 4901 Hawkins NE Suite D  
Albuquerque, NM 87109  
**Attn:** Andy Freeman

**Work Order:** MCL0148  
**Project:** 2212179  
**Reported:** 12/20/2022 13:03

## Analytical Results Report

**Sample Location:** 2212179-001B (SDC-20221204)  
**Lab/Sample Number:** MCL0148-01 **Collect Date:** 12/04/22 01:03  
**Date Received:** 12/06/22 13:11 **Collected By:**  
**Matrix:** Water

| Analyte                 | Result       | Units | MDL           | PQL   | Analyzed            | Analyst    | Method           | Qualifier |
|-------------------------|--------------|-------|---------------|-------|---------------------|------------|------------------|-----------|
| <b>Semivolatiles</b>    |              |       |               |       |                     |            |                  |           |
| Aroclor 1016 (PCB-1016) | ND           | ug/L  | 0.200         | 0.800 | 12/9/22 3:25        | GPB        | EPA 608.3        | U         |
| Aroclor 1221 (PCB-1221) | ND           | ug/L  | 0.200         | 0.800 | 12/9/22 3:25        | GPB        | EPA 608.3        | U         |
| Aroclor 1232 (PCB-1232) | ND           | ug/L  | 0.200         | 0.800 | 12/9/22 3:25        | GPB        | EPA 608.3        | U         |
| Aroclor 1242 (PCB-1242) | ND           | ug/L  | 0.200         | 0.800 | 12/9/22 3:25        | GPB        | EPA 608.3        | U         |
| Aroclor 1248 (PCB-1248) | ND           | ug/L  | 0.200         | 0.800 | 12/9/22 3:25        | GPB        | EPA 608.3        | U         |
| Aroclor 1254 (PCB-1254) | ND           | ug/L  | 0.200         | 0.800 | 12/9/22 3:25        | GPB        | EPA 608.3        | U         |
| Aroclor 1260 (PCB-1260) | ND           | ug/L  | 0.200         | 0.800 | 12/9/22 3:25        | GPB        | EPA 608.3        | U         |
| <i>Surrogate: DCB</i>   | <i>90.3%</i> |       | <i>40-130</i> |       | <i>12/9/22 3:47</i> | <i>GPB</i> | <i>EPA 608.3</i> |           |

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## Analytical Results Report

(Continued)

Sample Location: 2212179-001C (SDC-20221204)  
Lab/Sample Number: MCL0148-02 Collect Date: 12/04/22 01:03  
Date Received: 12/06/22 13:11 Collected By:  
Matrix: Water

| Analyte        | Result | Units | MDL     | PQL     | Analyzed      | Analyst | Method     | Qualifier |
|----------------|--------|-------|---------|---------|---------------|---------|------------|-----------|
| <b>Mercury</b> |        |       |         |         |               |         |            |           |
| Mercury        | 0.0299 | ug/L  | 0.00200 | 0.00500 | 12/8/22 14:58 | BSM     | EPA 1631 E | D1        |

Authorized Signature,



Justin Doty For Todd Taruscio, Laboratory Manager

- D1 Sample required dilution due to matrix  
J The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.  
U Compound was analyzed for but not detected  
PQL Practical Quantitation Limit  
ND Not Detected  
MDL Method Detection Limit  
Dry Sample results reported on a dry weight basis  
\* Not a state-certified analyte  
RPD Relative Percent Difference  
%REC Percent Recovery  
Source Sample that was spiked or duplicated.

This report shall not be reproduced except in full, without the written approval of the laboratory  
The results reported related only to the samples indicated.



# Anatek Labs, Inc.

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 504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - fax (509) 838-4433 - email spokane@anateklabs.com

## Quality Control Data

### Mercury

| Analyte                                | Result  | Qual | Reporting Limit | Units | Spike Level                    | Source Result | %REC | %REC Limits | RPD  | RPD Limit |
|--|---------|------|-----------------|-------|--------------------------------|---------------|------|-------------|------|-----------|
| <b>Batch: BCL0232 - Hg Trace</b>       |         |      |                 |       |                                |               |      |             |      |           |
| <b>Blank (BCL0232-BLK1)</b>            |         |      |                 |       |                                |               |      |             |      |           |
| Mercury                                | ND      | U    | 0.000500        | ug/L  |                                |               |      |             |      |           |
|  |         |      |                 |       | Prepared & Analyzed: 12/8/2022 |               |      |             |      |           |
| <b>LCS (BCL0232-BS1)</b>               |         |      |                 |       |                                |               |      |             |      |           |
| Mercury                                | 0.00474 |      | 0.000500        | ug/L  | 0.00500                        |               | 94.7 | 77-123      |      |           |
|  |         |      |                 |       | Prepared & Analyzed: 12/8/2022 |               |      |             |      |           |
| <b>Matrix Spike (BCL0232-MS1)</b>      |         |      |                 |       |                                |               |      |             |      |           |
| Mercury                                | 0.00498 |      | 0.000500        | ug/L  | 0.00500                        | 0.000697      | 85.7 | 71-125      |      |           |
|  |         |      |                 |       | Prepared & Analyzed: 12/8/2022 |               |      |             |      |           |
| <b>Matrix Spike Dup (BCL0232-MSD1)</b> |         |      |                 |       |                                |               |      |             |      |           |
| Mercury                                | 0.00530 |      | 0.000500        | ug/L  | 0.00500                        | 0.000697      | 92.1 | 71-125      | 6.22 | 24        |
|  |         |      |                 |       | Prepared & Analyzed: 12/8/2022 |               |      |             |      |           |

## Quality Control Data

### Semivolatiles

| Analyte                            | Result | Qual | Reporting Limit | Units       | Spike Level                             | Source Result | %REC       | %REC Limits   | RPD | RPD Limit |
|------------------------------------|--------|------|-----------------|-------------|---|---------------|------------|---------------|-----|-----------|
| <b>Batch: BCL0233 - Pesticides</b> |        |      |                 |             |   |               |            |               |     |           |
| <b>Blank (BCL0233-BLK1)</b>        |        |      |                 |             |   |               |            |               |     |           |
|                                    |        |      |                 |             | Prepared: 12/8/2022 Analyzed: 12/9/2022 |               |            |               |     |           |
| Arochlor 1016 (1)                  | ND     | U    | 0.200           | ug/L        |   |               |            |               |     |           |
| Arochlor 1221 (1)                  | ND     | U    | 0.200           | ug/L        |   |               |            |               |     |           |
| Arochlor 1232 (1)                  | ND     | U    | 0.200           | ug/L        |   |               |            |               |     |           |
| Arochlor 1242 (1)                  | ND     | U    | 0.200           | ug/L        |   |               |            |               |     |           |
| Arochlor 1248 (1)                  | ND     | U    | 0.200           | ug/L        |   |               |            |               |     |           |
| Arochlor 1254 (1)                  | ND     | U    | 0.200           | ug/L        |   |               |            |               |     |           |
| Arochlor 1260 (1)                  | ND     | U    | 0.200           | ug/L        |   |               |            |               |     |           |
| <i>Surrogate: DCB</i>              |        |      | <i>1.28</i>     | <i>ug/L</i> | <i>1.25</i>                             |               | <i>103</i> | <i>40-130</i> |     |           |



