



October 31, 2023

Kelsey Bicknell  
Environmental Manager  
ABCWUA  
Albuquerque, New Mexico

[kbicknell@abcwua.org](mailto:kbicknell@abcwua.org)

**RE: Results of Third Quarter 2023 Water Authority Data Gap Well Monitoring (revised February 5, 2024)**

Dear Kelsey:

John Shomaker & Associates, Inc. (JSAI) was contracted by the Albuquerque Bernalillo County Water Utility Authority (Water Authority) to assist with Data Gap Well Monitoring at well WUABFFMW-01 for four quarters beginning with the 3<sup>rd</sup> Quarter (Q3) 2023 event. The sampling event began on September 15, 2023 when the passive sampling devices were deployed, and concluded on September 29, 2023 when active sampling took place.

On September 15, 2023, Prior to deploying the passive sampling equipment, the pressure transducer installed in WUABFFMW-01 was retrieved and depth-to-water was measured at 454.06 feet below ground level (ft bgl) using a Herron dipper-T2 water level meter. Transducer recorded and manual water level measurements are presented as Figure 1. JSAI deployed 4 dual membrane passive diffusion bags (DMPDB) and one passive diffusion bag (PDB) in WUABFFMW-01. The passive sampling equipment was provided by Eon Products, Inc. (Eon). The DMPDBs and PDB were filled with deionized water using the PDB fill kits, both supplied by the manufacturer. The bags were secured to a weighted rope at pre-measured intervals, provided by the Water Authority. The passive sampling devices were retrieved and samples were collected for laboratory analysis on September 29, 2023. Samples were collected in laboratory-provided sample containers using sampling straws and equipment provided by Eon, then immediately placed on ice. Following retrieval of the passive sampling devices, the Water Authority owned Bennett sample pump was deployed for active sampling. The well was pumped at a rate of about 0.75 gallons per minute (gpm) until three well volumes had been purged. Samples were then collected for laboratory analysis for the analytes and methods presented in Table 1. Deployed depths of the passive sampling devices and the setting of the Bennett sample pump are presented in Table 2. Laboratory analytical results, chains-of-custody, and field documents including purge logs are attached.

Samples were shipped overnight to Eurofins Environment Testing (Eurofins) in Denver, CO for analytical analysis. The bottle kits that were provided and shipped by Eurofins were delayed in transit by several days. In order to stay on schedule and perform the sampling event in the third quarter of 2023, sample bottles were obtained locally from Hall Environmental Analytical Laboratory (HEAL). Table 3 is a summary of analytes that were detected during the third quarter 2023 sampling. None of the detected analytes were reported above the New Mexico Environmental Department Drinking Water Bureau (NMED-DWB) standards aside from manganese. Manganese falls under the secondary drinking water standards, which are

non-enforceable standards related to aesthetics. There is not a standard for benzaldehyde, which was detected in WUABFFMW-01 BP (Bennett Pump sample).

Bis(2-ethylhexyl) phthalate was detected in and reported as estimates for all of the samples submitted for laboratory analysis, as well as the method blank at the laboratory. According to Eurofins, the level in the method blank is consistent with common lab contamination and it is implied and likely that the results are lab contamination. Di-n-butyl-phthalate was detected in the field blank and the method blank and are highly likely to be common lab contamination. Benzaldehyde is unlikely to be lab contamination, based on Eurofins' experience, but the detection is unusual and at the minimum detection limit level and borderline reportable as non-detect (ND)<sup>1</sup>. Benzaldehyde was also not detected in the method blank. Subsequent sampling events should help determine the actual presence or absence of benzaldehyde, which could suggest laboratory contamination.

Prior to deploying and post-sampling, the Bennett pump was decontaminated by pumping 5 gallons each of a distilled water and Liquinox mix, distilled water, and lab-grade deionized water through the pump and tubing. After final field decontamination, post-purging and sampling of the well, a sample final rinse sample (Equip Rinsate) was collected and submitted for laboratory analysis. All decontamination water and industrial derived waste (IDW) water produced during purging was collected in a container provided by Advanced Environmental Solutions, Inc. (AES) and delivered to their facility for disposal. The disposal manifest is attached.

**Table 1. Analytes for samples at WUABFFMW-01, deployed September 13, 2023, retrieved September 29, 2023, Albuquerque, Bernalillo County, New Mexico**

analyte suite	method of analysis
anions (Cl, Br, SO <sub>4</sub> , NO <sub>3</sub> , NO <sub>2</sub> )	EPA E300.0, E353.2
ethylene dibromide (EDB)	EPA 8011
volatile organic compounds (VOCs)	EPA 8260
semi-volatile organic compounds (SVOCs)	EPA 8270
total metals (Ca, Mg, Na, K, As, Pb)	EPA 6010C/6020A
dissolved metals (Fe, Mg)	EPA 6010C/6020A
alkalinity	EPA SM2320B

<sup>1</sup> N. Stone, Eurofins, personal communication via email, January 22, 2023.

**Table 2. Sample collection depths at WUABFFMW-01, deployed September 13, 2023, retrieved September 29, 2023, Albuquerque, Bernalillo County, New Mexico**

sample type	equipment	sample collection depth, ft bgl
passive	DMPDB	574*
passive	DMPDB	577*
passive	DMPDB	580*
passive	DMPDB	583*
passive	PDB	586*
active	Bennett pump	582**

\*passive samples

\*\*pump intake

Sincerely,

JOHN SHOMAKER & ASSOCIATES, INC.

Zach Weathers, PG  
Project Hydrogeologist

Enc: Table 3. Summary of analytes detected in Q3 2023 sampling  
Figure 1. Hydrograph for WUABFFMW-01  
Field documents  
Disposal manifest  
Chain-of-custody  
Laboratory analytical results & data, via Dropbox

**Table 3. Analytes above the detection limit for samples at WUABFFMW-01, deployed September 13, 2023, retrieved September 29, 2023, Albuquerque, Bernalillo County, New Mexico**

sample ID		WUABFF MW-01 PDB	WUABFFMW -01 BP	equip rinsate	field blank	method	NMED/DWB standard
analyte	units						
Bis(2-ethylhexyl) phthalate	µg/L	4.4 <sup>b</sup>	4.2 <sup>b</sup>	4.5 <sup>b</sup>	10 <sup>b</sup>	8270E	6
Benzaldehyde	µg/L	nd	1.2 <sup>b</sup>	nd	nd	8270E	no standard
Di-n-butyl phthalate	µg/L	nd	nd	nd	0.64 <sup>b</sup>	8270E	20
Alkalinity	mg/L	130	120	nd	nd	SM 2320B	no standard
sulfate	mg/L	28	30	nd	nd	300.0	250 <sup>a</sup>
chloride	mg/L	9.8	9.0	nd	nd	300.0	250 <sup>a</sup>
nitrate-N	mg/L	nd	0.051 <sup>b</sup>	0.068 <sup>b</sup>	nd	353.2	10
calcium	mg/L	36	34	0.076 <sup>b</sup>	nd	6010D	no standard
magnesium	mg/L	5	4.7	nd	nd	6010D	no standard
manganese	mg/L	<b>0.33</b>	<b>0.29</b>	0.0015 <sup>b</sup>	nd	6010D	0.05 <sup>a</sup>
potassium	mg/L	3.6	3.3	nd	md	6010D	no standard
sodium	mg/L	30	27	0.10 <sup>b</sup>	0.14 <sup>b</sup>	6010D	no standard
total arsenic	µg/L	0.92 <sup>b</sup>	0.96 <sup>b</sup>	nd	nd	6010D	10
iron	mg/L	0.040 <sup>b</sup>	0.031 <sup>b</sup>	0.011 <sup>b</sup>	0.0093 <sup>b</sup>	6010D	0.30 <sup>a</sup>

<sup>a</sup> secondary drinking water standard (non-enforceable, aesthetic guideline)