**CHAIN OF CUSTODY RECORD**

PAGE: 1 OF: 1

Hall Environmental Analysis Laboratory

MCL0148



Due: 12/20/22

|   |                                   |                              |      |
|---|-----------------------------------|------------------------------|------|
| SUB CONTRACTOR: <b>Anatek ID</b>          | COMPANY: <b>Anatek Labs, Inc.</b> | PHONE: <b>(208) 883-2839</b> | FAX: |
| ADDRESS: <b>1282 Alturas Dr</b>           | ACCOUNT #:                        | EMAIL:                       |      |
| CITY, STATE, ZIP: <b>Moscow, ID 83843</b> |                                   |                              |      |

| ITEM | SAMPLE       | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX  | COLLECTION DATE      | # CONTAINERS | ANALYTICAL COMMENTS |
|------|--------------|------------------|-------------|---------|----------------------|--------------|---------------------|
| 1    | 2212179-001B | SDC-20221204     | 1LAMGU      | Aqueous | 12/4/2022 1:03:00 AM | 1            | PCBs by 608         |
| 2    | 2212179-001C | SDC-20221204     | 250ML CLEAR | Aqueous | 12/4/2022 1:03:00 AM | 1            | 1631 Hg             |

**SPECIAL INSTRUCTIONS / COMMENTS:**

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

|   |                 |               |                         |                |             |   |
|---|-----------------|---------------|-------------------------|----------------|-------------|---|
| Relinquished By: <i>JVA</i>   | Date: 12/5/2022 | Time: 1:24 PM | Received By: <i>JVA</i> | Date: 12/16/22 | Time: 13:11 | REPORT TRANSMITTAL DESIRED:<br><input type="checkbox"/> HARDCOPY (extra cost) <input type="checkbox"/> FAX <input type="checkbox"/> EMAIL <input type="checkbox"/> ONLINE<br><br>FOR LAB USE ONLY<br><br>Temp of samples _____ °C    Attempt to Cool? _____<br><br>Comments _____ |
| Relinquished By:  | Date:           | Time:         | Received By:            | Date:          | Time:       |   |
| Relinquished By:  | Date:           | Time:         | Received By:            | Date:          | Time:       |   |
| TAT:    Standard <input checked="" type="checkbox"/> RUSH    Next BD <input type="checkbox"/> 2nd BD <input type="checkbox"/> 3rd BD <input type="checkbox"/> |                 |               |                         |                |             |   |



Sample Receipt and Preservation Form

MCL0148



Due: 12/20/22

Client Name: Hall

TAT: Normal RUSH: \_\_\_\_\_ days

Samples Received From: FedEx UPS USPS Client Courier Other: \_\_\_\_\_

Custody Seal on Cooler/Box: Yes No Custody Seals Intact: Yes No N/A

Number of Coolers/Boxes: 1 Type of Ice: Wet Ice Ice Packs Dry Ice None

Packing Material: Bubble Wrap Bags Foam/Peanuts Paper None Other: \_\_\_\_\_

Cooler Temp As Read (°C): 1.9 Cooler Temp Corrected (°C): - Thermometer Used: JW-5

Comments:

Samples Received Intact? Yes No N/A  
 Chain of Custody Present/Complete? Yes No N/A  
 Labels and Chains Agree? Yes No N/A  
 Samples Received Within Hold Time? Yes No N/A  
 Correct Containers Received? Yes No N/A  
 Anatek Bottles Used? Yes No Unknown  
 Total Number of Sample Bottles Received: 2

|  |
|--|
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |

Samples Properly Preserved? Yes No N/A  
*if No, record preservation and pH-after details*  
 VOC Vials Free of Headpace (<6mm)? Yes No N/A  
 VOC Trip Blanks Present? Yes No N/A

|             |              |
|-------------|--------------|
| Initial pH: | pH Paper ID: |
| <2 or       |              |
|             |              |
|             |              |
|             |              |

Record preservatives (and lot numbers, if known) for containers below:

HCl - 1631 - g 250ml

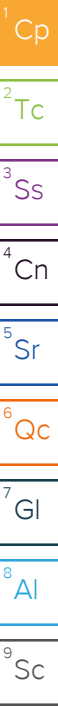
Notes, comments, etc. (also use this space if contacting the client - record names and date/time)

PCBs by 608 - g 1L

Received/Inspected By: JWT Date/Time: 12/16/22 13:11

Form F19.01 - Eff 1 Dec 2022

Page 1 of 1



## Hall Environmental Analysis Laboratory

Sample Delivery Group: L1564374

Samples Received: 12/06/2022

Project Number:

Description:

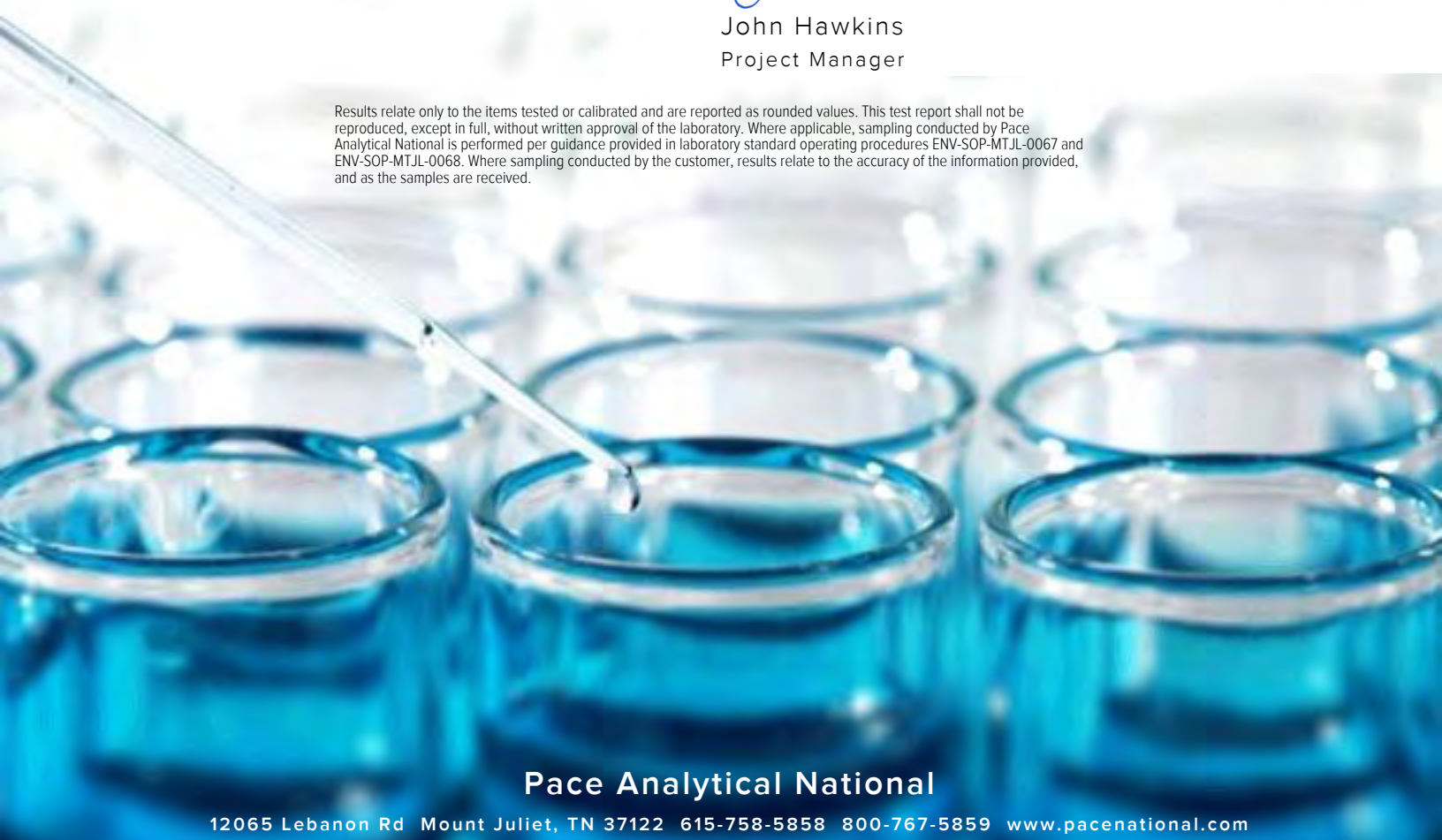
Report To: Andy Freeman  
4901 Hawkins NE  
Albuquerque, NM 87109

Entire Report Reviewed By:



John Hawkins  
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



**Pace Analytical National**

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 [www.pacenational.com](http://www.pacenational.com)

**H125**

| SUB CONTRACTOR: <b>Pace TN</b>                |              | COMPANY: <b>PACE TN</b> |             | PHONE: <b>(800) 767-5859</b> | FAX: <b>(615) 758-5859</b> |              |  |
|---|--------------|-------------------------|-------------|------------------------------|----------------------------|--------------|--|
| ADDRESS: <b>12065 Lebanon Rd</b>              |              |                         |             | ACCOUNT #:                   | EMAIL:                     |              |  |
| CITY, STATE, ZIP: <b>Mt. Juliet, TN 37122</b> |              |                         |             |                              |                            |              |  |
| ITEM  | SAMPLE       | CLIENT SAMPLE ID        | BOTTLE TYPE | MATRIX                       | COLLECTION DATE            | # CONTAINERS | ANALYTICAL COMMENTS                                  |
| 1   | 2212179-001D | SDC-20221204            | 120mL       | Aqueous                      | 12/4/2022 1:03:00 AM       | 1            | HEXAVALENT CHROMIUM<br><i>L1564374</i><br><i>-01</i> |

**Sample Receipt Checklist**

COC Seal Present/Intact:  Y  N *If Applicable*

COC Signed/Accurate:  Y  N

Bottles arrive intact:  Y  N *VOA Zero Headspace:  Y  N*

Correct bottles used:  Y  N *Pres. Correct/Check:  Y  N*

Sufficient volume sent:  Y  N

RAD Screen <0.5 mR/hr:  Y  N

*7706 8121 2380*  
*MSA2*  
*2.1 to = 2.1*

**SPECIAL INSTRUCTIONS / COMMENTS:**  
Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

|   |                        |                      |                                 |                      |                   |  |
|---|------------------------|----------------------|---------------------------------|----------------------|-------------------|--|
| Relinquished By: <i>see</i>   | Date: <b>12/5/2022</b> | Time: <b>1:32 PM</b> | Received By: <i>[Signature]</i> | Date: <b>12/6/22</b> | Time: <b>9:00</b> | <b>REPORT TRANSMITTAL DESIRED:</b><br><input type="checkbox"/> <b>HARDCOPY</b> (extra cost) <input type="checkbox"/> <b>FAX</b> <input type="checkbox"/> <b>EMAIL</b> <input type="checkbox"/> <b>ONLINE</b><br><br><b>FOR LAB USE ONLY</b><br><br>Temp of samples _____ °C    Attempt to Cool? _____<br><br>Comments: _____ |
| Relinquished By:  | Date:                  | Time:                | Received By:                    | Date:                | Time:             |  |
| Relinquished By:  | Date:                  | Time:                | Received By:                    | Date:                | Time:             |  |
| <b>TAT:</b> Standard <input checked="" type="checkbox"/> <b>RUSH</b> Next BD <input type="checkbox"/> 2nd BD <input type="checkbox"/> 3rd BD <input type="checkbox"/> |                        |                      |                                 |                      |                   |  |

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212179

21-Dec-22

Client: AMAFCA  
Project: Dry Season 23

| Sample ID: <b>MB-71853</b>  | SampType: <b>MBLK</b>           | TestCode: <b>SM 9223B Fecal Indicator: E. coli MPN</b> |           |             |                         |          |           |      |          |      |
|-----------------------------|---------------------------------|--|-----------|-------------|-------------------------|----------|-----------|------|----------|------|
| Client ID: <b>PBW</b>       | Batch ID: <b>71853</b>          | RunNo: <b>93086</b>                                    |           |             |                         |          |           |      |          |      |
| Prep Date: <b>12/5/2022</b> | Analysis Date: <b>12/6/2022</b> | SeqNo: <b>3352628</b>                                  |           |             | Units: <b>MPN/100mL</b> |          |           |      |          |      |
| Analyte                     | Result                          | PQL  | SPK value | SPK Ref Val | %REC                    | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| E. Coli                     | <1                              | 1.000  |           |             |                         |          |           |      |          |      |