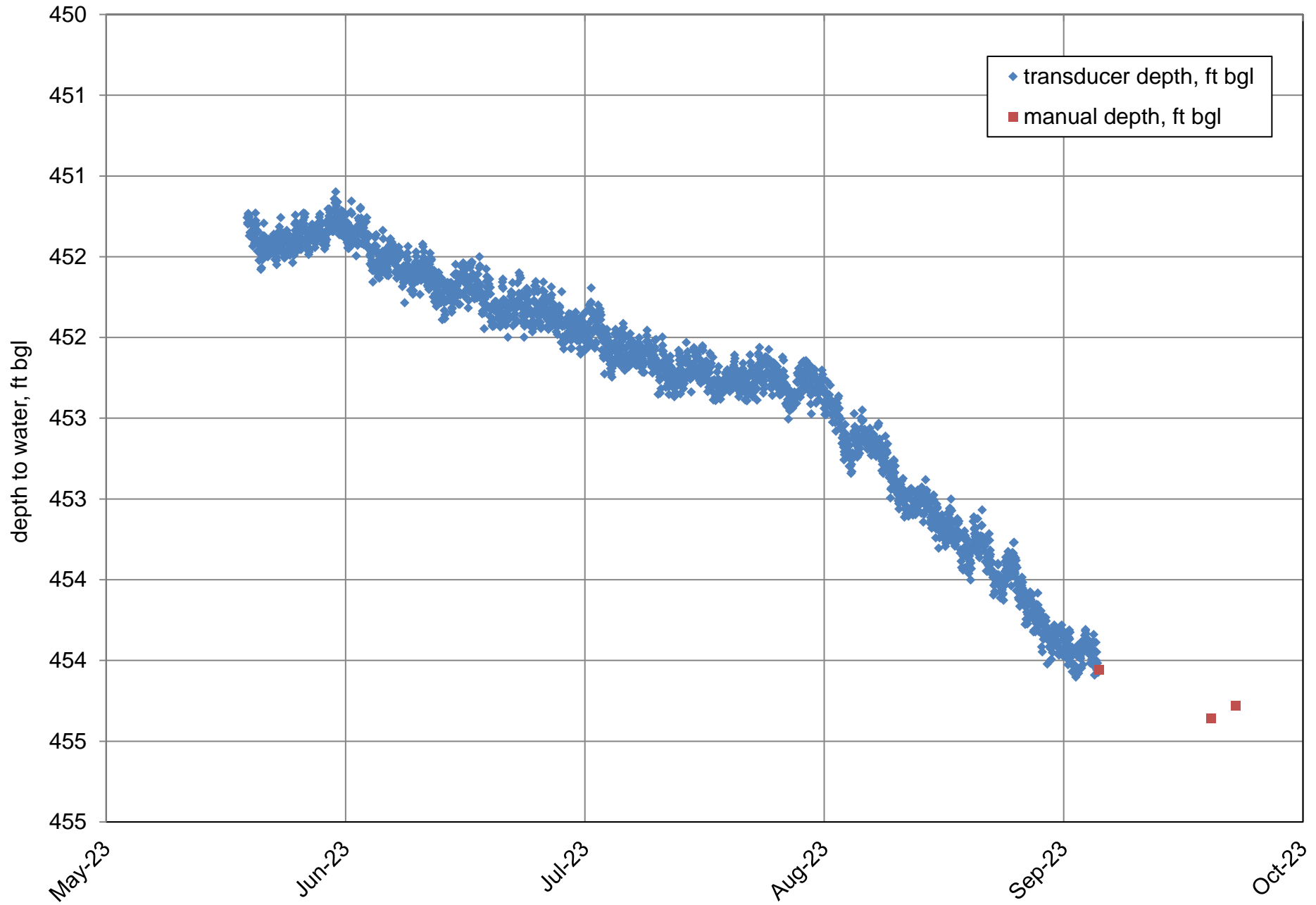
<sup>b</sup> estimated: the analyte was positively identified; the quantitation is an estimation

**bold** indicates concentration exceeds NMED/DWB standard

nd not detected

µg/L - micrograms per liter

mg/L - milligrams per liter



Hydrograph for WUABFFMW-01



PROJECT NAME: Data Gap Well Sampling WELL NO.: WJABFF MW-01  
 PROJECT NO.: \_\_\_\_\_ DATE: 9/29/20 FIELD CREW: ZW + ZAC

**WATER LEVEL, WATER COLUMN HEIGHT, PUMP DETAILS**

TIME	DEPTH TO BOTTOM OF WELL (ft btoc)	DEPTH TO WATER (DTW) (ft btoc)	Water Column Height (DTB-DTW) (ft)	PUMP TYPE	PUMP DEPTH (ft btoc)
11:12	597	453.96	143.04	Bennett	590

ft btoc: feet below top of casing from designated measuring point

**PURGE VOLUME**

Well Casing Diameter (inches)	Volume/Linear Foot (see conversion table below)	1 Well Volume (gal)	2 Well Volumes (gal)	3 Well Volumes (gal)
3	0.38	54.36	108.72	163.08

**VOLUME/LINEAR FOOT (gal/ft) (Use well casing ID)**

1" = 0.04	1.5" = 0.09	2" = 0.17	3" = 0.38	4" = 0.66	6" = 1.5	8" = 2.6	10" = 4.1
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1 well casing volume = Volume/Linear Foot x Water Column Height

METHOD OF PURGING: Pumping with Bennett Sample Pump  
 METHOD OF SAMPLING: Grab samples

**WATER LEVEL/WATER QUALITY INSTRUMENTS USED**

INSTRUMENT	SERIAL NO.	TIME CALIBRATION PERFORMED	TECH	COMMENTS
Heco	1203-T2			

**WATER QUALITY READINGS DURING PURGING**

TIME	TEMP (°C)	pH	SP. COND. (µS/cm)	ORP (mV)	TURB. (NTU)*	Water Level (ft bTOC)	Flow Rate (gal/min)	Total Volume Purged (gal)	Comments (color/odor)
12:32	23.4	6.30	343.2	-174	3.25	454.22	~0.75	212	DO: 2.00, color, no odor
12:45	21.9	6.95	312.1	-158	1.84	454.13	~0.75	23	DO: 2.30, color, no odor
13:30	21.6	7.67	305.4	-145	1.72	454.19	~0.75	25	DO: 2.08, color, no odor
13:45	21.1	7.48	302.2	-141	0.70	454.15	~0.75	37	1.80, color, no odor
14:00	21.5	7.81	301.5	-137	0.67	454.15	0.75	50	1.98, color, no odor
14:15	20.8	7.81	301.9	-128	0.57	454.12	~0.75	60	2.09, color, no odor
14:30	21.3	7.85	299.7	-123	0.67	454.15	~0.75	72	2.29, color, no odor
14:45	21.4	7.86	298.5	-122	0.88	454.13	~0.75	83	2.03, color, no odor
15:00	21.4	7.89	297.7	-118	0.89	454.13	~0.75	95	2.27, color, no odor
15:15	21.5	7.92	299.2	-115	0.71	454.11	~0.75	105	2.18, color, no odor
15:30	21.1	7.91	297.3	-116	0.61	454.11	~0.75	117	2.08, color, no odor
15:43	generator died, carbon monoxide warning								
15:50	resume pumping								
15:52	21.7	8.00	298.5	-112	0.27	451.11	~0.75	129	1.76, color, no odor

\* Modified INTERA project form provided by ABCWUA



**WATER QUALITY READINGS DURING PURGING (continued)**

TIME	TEMP (°C)	pH	SP. COND. (µS/cm)	ORP (mV)	TURB. (NTU)*	Water Level (ft bTOC)	Flow Rate (gal/min)	Total Volume Purged (gal)	Comments (color/odor)
16:00	20.7	7.96	295.9	-111	0.42	454.10	0.75	130	2.18, clear, no color
16:15	21.0	7.94	295.1	-108	0.36	454.09	0.75	143	1.91, clear, no color
16:30	20.8	7.98	295.6	-98	0.27	454.10	0.75	158	2.28, clear, no color
16:37	20.3	7.94	296.6	-104	0.37	454.10	0.75	166	2.06, clear, no color

\*If measured.  
 Stabilization = Temp ±1°C; pH ±0.2 units; Sp. Cond. ±10%; Turb. ±10%