## Qualifiers:

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.                                      | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix  | E Above Quantitation Range/Estimated Value        |
| H Holding times for preparation or analysis exceeded                            | J Analyte detected below quantitation limits      |
| ND Not Detected at the Reporting Limit  | P Sample pH Not In Range                          |
| PQL Practical Quantitative Limit  | RL Reporting Limit                                |
| S % Recovery outside of standard limits. If undiluted results may be estimated. |   |

**Sample Log-In Check List**

Client Name: AMAFCA

Work Order Number: 2212179

RcptNo: 1

Received By: Joseph Alderette 12/5/2022 12:10:00 PM

Completed By: Sean Livingston 12/5/2022 12:21:41 PM

Reviewed By: *ju 12/5/22 @ 13:15*

*SL*  
*Sean Livingston*

**Chain of Custody**

1. Is Chain of Custody complete? Yes  No  Not Present
2. How was the sample delivered? Client

**Log In**

3. Was an attempt made to cool the samples? Yes  No  NA
4. Were all samples received at a temperature of >0° C to 6.0°C Yes  No  NA
5. Sample(s) in proper container(s)? Yes  No
6. Sufficient sample volume for indicated test(s)? Yes  No
7. Are samples (except VOA and ONG) properly preserved? Yes  No
8. Was preservative added to bottles? Yes  No  NA
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes  No  NA
10. Were any sample containers received broken? Yes  No
11. Does paperwork match bottle labels? Yes  No   
 (Note discrepancies on chain of custody)
12. Are matrices correctly identified on Chain of Custody? Yes  No
13. Is it clear what analyses were requested? Yes  No
14. Were all holding times able to be met? Yes  No   
 (If no, notify customer for authorization.)

# of preserved bottles checked for pH: \_\_\_\_\_  
 (<2 or >12 unless noted)  
 Adjusted? \_\_\_\_\_  
 Checked by: *KPA 12.05.22*

**Special Handling (if applicable)**

15. Was client notified of all discrepancies with this order? Yes  No  NA

|                      |       |       |   |
|----------------------|-------|-------|---|
| Person Notified:     | _____ | Date: | _____   |
| By Whom:             | _____ | Via:  | <input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person |
| Regarding:           | _____ |       |   |
| Client Instructions: | _____ |       |   |

16. Additional remarks:

**17. Cooler Information**

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1         | 5.8     | Good      |             |         |           |           |

# Chain-of-Custody Record

Client: AMAFCA

Mailing Address: 2600 Prospect Ave.

Albuquerque, NM 87107

Phone #: 505-218-2798

email or Fax#: pchavez@amafca.org

QA/QC Package: epadilla@amafca.org

Standard  Level 4 (Full Validation)

Accreditation:  Az Compliance

NELAC  Other

EDD (Type) excel spreadsheet

Turn-Around Time:

Standard  Rush

Project Name:

Dry Season '23

Project #:

.

Project Manager:

PJ Chavez

Sampler: Esgui Padilla

On Ice:  Yes  No

# of Coolers: 1

Cooler Temp (including CF): 5.7 to 6.1 = 5.8 (°C)

Date

Time

Matrix

Sample Name

12/4/22 01:03

SDC-20221204

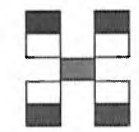
Container Type and #

Preservative Type

HEAL No.

2212179

001



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

### Analysis Request

| BTEX / MTBE / TMB's (8021) | TPH:8015D(GRO / DRO / MRO) | 8081 Pesticides/8082 PCB's | EDB (Method 504.1) | PAHs by 8310 or 8270SIMS | RCRA 8 Metals | Cl, F, Br, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> | 8260 (VOA) | 8270 (Semi-VOA) | Total Coliform (Present/Absent)  |
|----------------------------|----------------------------|----------------------------|--------------------|--------------------------|---------------|--|------------|-----------------|----------------------------------|
|                            |                            |                            |                    |                          |               |  |            |                 | <u>E. coli</u>                   |
|                            |                            |                            |                    |                          |               |  |            |                 | <u>PCBs (method 608)</u>         |
|                            |                            |                            |                    |                          |               |  |            |                 | <u>Mercury (method 1631)</u>     |
|                            |                            |                            |                    |                          |               |  |            |                 | <u>Chromium VI (Hexa valent)</u> |

Date: 12/5/22 Time: 12:10 Relinquished by: [Signature]

Received by: [Signature] Via: CDU Date: 12-5-22 Time: 12:10

Remarks:

Date: Time: Relinquished by:

Received by: Via: Date: Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Sampler Esqui Padilla

## AMAFCA Dry Season 2023 Sampling Data Sheet

Site Identification: **8 – Hahn Arroyo**

ISCO Programming Dates    24 hour start:                      Time restricted start:                      Shut off:

Full Suite Sample Date and Time:

Full Sample identification:

E. coli (in holding time) Sample Date and Time:    1/17/23 @ 13:20

E. coli (in holding time) Sample Identification:    Hahn-2023 0117

QC Samples:    Duplicate/None                      QC Sample ID:

QC Sample Time:

|                              |               |                                     |                   |
|------------------------------|---------------|-------------------------------------|-------------------|
| Full Suite Collection Point: | ISCO Sampler  | Grab                                | Other:            |
| E. coli Collection Point:    | ISCO Sampler  | Grab                                | Other:            |
| Full Suite Sample Volume:    |               | Collection Time Start:              | End:              |
| E. coli Sample Volume:       | <u>6 Lit.</u> | Collection Time Start: <u>13:20</u> | End: <u>13:20</u> |

Field Parameters (measured every sampling event)

| Date           | Time         | Temp (°C)  | pH          | Specific Conductance (µS/cm) | Dissolved Oxygen (mg/L) | Clarity, Odor, Other |
|----------------|--------------|------------|-------------|------------------------------|-------------------------|----------------------|
| <u>1/17/23</u> | <u>13:30</u> | <u>8.9</u> | <u>8.94</u> | <u>88</u>                    | <u>8.72</u>             |                      |

Turbid Water     Color dark brown     Oil/Sheen     Foam     Odor none

|                                     |   |
|-------------------------------------|---|
| Qualifying Source: <u>CoCoRatts</u> | Station Name/#: <u>NM-BR-107: Sandia Heights 3.7W</u>                 |
| Gauge Catch: <u>.28</u>             | Observation Date/Time: <u>1/18/23 @ 07:00</u>                         |
| Qualifying Source: <u>CoCoRatts</u> | Station Name/#: <u>NM-BR-400: Albuquerque 8.7NE</u>                   |
| Gauge Catch: <u>.25</u>             | Observation Date/Time: <u>1/18/23 @ 07:00</u>                         |
| Pump alarm alert date/time:         | Sensor 1: <input type="checkbox"/> Sensor 2: <input type="checkbox"/> |

Notes:

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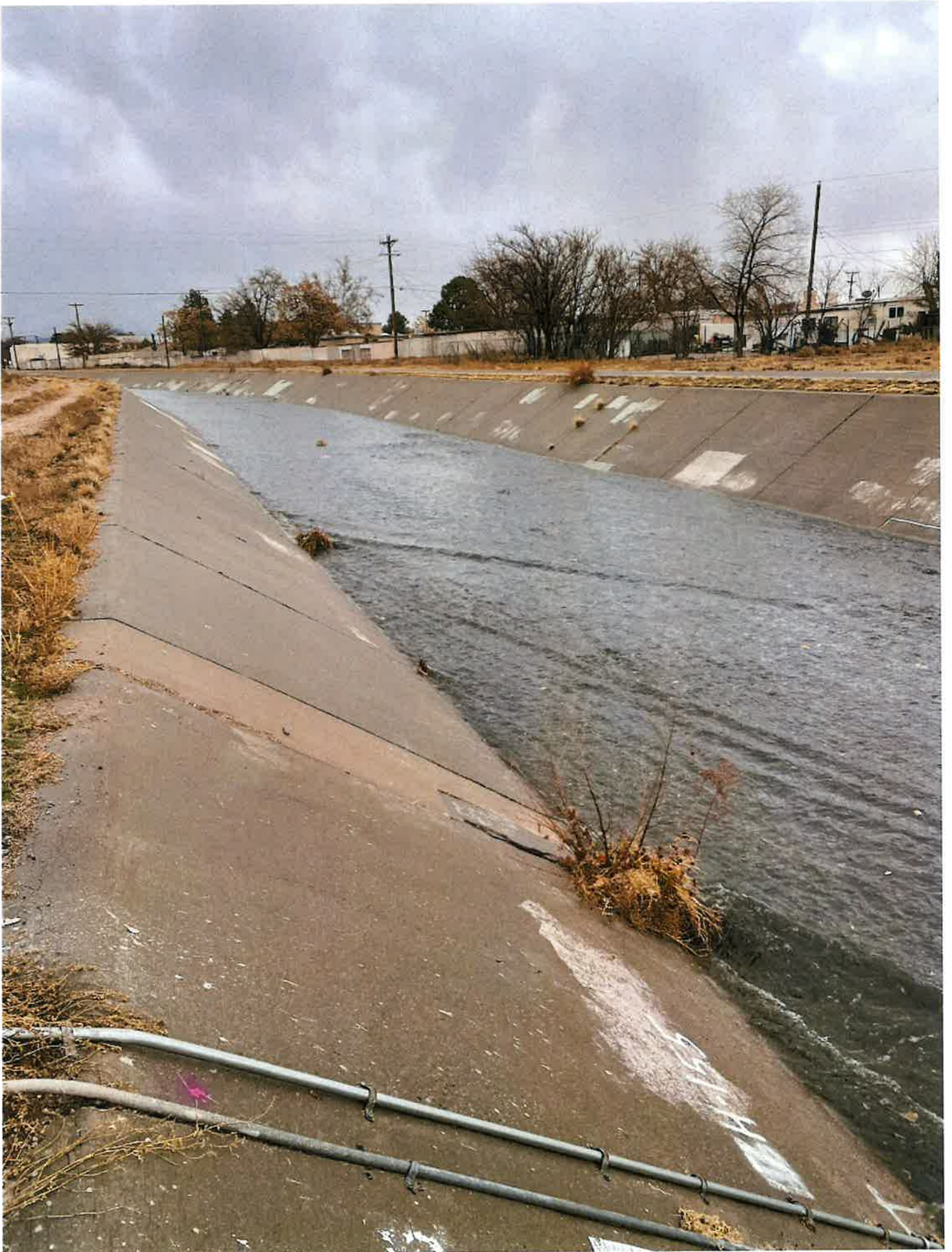


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# Chain-of-Custody Record

Turn-Around Time:  
 Standard     Rush \_\_\_\_\_

Client: AMAFCA

Mailing Address: 26001 Pioneer Ave  
Albuquerque, NM 87124

Phone #: 505 218 2798

email or Fax#: plove2@amafca.org

QA/QC Package: ppdilla @ amafca.org  
 Standard     Level 4 (Full Validation)

Accreditation:     Az Compliance

NELAC     Other \_\_\_\_\_

EDD (Type) excel spreadsheets

Project Name: Dry Season '23

Project #:

Project Manager: P. Plove

Sampler: EQUIPORT

On Ice:     Yes     No

# of Coolers: 1

Cooler Temp (including CF): 57.01 58 (°C)

| Date    | Time  | Matrix | Sample Name   | Container Type and # | Preservative Type | HEAL No. |
|---------|-------|--------|---------------|----------------------|-------------------|----------|
| 1/17/23 | 13:20 | AG     | Haha-20230117 |                      |                   |          |
| 1/17/23 | 14:45 | AG     | NOB-20230117  |                      |                   |          |
|         |       |        |               |                      |                   |          |
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www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975    Fax 505-345-4107

## Analysis Request

| BTEX / MTBE / TMB's (8021) | TPH:8015D(GRO / DRO / MRO) | 8081 Pesticides/8082 PCB's | EDB (Method 504.1) | PAHs by 8310 or 8270SIMS | RCRA 8 Metals | Cl, F, Br, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> | 8260 (VOA) | 8270 (Semi-VOA) | Total Coliform (Present/Absent) |  |  |  |  |  |  |  |  |  |  |
|----------------------------|----------------------------|----------------------------|--------------------|--------------------------|---------------|--|------------|-----------------|---------------------------------|--|--|--|--|--|--|--|--|--|--|
|                            |                            |                            |                    |                          |               |  |            |                 |                                 |  |  |  |  |  |  |  |  |  |  |
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Date: 1/17/23 Time: 15:15 Relinquished by: [Signature]