**GROUNDWATER SAMPLING DATA**

GROUNDWATER SAMPLE ID: WJABBFMW-01 BP DUPLICATE SAMPLE ID: \_\_\_\_\_

Time	Bottle Type	Analytical Method	# of Bottles	Volume	Preservative
16:44	HDP2	300	1	250mL	HNO <sub>3</sub>
16:44	HDP2	353.2	1	125mL	HNO <sub>3</sub>
16:44	VQA	8260	3	40mL	Sodium Thiosulfate
16:44	VQA	8011	2	40mL	HCl
16:44	Amber	8276	1	1000mL	none
16:44	HDP2	6010C/6020A/2320B	1	250mL	none
16:44	HDP2	6010C	1	125mL	H <sub>2</sub> SO <sub>4</sub>
TOTAL:					

Sampler: Zach Weathers (Printed Name) Zach Weathers (Signature)



DAILY FIELD LOG

ACTIVITY: Deploying Passive Samplers DATE: Sept. 15, 2023  
GEOLOGIST: ZBC & STF CLIENT: ABCWUA  
PROJECT: Data gap well

- 10:00 Arrv. @ 800 Indian Site, do not have key for lock  
On well cap so we just pried it off.
- 10:10 Removed transducer onto reel
- 10:34 DTW = 453.66 ft BMP, MP = 0.40 ft blw grade (Top PVC)  
- Decored sounds as reel went into well w/ Liquinox
- 10:40 - Started to Deploy all 5 PDB's  
- First PDB in the hole was the black PDB  
- The following 4 inserted are Dual Membrane PDB's  
- Each bag was filled with the provided DI water  
Using the proper funnel. The cap was then firmly  
pressed into the top opening and each bag was  
secured ~~to~~ their designated rings on the reel with  
two zip ties at the top ring and one at the bottom.  
The reel was lowered into the well without the rope  
touching the ground.
- 11:10 - finished lowering the samplers into well and tightly secured  
end of rope to well cap
- 11:30 - Secured well cover and cleaned up materials  
- lv. loc.

Note: For next time, make sure to bring stand for the reel,  
& tarp. Also bring clippers for zip ties on samplers





### DAILY FIELD LOG

DATE: September 26, 2023  
 ACTIVITY: Team Meeting w/ Diana Agnew CLIENT: ABLWJA  
 GEOLOGIST: ZW/STP PROJECT: Data Log

On call - Kelsey, STP, ZW, Diana  
 - Need to check plug to make sure it is functioning properly.  
 - Send Kelsey tx data.

- tarp
- traffic cones
- signpost
- gloves
- PPE
- ice
- bottle kits
- tx

DI water from Hall.  
↳ to test pump & device  
x 2.

- ↳ • reel & stand
- soil sampler
- IDW container
- sample forms
- WQ kits - general, DO,
- ↳ • 500 hoses & pipes



### DAILY FIELD LOG

DATE: September 26, 2023  
 CLIENT: AbenUSA  
 ACTIVITY: Test Sample Pump  
 GEOLOGIST: ZJ PROJECT: Data Gap Well

- 13:30 Decon containers for Lab Grade DI Water w/ Liquefied, DI Rings.
- 14:12 Drop containers at Hall to be filled w/ DI water
- 15:58 Pick up DI water from Hall
- 16:07 On site at Drinking Water Plant. Will test pump w/ 5-gal DI water.
- 16:36 Finish testing pump. Pumped 5-gal D.I. water at 0.75 gpm, then purged the line. Secured the lockbox.
- 16:39 ZJ off site.



### DAILY FIELD LOG

DATE: September 29, 2023

ACTIVITY: Quarterly Sampling

CLIENT: ABCWUA

GEOLOGIST: ZW/ZBC

PROJECT: Data Gap Well Sampling

8:01 On site at Drinking Water Plant to pick up Bennett Pump.

8:04 Loading Pump

8:26 Off site to well

9:02 ZW on site at Data Gap Well. ZBC, Kelsey, Rowan, 2 EA employees on site. Setting up for sampling. Dillon + Tracie are the EA employees.

9:20 The key provided by ABCWUA will not unlock the well cap. Kelsey thinks she has another key at her office, off site to retrieve it. ZBC off site to JSAI office for bolt cutters.

9:25 ZW calibrates pH + conductivity, check DO barometric pressure. ORP sensor calibrated by Geotech. Calibrate turbidity meter

10:10 Begin retrieving PDBs

10:32 Collect samples from PDBs.

11:00 Finish collecting samples from PDB's.

11:12 DTW = 453.96 ft bwp.

11:30 Tracie + Dillon off site

11:30 Begin decommissioning pump

12:01 Finish decon, deploying pump

12:18 Pump deployed to 580 ft bwp

12:28 Pump on, rate ~ 0.75 gpm, 95 psi

12:35 Kelsey + Rowan off site.

12:49 Generator shuts off, carbon monoxide warning.

13:17 pump back on. Kelsey told ZW we need to set up a fan to vent the exhaust away from the generator. I picked one up at my house.

15:43 Generator shuts off, Carbon monoxide warning

15:45 Kelsey on site.

15:50 Pump back on



### DAILY FIELD LOG

DATE: September 29, 2023

CLIENT: ABC WUA

ACTIVITY: Quarterly Sampling

GEOLOGIST: ZJ/ZBL

PROJECT: Data Log Well Sampling

15:53 Rowan on site,

16:01 Tracie on site

16:20 Dylan on site,

16:44 Collect samples for lab analysis, sample name is WUA BFF MW-02 BP. Dylan collects split samples,

16:58 Finish collecting samples, retrieving pump. Tracie & Dylan off site.

- Per Kelcey's instructions, we will collect an equipment rinse sample after purging the pump & tubing with 5-gallons of distilled water.

17:36 Equipment rinse sample collected, "Equip Rinse".

18:20 Off site to drop sample pump off at the Drinking Water Plant.





### DAILY FIELD LOG

DATE: October 2, 2023  
 ACTIVITY: Deploy tx  
 CLIENT: ABCWUA  
 GEOLOGIST: 2nd / STF  
 PROJECT: Data Gap Well Sampling

14:30 On site to deploy transducer and install new lock.  
 14:36 DTW = 453.88 ft long  
 15:01 Finish deploying tx, started new log reading DTW every 1 hr  
 15:08 off site



# PASSIVE DIFFUSION WATER SAMPLING DATA SHEET

Well Location ID:

## DEPLOYMENT RECORD

Sample ID	WUABFFMW01		
Deployment Team	S. Finch + Z. Chavez		
Date/Time Deployed	Date: MM/DD/YYYY	Time:	
	09/15/2023	11:10	
Water Level Meter	Solinst 750 ft Sounder		

Well Stats (feet below top of casing [ft btoc])	
Well Total Depth <sup>1</sup>	597
Top of Screen	572
Bottom of Screen	592
Depth to Water	453.66
Notes	

Sampler Number	Top of Sampler Depth (ft btoc)
1*	574
2*	577
3*	580
4*	583
5**	586

<sup>1</sup>Total Depth is based on construction data, not measured

\*Dual Membrane Bag; \*\* Passive Diffusive Bag

  
Signed

9/15/2023  
Date

## SAMPLING RECORD

Sample ID	WUABFFMW-01 (PDB)		
Sampling Team	Zach W. + Zach C.		
Date/Time Sampled	Date: MM/DD/YYYY	Time:	
	09/29/2023	10:32	
Water Level Meter	Heron dipper-T2		
Water Quality Meter	Oxton PL 450, YSI Pro ODO, YSI Pro 1030, Hach 2100Q		

## Water Quality Readings

Time	Temp (C)	pH	SP. COND. (mS/cm)	ORP (mV)	TURB. (NTU)*	Comments (color/odor)
11:06	25.3°	6.86	330.2	-168	4.59	DO: 2.20 mg/L, clear





# PASSIVE DIFFUSION WATER SAMPLING DATA SHEET

## Groundwater Analyses

2A  
↓

Analytes/Method	1	2	3	4	5	Notes
VOCs EPA Method 8260.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
SVOCs via EPA Method 8270.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Total Metals (As, Pb, Ca, Mg, K, Na) via EPA Method 6010/6020.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dissolved Metals (Fe, Mn) via EPA 6010	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Anions (Cl, Br, SO4) via EPA Method E300.0.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Nitrate/Nitrite nitrogen via EPA 353.2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
EDB via EPA Method 8011.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Alkalinity via EPA Method SM2320B.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