Received by: [Signature] Via:   Date: 1/17/23 Time: 15:16

Remarks:

Date:    Time:    Relinquished by:

Received by:    Via:    Date:    Time:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Sampler Espin Padilla

## AMAFCA Dry Season 2023 Sampling Data Sheet

Site Identification: **ML-1 North Diversion Channel**

ISCO Programming Dates    24 hour start:                      Time restricted start:                      Shut off:

Full Suite Sample Date and Time:

Full Sample identification:

E. coli (in holding time) Sample Date and Time:

1/17/23 @ 14:55

E. coli (in holding time) Sample Identification:

NDC - 2022 0117

QC Samples:            Duplicate/None

QC Sample ID:

QC Sample Time:

|                              |  |                               |                                 |
|------------------------------|--|-------------------------------|---------------------------------|
| Full Suite Collection Point: | <input checked="" type="checkbox"/> ISCO Sampler | <input type="checkbox"/> Grab | <input type="checkbox"/> Other: |
| E. coli Collection Point:    | <input checked="" type="checkbox"/> ISCO Sampler | <input type="checkbox"/> Grab | <input type="checkbox"/> Other: |
| Full Suite Sample Volume:    |  | Collection Time Start:        | End:                            |
| E. coli Sample Volume:       | <u>3 Lit.</u>                                    | Collection Time Start:        | <u>14:55</u> End: <u>14:55</u>  |

Field Parameters (measured every sampling event)

| Date           | Time         | Temp (°C)  | pH          | Specific Conductance (µS/cm) | Dissolved Oxygen (mg/L) | Clarity, Odor, Other |
|----------------|--------------|------------|-------------|------------------------------|-------------------------|----------------------|
| <u>1/17/23</u> | <u>15:02</u> | <u>8.6</u> | <u>8.68</u> | <u>124</u>                   | <u>8.77</u>             |                      |
|                |              |            |             |                              |                         |                      |

Turbid Water     Color dark brown     Oil/Sheen     Foam     Odor \_\_\_\_\_

|  |  |
|--|--|
| Qualifying Source: <u>CoCo Ra HS</u>               | Station Name/#: <u>NM-BR-107: Santa Heights 3.7w</u>                             |
| Gauge Catch: <u>.28</u>                            | Observation Date/Time: <u>1/15/23 @ 07:00</u>                                    |
| Qualifying Source: <u>CoCo Ra HS</u>               | Station Name/#: <u>NM-BR-400: Albuquerque 8.7ME</u>                              |
| Gauge Catch: <u>.25</u>                            | Observation Date/Time: <u>1/18/23 @ 07:00</u>                                    |
| Pump alarm alert date/time: <u>1/17/23 @ 14:56</u> | Sensor 1: <input checked="" type="checkbox"/> Sensor 2: <input type="checkbox"/> |

Notes:

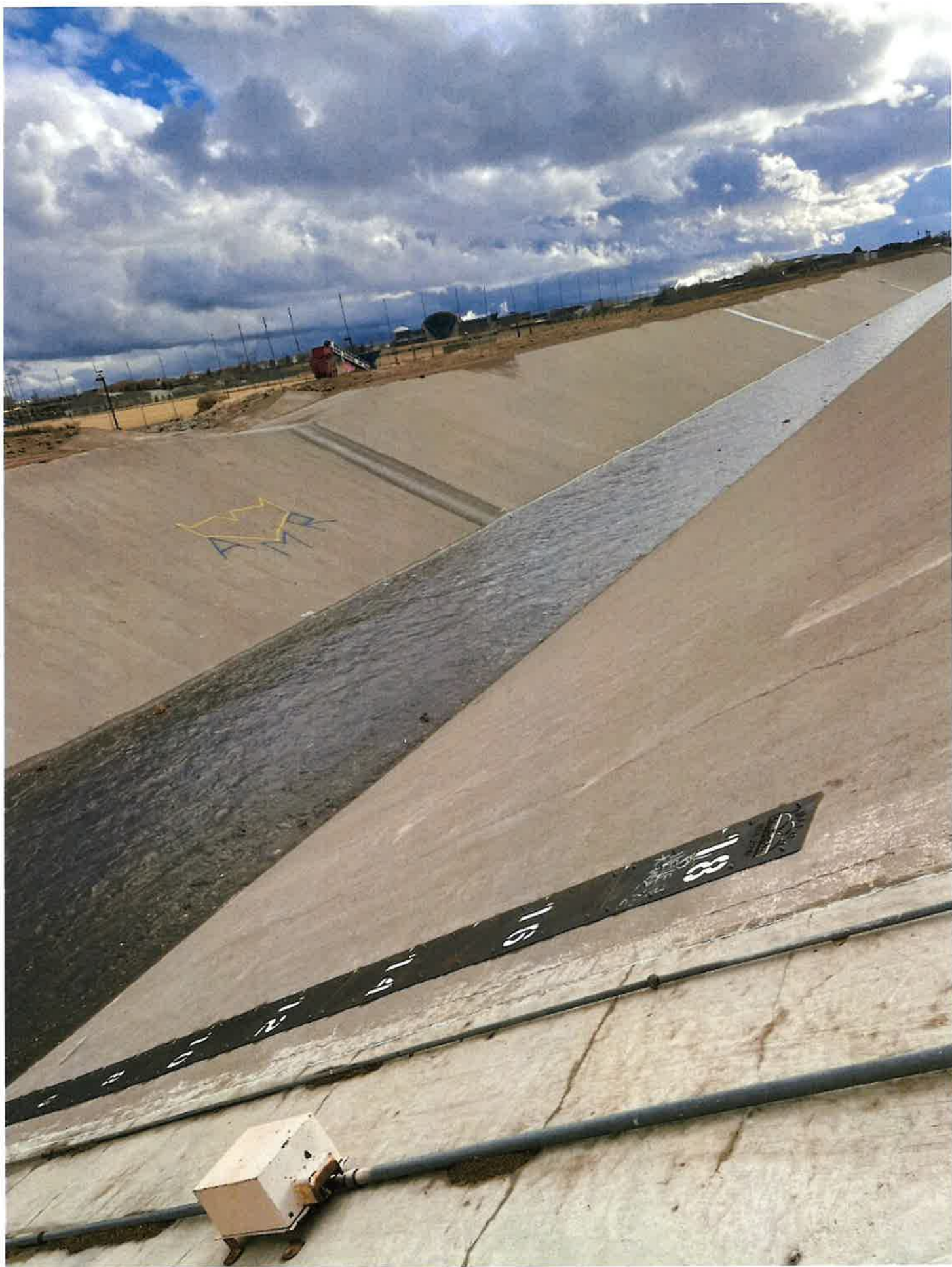
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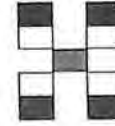