*John Weather*  
Signed

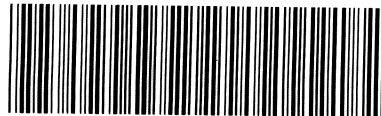
*September 29, 2023*  
Date

<b>NON-HAZARDOUS WASTE MANIFEST</b>	1. Generator ID Number <b>V S Q G</b>	2. Page 1 of <b>1</b>	3. Emergency Response Phone <b>800-861-1700</b>	4. Waste Tracking Number <b>1 4 2 9 2 - 1</b>	
5. Generator's Name and Mailing Address <b>Albuquerque Bernalillo County Water Utility Authority</b> <b>1 Civic Plaza NW</b> <b>Albuquerque NM 87103</b> Generator's Phone: <b>505 289-3008</b>					
6. Transporter 1 Company Name <b>Advanced Environmental Solutions, Inc.</b>			U.S. EPA ID Number <b>N M R 0 0 0 0 0 6 5 0 2</b>		
7. Transporter 2 Company Name			U.S. EPA ID Number		
8. Designated Facility Name and Site Address <b>Advanced Environmental Solutions, Inc.</b> <b>2318 Roldan Drive</b> <b>Belen NM 87002</b> Facility's Phone: <b>505 861-1700</b>			U.S. EPA ID Number <b>N M R 0 0 0 0 0 6 5 0 2</b>		
GENERATOR	9. Waste Shipping Name and Description	10. Containers		11. Total Quantity	12. Unit Wt./Vol.
	<b>Non RCRA Regulated, Non DOT Hazardous IDW Water</b>	No.	Type		
		<b>0 0 1</b>	<b>TP</b>	<b>2 2 5</b>	<b>G</b>
	2.				
	3.				
13. Special Handling Instructions and Additional Information <b>1)(L) AES Profile # AES1186</b>  <b>NON-HAZ</b> <b>9.1) A10313</b>  <b>JOB# J14292</b>					
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.					
Generator's/Offor's Printed/Typed Name <b>Zach Weathers</b>		Signature <i>Zach Weathers</i>		Month <b>9</b>	Day <b>29</b>
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.		Port of entry/exit: Date leaving U.S.:			
16. Transporter Acknowledgment of Receipt of Materials					
Transporter 1 Printed/Typed Name <b>Zach Weathers</b>		Signature <i>Zach Weathers</i>		Month <b>10</b>	Day <b>2</b>
Transporter 2 Printed/Typed Name		Signature		Month	Day
17. Discrepancy					
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection					
Manifest Reference Number:					
17b. Alternate Facility (or Generator)				U.S. EPA ID Number	
Facility's Phone:					
17c. Signature of Alternate Facility (or Generator)				Month	Day
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a					
Printed/Typed Name <b>JOHN J. SANCHERZ</b>		Signature <i>John J. Sanchez</i>		Month <b>10</b>	Day <b>2</b>

**Eurofins Denver**

4955 Yarrow Street  
 Arvada, CO 80002  
 Phone (303) 736-0100 Phone (303) 431-7171

**Chain of Custody Record**

<b>Client Information</b>		Sampler: <i>Zack Weathers</i>		Lab PM: Stone, Natalie B		Carrier Tracking No(s):		COC No: 280-133831-37088.1																					
Client Contact: Zack Weathers		Phone: (432) 386-3117		E-Mail: Natalie.Stone@et.eurofinsus.com		State of Origin: <i>New Mexico</i>		Page: <u>1</u> of <u>1</u>																					
Company: John Shomaker & Associates, Inc		PWSID:		<b>Analysis Requested</b>						Job #:																			
Address: 2611 Broadbent Parkway NE		Due Date Requested:		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Total Number of containers		Preservation Codes: A - HCL                      M - Hexane B - NaOH                    N - None C - Zn Acetate              O - AsNaO2 D - Nitric Acid              P - Na2O4S E - NaHSO4                 Q - Na2SO3 F - MeOH                    R - Na2S2O3 G - Amchlor                S - H2SO4 H - Ascorbic Acid         T - TSP Dodecahydrate I - Ice                         U - Acetone J - DI Water                V - MCAA K - EDTA                    W - pH 4-5 L - EDA                      Y - Trizma Z - other (specify)																			
City: Albuquerque		TAT Requested (days):																											
State, Zip: NM, 87107		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No																											
Phone: 432-386-3117(Tel)		PO #:																											
Email: zweather@shomaker.com		Pre-Payment by CC Required																											
Project Name: AFB Water Testing		Project #: 28025591		2320B - Alkalinity / 300.0_28D - Chloride, Bromide, & Sulfate		6010D_DOD5 - Total Metals		353.2_Pres - Nitrate-Nitrite		8280D_DOD5 - VOCs		8011_DOD5 - Ethylene Dibromide		6010D_DOD5 - Dissolved Metals (Lab to Filter)		8270E_DOD5 - SVOCs													
Site:		SSOW#:																											
<b>Sample Identification</b>		<b>Sample Date</b>		<b>Sample Time</b>		<b>Sample Type (C=Comp, G=grab)</b>		<b>Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)</b>		<b>Field Filtered Sample (Yes or No)</b>		<b>Perform MS/MSD (Yes or No)</b>		<b>Total Number of containers</b>		<b>Special Instructions/Note:</b>													
WUABFFMW-01 PDB		9/29/23		10:32		G		Water		Y		N		D		S		A		A		N		N		10		Filtered sample is labeled "Filtered"	
Field Blank		9/29/23		14:53		G		W		Y		X		X		X		X		X		X		X		10		"	
WUABFFMW-02-BP		9/29/23		14:44		G		W		Y		X		X		X		X		X		X		X		10		"	
Equip Rinse		9/29/23		17:34		G		W		Y		X		X		X		X		X		X		X		10		"	
Trip Blank																										2		preserved w/ Na2S2O3	
										 280-182246 Chain of Custody																			
<b>Possible Hazard Identification</b>										<b>Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)</b>																			
<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological										<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months																			
Deliverable Requested: I, II, III, IV, Other (specify)										Special Instructions/QC Requirements:																			
Empty Kit Relinquished by:					Date:					Time:					Method of Shipment:														
Relinquished by: <i>Zack Weathers</i>					Date/Time: <i>10/2/23 11:04</i>					Company: <i>JSAT</i>					Received by: <i>AMLR</i>					Date/Time: <i>10/3/23 9:35</i>					Company: <i>EETD&amp;N</i>				
Relinquished by:					Date/Time:					Company:					Received by:					Date/Time:					Company:				
Relinquished by:					Date/Time:					Company:					Received by:					Date/Time:					Company:				
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No					Custody Seal No.:					Cooler Temperature(s) °C and Other Remarks: <i>3.4 07.3 RE-MOND</i>																			

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Zach Weathers  
John Shomaker and Associates Inc  
2611 Broadbent Pkwy Ne  
Albuquerque NM 87107

Generated 10/27/2023 3:26 PM

**JOB DESCRIPTION**

Water Authority Data Gap Well Monitoring

**JOB NUMBER**

280-182246-1

# Eurofins Denver

## Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

## Authorization



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Authorized for release by  
Natalie B Stone, Project Manager  
[Natalie.Stone@et.eurofinsus.com](mailto:Natalie.Stone@et.eurofinsus.com)

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# Definitions/Glossary

Client: John Shomaker and Associates Inc  
Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

### GC/MS Semi VOA

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
M	Manual integrated compound.
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

### GC Semi VOA

Qualifier	Qualifier Description
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

### Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

### General Chemistry

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive

# Definitions/Glossary

Client: John Shomaker and Associates Inc  
Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

## Glossary (Continued)

---

Abbreviation	These commonly used abbreviations may or may not be present in this report.
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

## CASE NARRATIVE

**Client: John Shomaker and Associates Inc**

**Project: Water Authority Data Gap Well Monitoring**

**Report Number: 280-182246-1**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

### **RECEIPT**

The samples were received on 10/3/2023 9:35 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.7° C.

### **VOLATILE ORGANIC COMPOUNDS (GC/MS)**

Samples WUABFFMW-01 PDB (280-182246-1), Field Blank (280-182246-2), WUABFFMW-01-BP (280-182246-3), Equip Rinsate (280-182246-4) and Trip Blank (280-182246-5) were analyzed for volatile organic compounds (GC/MS) in accordance with SW-846 8260D. The samples were analyzed on 10/11/2023 and 10/13/2023.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batches 280-629278, 280-629418, and 280-629597. An LCS/LCSD was analyzed for each to provide batch precision and accuracy.

The following sample in batch 280-629278 was improperly preserved: Trip Blank (280-182246-5). The preservative used is not compatible with the analytes requested. This does not meet regulatory requirements. The two vials of TB provided were both preserved with sodium thiosulfate, not HCl. The sample was thus run out of holding time.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### **SEMIVOLATILE ORGANIC COMPOUNDS (GC/MS)**

Samples WUABFFMW-01 PDB (280-182246-1), Field Blank (280-182246-2), WUABFFMW-01-BP (280-182246-3) and Equip Rinsate (280-182246-4) were analyzed for Semivolatile Organic Compounds (GC/MS) in accordance with 8270E. The samples were prepared on 10/06/2023 and analyzed on 10/08/2023.

Bis(2-ethylhexyl) phthalate was detected in method blank MB 280-628746/1-A at a level exceeding the reporting limit. Di-n-butyl phthalate was detected in method blank MB 280-628746/1-A at a level that was above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated samples reported results above the MDL and/or RL, the results have been flagged. Refer to the QC report for details.

The continuing calibration verification (CCV) associated with batch 280-628919 recovered outside acceptance criteria, low biased, for 2,4-Dimethylphenol, Di-n-octyl phthalate, Hexachlorocyclopentadiene and Indeno[1,2,3-cd]pyrene. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### **EDB AND DBCP**

Samples WUABFFMW-01 PDB (280-182246-1), Field Blank (280-182246-2), WUABFFMW-01-BP (280-182246-3) and Equip Rinsate (280-182246-4) were analyzed for EDB and DBCP in accordance with 8011. The samples were prepared on 10/04/2023 and analyzed on 10/04/2023 and 10/05/2023.

The Ethylene Dibromide LCS recovery for the following samples was outside acceptance limits (low biased) on the primary: WUABFFMW-01 PDB (280-182246-1), Field Blank (280-182246-2), WUABFFMW-01-BP (280-182246-3), Equip Rinsate (280-182246-4) and (LCSD 280-628442/3-A). The recovery is within acceptance limits on the other column, indicating that the extraction process was in control. Data has been reported off of the secondary column.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### **DISSOLVED METALS (ICP)**



Samples WUABFFMW-01 PDB (280-182246-1), Field Blank (280-182246-2), WUABFFMW-01-BP (280-182246-3) and Equip Rinsate (280-182246-4) were analyzed for Dissolved Metals (ICP) in accordance with SW 846 6010D. The samples were prepared and analyzed on 10/19/2023.

Iron was detected in method blank MB 280-629983/1-B at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### **METALS (ICP)**

Samples WUABFFMW-01 PDB (280-182246-1), Field Blank (280-182246-2), WUABFFMW-01-BP (280-182246-3) and Equip Rinsate (280-182246-4) were analyzed for Metals (ICP) in accordance with 6010D. The samples were prepared on 10/19/2023 and 10/22/2023 and analyzed on 10/20/2023 and 10/22/2023.

Sodium was detected in method blank MB 280-630184/1-A at a level exceeding the reporting limit. Calcium was detected in method blank MB 280-630619/1-A at a level exceeding the reporting limit. Magnesium was detected in method blank MB 280-630619/1-A at a level that was above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated samples reported results above the MDL and/or RL, the results have been flagged. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### **TOTAL METALS (ICP/MS)**

Samples WUABFFMW-01 PDB (280-182246-1), Field Blank (280-182246-2), WUABFFMW-01-BP (280-182246-3) and Equip Rinsate (280-182246-4) were analyzed for total metals (ICP/MS) in accordance with SW846 6020B. The samples were prepared on 10/19/2023 and 10/22/2023 and analyzed on 10/20/2023, 10/23/2023 and 10/26/2023.

The continuing calibration verification (CCV) associated with batch 280-630521 recovered above the upper control limit for As. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: Field Blank (280-182246-2) and (CCV 280-630521/70).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### **ALKALINITY**

Samples WUABFFMW-01 PDB (280-182246-1), Field Blank (280-182246-2), WUABFFMW-01-BP (280-182246-3) and Equip Rinsate (280-182246-4) were analyzed for Alkalinity in accordance with SM20 2320B. The samples were analyzed on 10/05/2023 and 10/06/2023.

Alkalinity was detected in method blank MB 280-628623/5 at a level exceeding the reporting limit. Alkalinity was detected in method blank MB 280-629032/5 at a level exceeding the reporting limit. If the associated samples reported results above the MDL and/or RL, the results have been flagged. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### **ANIONS (28 DAYS)**

Samples WUABFFMW-01 PDB (280-182246-1), Field Blank (280-182246-2), WUABFFMW-01-BP (280-182246-3) and Equip Rinsate (280-182246-4) were analyzed for anions (28 days) in accordance with EPA Method 300.0 (28 Days). The samples were analyzed on 10/18/2023.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### **NITRATE-NITRITE AS NITROGEN**

Samples WUABFFMW-01 PDB (280-182246-1), Field Blank (280-182246-2), WUABFFMW-01-BP (280-182246-3) and Equip Rinsate (280-182246-4) were analyzed for nitrate-nitrite as nitrogen in accordance with EPA Method 353.2. The samples were analyzed on 10/06/2023.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Detection Summary

Client: John Shomaker and Associates Inc  
Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

## Client Sample ID: WUABFFMW-01 PDB

## Lab Sample ID: 280-182246-1

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Bis(2-ethylhexyl) phthalate	4.4	J	10	8.0	3.3	ug/L	1		8270E	Total/NA
Calcium	36000		200	64	24	ug/L	1		6010D	Total/NA
Magnesium	5000		200	15	4.2	ug/L	1		6010D	Total/NA
Potassium	3600		3000	940	240	ug/L	1		6010D	Total/NA
Sodium	30000		1000	320	97	ug/L	1		6010D	Total/NA
Iron	40	J	100	34	9.1	ug/L	1		6010D	Dissolved
Manganese	330		10	1.8	0.45	ug/L	1		6010D	Dissolved
Arsenic	0.92	J	5.0	2.0	0.50	ug/L	1		6020B	Total/NA
Chloride	9.8		3.0	2.5	1.0	mg/L	1		300.0	Total/NA
Sulfate	28		5.0	2.5	1.0	mg/L	1		300.0	Total/NA
Alkalinity	130		10	6.4	3.1	mg/L	1		SM 2320B	Total/NA

## Client Sample ID: Field Blank

## Lab Sample ID: 280-182246-2

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Di-n-butyl phthalate	0.64	J	4.0	3.2	0.45	ug/L	1		8270E	Total/NA
Bis(2-ethylhexyl) phthalate	10		10	8.0	3.3	ug/L	1		8270E	Total/NA
Sodium	140	J	1000	320	97	ug/L	1		6010D	Total/NA
Iron	9.3	J	100	34	9.1	ug/L	1		6010D	Dissolved

## Client Sample ID: WUABFFMW-01-BP

## Lab Sample ID: 280-182246-3

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Benzaldehyde	1.2	J	5.0	3.2	1.2	ug/L	1		8270E	Total/NA
Bis(2-ethylhexyl) phthalate	4.2	J	10	8.0	3.3	ug/L	1		8270E	Total/NA
Calcium	34000		200	64	24	ug/L	1		6010D	Total/NA
Magnesium	4700		200	15	4.2	ug/L	1		6010D	Total/NA
Potassium	3300		3000	940	240	ug/L	1		6010D	Total/NA
Sodium	27000		1000	320	97	ug/L	1		6010D	Total/NA
Iron	31	J	100	34	9.1	ug/L	1		6010D	Dissolved
Manganese	290		10	1.8	0.45	ug/L	1		6010D	Dissolved
Arsenic	0.96	J	5.0	2.0	0.50	ug/L	1		6020B	Total/NA
Chloride	9.0		3.0	2.5	1.0	mg/L	1		300.0	Total/NA
Sulfate	30		5.0	2.5	1.0	mg/L	1		300.0	Total/NA
Nitrate Nitrite as N	0.051	J	0.10	0.080	0.044	mg/L	1		353.2	Total/NA
Alkalinity	120		10	6.4	3.1	mg/L	1		SM 2320B	Total/NA

## Client Sample ID: Equip Rinsate

## Lab Sample ID: 280-182246-4

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Bis(2-ethylhexyl) phthalate	4.5	J	10	8.0	3.3	ug/L	1		8270E	Total/NA
Calcium	76	J	200	64	24	ug/L	1		6010D	Total/NA
Sodium	100	J	1000	320	97	ug/L	1		6010D	Total/NA
Iron	11	J	100	34	9.1	ug/L	1		6010D	Dissolved
Manganese	1.5	J	10	1.8	0.45	ug/L	1		6010D	Dissolved
Nitrate Nitrite as N	0.068	J	0.10	0.080	0.044	mg/L	1		353.2	Total/NA

## Client Sample ID: Trip Blank

## Lab Sample ID: 280-182246-5

No Detections.