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# Chain-of-Custody Record



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Client: AMAFCA

Turn-Around Time:  
 Standard  Rush

Mailing Address: 2600 Bonnet Ave  
Albuquerque NM 87124

Project Name: Day 8030723

Phone #: 505 218 2798

Project #:         

email or Fax#: phila@amafca.org

Project Manager: PJ O'Neil

QA/QC Package: Standard  
 Standard  Level 4 (Full Validation)

Sampler: Eqi Podile  
 On Ice:  Yes  No

Accreditation:  Az Compliance  
 NELAC  Other  
 EDD (Type) exel spreadsheet

# of Coolers: 1  
 Cooler Temp (including CF): 57.01-58 (°C)

### Analysis Request

| Date    | Time  | Matrix | Sample Name   |
|---------|-------|--------|---------------|
| 1/17/23 | 13:20 | AG     | Hahn 20230117 |
| 1/17/23 | 14:50 | AG     | NOC-20230117  |
|         |       |        |               |
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| Container Type and # | Preservative Type | HEAL No. |
|----------------------|-------------------|----------|
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| BTEX / MTBE / TMB's (8021) | TPH:8015D(GRO / DRO / MRO) | 8081 Pesticides/8082 PCB's | EDB (Method 504.1) | PAHs by 8310 or 8270SIMS | RCRA 8 Metals | Cl, F, Br, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> | 8260 (VOA) | 8270 (Semi-VOA) | Total Coliform (Present/Absent) |
|----------------------------|----------------------------|----------------------------|--------------------|--------------------------|---------------|--|------------|-----------------|---------------------------------|
|                            |                            |                            |                    |                          |               |  |            |                 | X                               |
|                            |                            |                            |                    |                          |               |  |            |                 | X                               |
|                            |                            |                            |                    |                          |               |  |            |                 |                                 |
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|                            |                            |                            |                    |                          |               |  |            |                 |                                 |

Date: 1/17/23 Time: 15:15 Relinquished by: [Signature]

Received by: [Signature] Via:    Date: 1/17/23 Time: 15:15

Remarks:   

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.





Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

February 07, 2023

Patrick Chavez  
AMAFCA  
2600 Prospect Ave NE  
Albuquerque, NM 87107  
TEL: (505) 884-2215  
FAX

1/17/2023 sample from  
the North Diversion  
Channel at Alameda and  
Main Hahn Arroyo for E.  
coli within hold time.

RE: Dry Season 23

OrderNo.: 2301620

Dear Patrick Chavez:

Hall Environmental Analysis Laboratory received 2 sample(s) on 1/17/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

Field Parameters  
North Diversion Channel -  
Temp = 8.6°C  
pH = 8.68  
Conductivity (uS/cm=umho/cm) = 124  
Dissolved Oxygen (mg/L) = 8.77  
  
Hahn -  
Temp = 8.9°C  
pH = 8.94  
Conductivity (uS/cm=umho/cm) = 88  
Dissolved Oxygen (mg/L) = 8.72

**Analytical Report**

Lab Order: 2301620

Date Reported: 2/7/2023

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** AMAFCA

**Lab Order:** 2301620

**Project:** Dry Season 23

**Lab ID:** 2301620-001

**Collection Date:** 1/17/2023 1:20:00 PM

**Client Sample ID:** Hahn-20230117

**Matrix:** AQUEOUS

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------|--------|----|------|-------|----|---------------|----------|
|----------|--------|----|------|-------|----|---------------|----------|

**SM 9223B FECAL INDICATOR: E. COLI MPN**

Analyst: dms

|         |       |       |  |         |    |                      |       |
|---------|-------|-------|--|---------|----|----------------------|-------|
| E. Coli | 10462 | 10.00 |  | MPN/100 | 10 | 1/18/2023 5:22:00 PM | 72672 |
|---------|-------|-------|--|---------|----|----------------------|-------|

**Lab ID:** 2301620-002

**Collection Date:** 1/17/2023 2:55:00 PM

**Client Sample ID:** NDC-20230117

**Matrix:** AQUEOUS

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------|--------|----|------|-------|----|---------------|----------|
|----------|--------|----|------|-------|----|---------------|----------|

**SM 9223B FECAL INDICATOR: E. COLI MPN**

Analyst: dms

|         |      |       |  |         |    |                      |       |
|---------|------|-------|--|---------|----|----------------------|-------|
| E. Coli | 2987 | 10.00 |  | MPN/100 | 10 | 1/18/2023 5:22:00 PM | 72672 |
|---------|------|-------|--|---------|----|----------------------|-------|

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.

- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2301620

07-Feb-23

**Client:** AMAFCA  
**Project:** Dry Season 23

| Sample ID: <b>MB-72672</b>  | SampType: <b>MBLK</b>           | TestCode: <b>SM 9223B Fecal Indicator: E. coli MPN</b> |           |             |                         |          |           |      |          |      |
|-----------------------------|---------------------------------|--|-----------|-------------|-------------------------|----------|-----------|------|----------|------|
| Client ID: <b>PBW</b>       | Batch ID: <b>72672</b>          | RunNo: <b>94045</b>                                    |           |             |                         |          |           |      |          |      |
| Prep Date: <b>1/17/2023</b> | Analysis Date: <b>1/18/2023</b> | SeqNo: <b>3395250</b>                                  |           |             | Units: <b>MPN/100mL</b> |          |           |      |          |      |
| Analyte                     | Result                          | PQL  | SPK value | SPK Ref Val | %REC                    | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| E. Coli                     | <1                              | 1.000  |           |             |                         |          |           |      |          |      |

## Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

**Sample Log-In Check List**

Client Name: **AMAFCA**

Work Order Number: **2301620**

RcptNo: **1**

Received By: **Kasandra Jimena Garcia** 1/17/2023 3:16:00 PM

Completed By: **Sean Livingston** 1/17/2023 3:23:54 PM

Reviewed By: *JA 1/17/23 @ 15:30*

*KJZ*  
*Sean Livingston*

**Chain of Custody**

1. Is Chain of Custody complete? Yes  No  Not Present   
 2. How was the sample delivered? Client

**Log In**

3. Was an attempt made to cool the samples? Yes  No  NA   
 4. Were all samples received at a temperature of >0° C to 6.0°C Yes  No  NA   
 5. Sample(s) in proper container(s)? Yes  No   
 6. Sufficient sample volume for indicated test(s)? Yes  No   
 7. Are samples (except VOA and ONG) properly preserved? Yes  No   
 8. Was preservative added to bottles? Yes  No  NA   
 9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes  No  NA   
 10. Were any sample containers received broken? Yes  No   
 11. Does paperwork match bottle labels? Yes  No   
 (Note discrepancies on chain of custody)  
 12. Are matrices correctly identified on Chain of Custody? Yes  No   
 13. Is it clear what analyses were requested? Yes  No   
 14. Were all holding times able to be met? Yes  No   
 (if no, notify customer for authorization.)

|  |
|--|
| # of preserved bottles checked for pH: _____ |
| (<2 or >12 unless noted)                     |
| Adjusted? _____                              |
| Checked by: <i>JA 1-17-23</i>                |

**Special Handling (if applicable)**

15. Was client notified of all discrepancies with this order? Yes  No  NA

|                            |  |
|----------------------------|--|
| Person Notified: _____     | Date: _____  |
| By Whom: _____             | Via: <input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person |
| Regarding: _____           |  |
| Client Instructions: _____ |  |

16. Additional remarks:

**17. Cooler Information**

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1         | 5.8     | Good      | Not Present | Morty   |           |           |

# Chain-of-Custody Record

Client: **AMAFCA**

Mailing Address: **2000 Prospect Ave  
Albuquerque, NM 87124**

Phone #: **505-218-2798**

email or Fax#: **pchave3@amafca.org**

QA/QC Package: **epudilla @ amafca.org**

Standard       Level 4 (Full Validation)

Accreditation:    Az Compliance  
 NELAC       Other

EDD (Type) **excel spreadsheet**

Turn-Around Time:  
 Standard       Rush

Project Name: **Dry Season '23**

Project #: \_\_\_\_\_

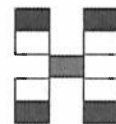
Project Manager: **PJ Chave 3**

Sampler: **Esgui Padilla**

On Ice:       Yes       No

# of Coolers: **1**      **Morty**

Cooler Temp (including CF): **57+0.1 = 5.8 (°C)**



**HALL ENVIRONMENTAL ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975      Fax 505-345-4107

### Analysis Request

| Date    | Time  | Matrix | Sample Name   | Container Type and # | Preservative Type | HEAL No. |
|---------|-------|--------|---------------|----------------------|-------------------|----------|
| 1/17/23 | 13:20 | AQ     | Hahn-20230117 |                      |                   | 001      |
| 1/17/23 | 14:55 | AQ     | NDC-20230117  |                      |                   | 002      |
|         |       |        |               |                      |                   |          |
|         |       |        |               |                      |                   |          |
|         |       |        |               |                      |                   |          |
|         |       |        |               |                      |                   |          |
|         |       |        |               |                      |                   |          |
|         |       |        |               |                      |                   |          |
|         |       |        |               |                      |                   |          |
|         |       |        |               |                      |                   |          |
|         |       |        |               |                      |                   |          |
|         |       |        |               |                      |                   |          |
|         |       |        |               |                      |                   |          |
|         |       |        |               |                      |                   |          |
|         |       |        |               |                      |                   |          |
|         |       |        |               |                      |                   |          |
|         |       |        |               |                      |                   |          |
|         |       |        |               |                      |                   |          |
|         |       |        |               |                      |                   |          |
|         |       |        |               |                      |                   |          |
|         |       |        |               |                      |                   |          |
|         |       |        |               |                      |                   |          |
|         |       |        |               |                      |                   |          |

| BTEX / MTBE / TMB's (8021) | TPH:8015D(GRO / DRO / MRO) | 8081 Pesticides/8082 PCB's | EDB (Method 504.1) | PAHs by 8310 or 8270SIMS | RCRA 8 Metals | Cl, F, Br, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> | 8260 (VOA) | 8270 (Semi-VOA) | Total Coliform (Present/Absent) |
|----------------------------|----------------------------|----------------------------|--------------------|--------------------------|---------------|--|------------|-----------------|---------------------------------|
|                            |                            |                            |                    |                          |               |  |            |                 |                                 |
|                            |                            |                            |                    |                          |               |  |            |                 |                                 |
|                            |                            |                            |                    |                          |               |  |            |                 |                                 |
|                            |                            |                            |                    |                          |               |  |            |                 |                                 |
|                            |                            |                            |                    |                          |               |  |            |                 |                                 |
|                            |                            |                            |                    |                          |               |  |            |                 |                                 |
|                            |                            |                            |                    |                          |               |  |            |                 |                                 |
|                            |                            |                            |                    |                          |               |  |            |                 |                                 |
|                            |                            |                            |                    |                          |               |  |            |                 |                                 |
|                            |                            |                            |                    |                          |               |  |            |                 |                                 |
|                            |                            |                            |                    |                          |               |  |            |                 |                                 |
|                            |                            |                            |                    |                          |               |  |            |                 |                                 |
|                            |                            |                            |                    |                          |               |  |            |                 |                                 |
|                            |                            |                            |                    |                          |               |  |            |                 |                                 |
|                            |                            |                            |                    |                          |               |  |            |                 |                                 |
|                            |                            |                            |                    |                          |               |  |            |                 |                                 |
|                            |                            |                            |                    |                          |               |  |            |                 |                                 |
|                            |                            |                            |                    |                          |               |  |            |                 |                                 |
|                            |                            |                            |                    |                          |               |  |            |                 |                                 |
|                            |                            |                            |                    |                          |               |  |            |                 |                                 |
|                            |                            |                            |                    |                          |               |  |            |                 |                                 |
|                            |                            |                            |                    |                          |               |  |            |                 |                                 |
|                            |                            |                            |                    |                          |               |  |            |                 |                                 |
|                            |                            |                            |                    |                          |               |  |            |                 |                                 |
|                            |                            |                            |                    |                          |               |  |            |                 |                                 |
|                            |                            |                            |                    |                          |               |  |            |                 |                                 |

*E-coll*

Date: **1/17/23** Time: **15:15** Relinquished by: **[Signature]**

Date: \_\_\_\_\_ Time: \_\_\_\_\_ Relinquished by: \_\_\_\_\_

Received by: **[Signature]** Via: **000** Date: **1-17-23** Time: **15:16**

Received by: \_\_\_\_\_ Via: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly noted on the analytical report.