This Detection Summary does not include radiochemical test results.

# Client Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

**Client Sample ID: WUABFFMW-01 PDB**

**Lab Sample ID: 280-182246-1**

**Date Collected: 09/29/23 10:32**

**Matrix: Water**

**Date Received: 10/03/23 09:35**

**Method: SW846 8260D - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylbenzene	0.40	U	1.0	0.40	0.30	ug/L		10/13/23 12:39	1
Styrene	0.80	U	1.0	0.80	0.36	ug/L		10/13/23 12:39	1
cis-1,3-Dichloropropene	1.8	U	2.0	1.8	0.63	ug/L		10/13/23 12:39	1
trans-1,3-Dichloropropene	1.8	U	2.0	1.8	0.65	ug/L		10/13/23 12:39	1
N-Propylbenzene	0.80	U	1.0	0.80	0.53	ug/L		10/13/23 12:39	1
n-Butylbenzene	0.80	U	1.0	0.80	0.48	ug/L		10/13/23 12:39	1
4-Chlorotoluene	0.80	U	1.0	0.80	0.21	ug/L		10/13/23 12:39	1
1,4-Dichlorobenzene	0.50	U	1.0	0.50	0.39	ug/L		10/13/23 12:39	1
Ethylene Dibromide	0.80	U	1.0	0.80	0.40	ug/L		10/13/23 12:39	1
3-Chloro-1-propene	0.40	U	2.0	0.40	0.17	ug/L		10/13/23 12:39	1
1,2-Dichloroethane	0.80	U	1.0	0.80	0.54	ug/L		10/13/23 12:39	1
Acrylonitrile	8.0	U	20	8.0	4.5	ug/L		10/13/23 12:39	1
Vinyl acetate	2.0	U	3.0	2.0	0.94	ug/L		10/13/23 12:39	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98	ug/L		10/13/23 12:39	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.37	ug/L		10/13/23 12:39	1
Bromobenzene	0.50	U	1.0	0.50	0.40	ug/L		10/13/23 12:39	1
Methylcyclohexane	0.40	U	1.0	0.40	0.31	ug/L		10/13/23 12:39	1
Toluene	0.40	U	1.0	0.40	0.32	ug/L		10/13/23 12:39	1
Chlorobenzene	0.80	U	1.0	0.80	0.42	ug/L		10/13/23 12:39	1
Tetrahydrofuran	6.4	U	7.0	6.4	2.0	ug/L		10/13/23 12:39	1
Hexane	0.80	U	2.0	0.80	0.16	ug/L		10/13/23 12:39	1
trans-1,4-Dichloro-2-butene	1.6	U	3.0	1.6	1.4	ug/L		10/13/23 12:39	1
Cyclohexane	0.80	U	1.0	0.80	0.44	ug/L		10/13/23 12:39	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.58	ug/L		10/13/23 12:39	1
Chlorodibromomethane	1.8	U	2.0	1.8	0.62	ug/L		10/13/23 12:39	1
Tetrachloroethene	0.80	U	1.0	0.80	0.40	ug/L		10/13/23 12:39	1
sec-Butylbenzene	0.80	U	1.0	0.80	0.45	ug/L		10/13/23 12:39	1
1,3-Dichloropropane	0.80	U	1.0	0.80	0.38	ug/L		10/13/23 12:39	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.32	ug/L		10/13/23 12:39	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	0.37	ug/L		10/13/23 12:39	1
Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25	ug/L		10/13/23 12:39	1
m-Xylene & p-Xylene	0.80	U	2.0	0.80	0.36	ug/L		10/13/23 12:39	1
1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.33	ug/L		10/13/23 12:39	1
Carbon tetrachloride	0.80	U	1.0	0.80	0.57	ug/L		10/13/23 12:39	1
1,1-Dichloropropene	0.80	U	1.0	0.80	0.42	ug/L		10/13/23 12:39	1
2-Hexanone	4.0	U	5.0	4.0	1.7	ug/L		10/13/23 12:39	1
2,2-Dichloropropane	0.80	U	1.0	0.80	0.38	ug/L		10/13/23 12:39	1
Ethyl ether	0.80	U	2.0	0.80	0.35	ug/L		10/13/23 12:39	1
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.58	ug/L		10/13/23 12:39	1
Acetone	8.0	U	15	8.0	6.6	ug/L		10/13/23 12:39	1
Chloroform	0.80	U	1.0	0.80	0.36	ug/L		10/13/23 12:39	1
Benzene	0.80	U	1.0	0.80	0.31	ug/L		10/13/23 12:39	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.39	ug/L		10/13/23 12:39	1
Bromomethane	4.0	U	5.0	4.0	2.4	ug/L		10/13/23 12:39	1
Chloromethane	1.0	U	2.0	1.0	0.75	ug/L		10/13/23 12:39	1
Iodomethane	4.0	U	5.0	4.0	2.6	ug/L		10/13/23 12:39	1
Dibromomethane	0.40	U	1.0	0.40	0.34	ug/L		10/13/23 12:39	1
Chlorobromomethane	0.80	U	1.0	0.80	0.40	ug/L		10/13/23 12:39	1
Chloroethane	1.6	U	4.0	1.6	1.4	ug/L		10/13/23 12:39	1

# Client Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

**Client Sample ID: WUABFFMW-01 PDB**

**Lab Sample ID: 280-182246-1**

Date Collected: 09/29/23 10:32

Matrix: Water

Date Received: 10/03/23 09:35

**Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Vinyl chloride	1.0	U	2.0	1.0	0.51	ug/L		10/13/23 12:39	1
Methylene Chloride	1.8	U	2.0	1.8	0.94	ug/L		10/13/23 12:39	1
Carbon disulfide	0.80	U	2.0	0.80	0.63	ug/L		10/13/23 12:39	1
Bromoform	1.8	U	2.0	1.8	1.2	ug/L		10/13/23 12:39	1
Dichlorobromomethane	0.50	U	1.0	0.50	0.39	ug/L		10/13/23 12:39	1
1,1-Dichloroethane	0.80	U	1.0	0.80	0.22	ug/L		10/13/23 12:39	1
1,1-Dichloroethene	0.80	U	1.0	0.80	0.23	ug/L		10/13/23 12:39	1
Trichlorofluoromethane	0.80	U	2.0	0.80	0.57	ug/L		10/13/23 12:39	1
Dichlorodifluoromethane	2.5	U	3.0	2.5	0.96	ug/L		10/13/23 12:39	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.8	U	3.0	1.8	0.73	ug/L		10/13/23 12:39	1
1,2-Dichloropropane	0.80	U	1.0	0.80	0.52	ug/L		10/13/23 12:39	1
2-Butanone (MEK)	12	U	15	12	6.0	ug/L		10/13/23 12:39	1
1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27	ug/L		10/13/23 12:39	1
Trichloroethene	0.40	U	1.0	0.40	0.30	ug/L		10/13/23 12:39	1
Methyl acetate	4.0	U	5.0	4.0	1.6	ug/L		10/13/23 12:39	1
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21	ug/L		10/13/23 12:39	1
1,2,3-Trichlorobenzene	0.80	U	2.0	0.80	0.70	ug/L		10/13/23 12:39	1
Hexachlorobutadiene	1.8	U	2.0	1.8	1.2	ug/L		10/13/23 12:39	1
Naphthalene	0.80	U	2.0	0.80	0.63	ug/L		10/13/23 12:39	1
o-Xylene	0.40	U	1.0	0.40	0.33	ug/L		10/13/23 12:39	1
2-Chlorotoluene	0.40	U	1.0	0.40	0.34	ug/L		10/13/23 12:39	1
1,2-Dichlorobenzene	0.50	U	1.0	0.50	0.37	ug/L		10/13/23 12:39	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.15	ug/L		10/13/23 12:39	1
1,2-Dibromo-3-Chloropropane	4.0	U	5.0	4.0	1.8	ug/L		10/13/23 12:39	1
1,2,3-Trichloropropane	1.8	U	2.5	1.8	0.86	ug/L		10/13/23 12:39	1
Ethyl methacrylate	2.0	U	3.0	2.0	0.86	ug/L		10/13/23 12:39	1
tert-Butylbenzene	0.80	U	1.0	0.80	0.42	ug/L		10/13/23 12:39	1
Isopropylbenzene	0.50	U	1.0	0.50	0.36	ug/L		10/13/23 12:39	1
4-Isopropyltoluene	0.80	U	1.0	0.80	0.43	ug/L		10/13/23 12:39	1
1,2-Dichloroethene, Total	0.40	U	1.0	0.40	0.32	ug/L		10/13/23 12:39	1
1,3-Dichloropropene, Total	0.80	U	2.0	0.80	0.63	ug/L		10/13/23 12:39	1
Trihalomethanes, Total	0.80	U	1.0	0.80	0.36	ug/L		10/13/23 12:39	1
Total BTEX	0.40	U	1.0	0.40	0.30	ug/L		10/13/23 12:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		81 - 118		10/13/23 12:39	1
Dibromofluoromethane (Surr)	98		80 - 119		10/13/23 12:39	1
Toluene-d8 (Surr)	100		89 - 112		10/13/23 12:39	1
4-Bromofluorobenzene (Surr)	101		85 - 114		10/13/23 12:39	1

**Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1'-Biphenyl	8.0	U	10	8.0	1.2	ug/L		10/08/23 14:12	1
2,4-Dichlorophenol	8.0	U	10	8.0	0.64	ug/L		10/08/23 14:12	1
2,4-Dimethylphenol	8.0	U Q	10	8.0	1.4	ug/L		10/08/23 14:12	1
2,4-Dinitrophenol	20	U	30	20	13	ug/L		10/08/23 14:12	1
2,4-Dinitrotoluene	8.0	U	10	8.0	1.4	ug/L		10/08/23 14:12	1
2,4,6-Trichlorophenol	8.0	U	10	8.0	0.71	ug/L		10/08/23 14:12	1
2,4,5-Trichlorophenol	8.0	U	10	8.0	0.90	ug/L		10/08/23 14:12	1
2,2'-oxybis[1-chloropropane]	8.0	U	10	8.0	1.3	ug/L		10/08/23 14:12	1

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# Client Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

**Client Sample ID: WUABFFMW-01 PDB**

**Lab Sample ID: 280-182246-1**

**Date Collected: 09/29/23 10:32**

**Matrix: Water**

**Date Received: 10/03/23 09:35**

**Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Di-n-butyl phthalate	3.2	U	4.0	3.2	0.45	ug/L		10/08/23 14:12	1
Di-n-octyl phthalate	8.0	U Q	10	8.0	3.6	ug/L		10/08/23 14:12	1
Benzo[a]anthracene	3.2	U	4.0	3.2	0.39	ug/L		10/08/23 14:12	1
Benzo[a]pyrene	3.2	U M	4.0	3.2	0.50	ug/L		10/08/23 14:12	1
Benzo[b]fluoranthene	3.2	U	4.0	3.2	1.2	ug/L		10/08/23 14:12	1
Benzo[g,h,i]perylene	3.2	U	4.0	3.2	0.51	ug/L		10/08/23 14:12	1
Benzo[k]fluoranthene	3.2	U	4.0	3.2	0.40	ug/L		10/08/23 14:12	1
Acenaphthene	3.2	U	4.0	3.2	0.96	ug/L		10/08/23 14:12	1
Acenaphthylene	3.2	U	4.0	3.2	0.75	ug/L		10/08/23 14:12	1
Acetophenone	8.0	U	10	8.0	0.68	ug/L		10/08/23 14:12	1
Anthracene	3.2	U	4.0	3.2	0.58	ug/L		10/08/23 14:12	1
Atrazine	3.2	U	10	3.2	0.65	ug/L		10/08/23 14:12	1
Benzaldehyde	3.2	U	5.0	3.2	1.2	ug/L		10/08/23 14:12	1
Butyl benzyl phthalate	3.2	U	4.0	3.2	1.5	ug/L		10/08/23 14:12	1
Caprolactam	10	U	15	10	5.5	ug/L		10/08/23 14:12	1
Chrysene	3.2	U	4.0	3.2	2.0	ug/L		10/08/23 14:12	1
Dibenz(a,h)anthracene	8.0	U	10	8.0	0.58	ug/L		10/08/23 14:12	1
Dibenzofuran	3.2	U	4.0	3.2	0.95	ug/L		10/08/23 14:12	1
Diethyl phthalate	3.2	U	4.0	3.2	0.59	ug/L		10/08/23 14:12	1
Hexachlorobenzene	8.0	U	10	8.0	0.86	ug/L		10/08/23 14:12	1
Hexachlorocyclopentadiene	48	U Q	50	48	16	ug/L		10/08/23 14:12	1
Hexachlorobutadiene	8.0	U	10	8.0	2.9	ug/L		10/08/23 14:12	1
Hexachloroethane	8.0	U	10	8.0	4.5	ug/L		10/08/23 14:12	1
Fluoranthene	3.2	U	4.0	3.2	0.50	ug/L		10/08/23 14:12	1
Fluorene	3.2	U	4.0	3.2	0.78	ug/L		10/08/23 14:12	1
Indeno[1,2,3-cd]pyrene	8.0	U Q	10	8.0	1.3	ug/L		10/08/23 14:12	1
Isophorone	8.0	U	10	8.0	2.0	ug/L		10/08/23 14:12	1
N-Nitrosodi-n-propylamine	8.0	U	10	8.0	1.9	ug/L		10/08/23 14:12	1
N-Nitrosodiphenylamine	8.0	U	10	8.0	0.77	ug/L		10/08/23 14:12	1
Naphthalene	3.2	U	4.0	3.2	1.5	ug/L		10/08/23 14:12	1
Nitrobenzene	8.0	U	10	8.0	1.3	ug/L		10/08/23 14:12	1
Pentachlorophenol	48	U	50	48	20	ug/L		10/08/23 14:12	1
Phenanthrene	3.2	U	4.0	3.2	1.6	ug/L		10/08/23 14:12	1
Phenol	8.0	U	10	8.0	0.92	ug/L		10/08/23 14:12	1
Pyrene	8.0	U	10	8.0	0.53	ug/L		10/08/23 14:12	1
2-Chloronaphthalene	3.2	U	4.0	3.2	1.3	ug/L		10/08/23 14:12	1
2-Chlorophenol	8.0	U	10	8.0	0.68	ug/L		10/08/23 14:12	1
2-Methylnaphthalene	3.2	U	4.0	3.2	1.2	ug/L		10/08/23 14:12	1
2-Methylphenol	8.0	U	10	8.0	0.77	ug/L		10/08/23 14:12	1
2-Nitroaniline	3.2	U	10	3.2	2.6	ug/L		10/08/23 14:12	1
2-Nitrophenol	8.0	U	10	8.0	3.5	ug/L		10/08/23 14:12	1
3,3'-Dichlorobenzidine	30	U	50	30	3.4	ug/L		10/08/23 14:12	1
3-Nitroaniline	8.0	U	10	8.0	3.3	ug/L		10/08/23 14:12	1
4,6-Dinitro-2-methylphenol	30	U	50	30	4.0	ug/L		10/08/23 14:12	1
4-Bromophenyl phenyl ether	8.0	U	10	8.0	1.0	ug/L		10/08/23 14:12	1
4-Nitroaniline	8.0	U	10	8.0	2.6	ug/L		10/08/23 14:12	1
4-Nitrophenol	13	U M	25	13	9.1	ug/L		10/08/23 14:12	1
Bis(2-chloroethoxy)methane	8.0	U	10	8.0	0.81	ug/L		10/08/23 14:12	1
Bis(2-chloroethyl)ether	8.0	U	10	8.0	2.0	ug/L		10/08/23 14:12	1

# Client Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

**Client Sample ID: WUABFFMW-01 PDB**

**Lab Sample ID: 280-182246-1**

Date Collected: 09/29/23 10:32

Matrix: Water

Date Received: 10/03/23 09:35

**Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	4.4	J	10	8.0	3.3	ug/L		10/08/23 14:12	1
2,6-Dinitrotoluene	8.0	U	10	8.0	1.4	ug/L		10/08/23 14:12	1
4-Chloro-3-methylphenol	8.0	U	10	8.0	0.69	ug/L		10/08/23 14:12	1
4-Chloroaniline	13	U	20	13	6.3	ug/L		10/08/23 14:12	1
4-Chlorophenyl phenyl ether	8.0	U	10	8.0	1.2	ug/L		10/08/23 14:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	58		19 - 119	10/06/23 13:02	10/08/23 14:12	1
Phenol-d5 (Surr)	49		10 - 115	10/06/23 13:02	10/08/23 14:12	1
Nitrobenzene-d5 (Surr)	64		44 - 120	10/06/23 13:02	10/08/23 14:12	1
2-Fluorobiphenyl	66		44 - 119	10/06/23 13:02	10/08/23 14:12	1
2,4,6-Tribromophenol (Surr)	79		43 - 140	10/06/23 13:02	10/08/23 14:12	1
Terphenyl-d14 (Surr)	100		50 - 134	10/06/23 13:02	10/08/23 14:12	1

**Method: SW846 8011 - EDB, DBCP, and 1,2,3-TCP (GC)**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide	0.014	U M	0.020	0.014	0.0037	ug/L		10/04/23 23:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	94		70 - 130	10/04/23 12:28	10/04/23 23:57	1

**Method: SW846 6010D - Metals (ICP)**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	36000		200	64	24	ug/L		10/20/23 07:29	1
Magnesium	5000		200	15	4.2	ug/L		10/20/23 07:29	1
Potassium	3600		3000	940	240	ug/L		10/20/23 07:29	1
Sodium	30000		1000	320	97	ug/L		10/20/23 07:29	1

**Method: SW846 6010D - Metals (ICP) - Dissolved**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	40	J	100	34	9.1	ug/L		10/19/23 19:00	1
Manganese	330		10	1.8	0.45	ug/L		10/19/23 19:00	1

**Method: SW846 6020B - Metals (ICP/MS)**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.92	J	5.0	2.0	0.50	ug/L		10/20/23 14:00	1
Lead	0.70	U	1.0	0.70	0.23	ug/L		10/20/23 07:54	1

**General Chemistry**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide (EPA 300.0)	0.40	U M	0.50	0.40	0.23	mg/L		10/18/23 00:32	1
Chloride (EPA 300.0)	9.8		3.0	2.5	1.0	mg/L		10/18/23 00:32	1
Sulfate (EPA 300.0)	28		5.0	2.5	1.0	mg/L		10/18/23 00:32	1
Nitrate Nitrite as N (EPA 353.2)	0.080	U	0.10	0.080	0.044	mg/L		10/06/23 12:37	1
Alkalinity (SM 2320B)	130		10	6.4	3.1	mg/L		10/06/23 20:41	1



# Client Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

**Client Sample ID: Field Blank**

**Lab Sample ID: 280-182246-2**

**Date Collected: 09/29/23 14:53**

**Matrix: Water**

**Date Received: 10/03/23 09:35**

**Method: SW846 8260D - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylbenzene	0.40	U	1.0	0.40	0.30	ug/L		10/13/23 10:10	1
Styrene	0.80	U	1.0	0.80	0.36	ug/L		10/13/23 10:10	1
cis-1,3-Dichloropropene	1.8	U	2.0	1.8	0.63	ug/L		10/13/23 10:10	1
trans-1,3-Dichloropropene	1.8	U	2.0	1.8	0.65	ug/L		10/13/23 10:10	1
N-Propylbenzene	0.80	U	1.0	0.80	0.53	ug/L		10/13/23 10:10	1
n-Butylbenzene	0.80	U	1.0	0.80	0.48	ug/L		10/13/23 10:10	1
4-Chlorotoluene	0.80	U	1.0	0.80	0.21	ug/L		10/13/23 10:10	1
1,4-Dichlorobenzene	0.50	U	1.0	0.50	0.39	ug/L		10/13/23 10:10	1
Ethylene Dibromide	0.80	U	1.0	0.80	0.40	ug/L		10/13/23 10:10	1
3-Chloro-1-propene	0.40	U	2.0	0.40	0.17	ug/L		10/13/23 10:10	1
1,2-Dichloroethane	0.80	U	1.0	0.80	0.54	ug/L		10/13/23 10:10	1
Acrylonitrile	8.0	U	20	8.0	4.5	ug/L		10/13/23 10:10	1
Vinyl acetate	2.0	U	3.0	2.0	0.94	ug/L		10/13/23 10:10	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98	ug/L		10/13/23 10:10	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.37	ug/L		10/13/23 10:10	1
Bromobenzene	0.50	U	1.0	0.50	0.40	ug/L		10/13/23 10:10	1
Methylcyclohexane	0.40	U	1.0	0.40	0.31	ug/L		10/13/23 10:10	1
Toluene	0.40	U	1.0	0.40	0.32	ug/L		10/13/23 10:10	1
Chlorobenzene	0.80	U	1.0	0.80	0.42	ug/L		10/13/23 10:10	1
Tetrahydrofuran	6.4	U	7.0	6.4	2.0	ug/L		10/13/23 10:10	1
Hexane	0.80	U	2.0	0.80	0.16	ug/L		10/13/23 10:10	1
trans-1,4-Dichloro-2-butene	1.6	U	3.0	1.6	1.4	ug/L		10/13/23 10:10	1
Cyclohexane	0.80	U	1.0	0.80	0.44	ug/L		10/13/23 10:10	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.58	ug/L		10/13/23 10:10	1
Chlorodibromomethane	1.8	U	2.0	1.8	0.62	ug/L		10/13/23 10:10	1
Tetrachloroethene	0.80	U	1.0	0.80	0.40	ug/L		10/13/23 10:10	1
sec-Butylbenzene	0.80	U	1.0	0.80	0.45	ug/L		10/13/23 10:10	1
1,3-Dichloropropane	0.80	U	1.0	0.80	0.38	ug/L		10/13/23 10:10	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.32	ug/L		10/13/23 10:10	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	0.37	ug/L		10/13/23 10:10	1
Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25	ug/L		10/13/23 10:10	1
m-Xylene & p-Xylene	0.80	U	2.0	0.80	0.36	ug/L		10/13/23 10:10	1
1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.33	ug/L		10/13/23 10:10	1
Carbon tetrachloride	0.80	U	1.0	0.80	0.57	ug/L		10/13/23 10:10	1
1,1-Dichloropropene	0.80	U	1.0	0.80	0.42	ug/L		10/13/23 10:10	1
2-Hexanone	4.0	U	5.0	4.0	1.7	ug/L		10/13/23 10:10	1
2,2-Dichloropropane	0.80	U	1.0	0.80	0.38	ug/L		10/13/23 10:10	1
Ethyl ether	0.80	U	2.0	0.80	0.35	ug/L		10/13/23 10:10	1
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.58	ug/L		10/13/23 10:10	1
Acetone	8.0	U	15	8.0	6.6	ug/L		10/13/23 10:10	1
Chloroform	0.80	U	1.0	0.80	0.36	ug/L		10/13/23 10:10	1
Benzene	0.80	U	1.0	0.80	0.31	ug/L		10/13/23 10:10	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.39	ug/L		10/13/23 10:10	1
Bromomethane	4.0	U	5.0	4.0	2.4	ug/L		10/13/23 10:10	1
Chloromethane	1.0	U	2.0	1.0	0.75	ug/L		10/13/23 10:10	1
Iodomethane	4.0	U	5.0	4.0	2.6	ug/L		10/13/23 10:10	1
Dibromomethane	0.40	U	1.0	0.40	0.34	ug/L		10/13/23 10:10	1
Chlorobromomethane	0.80	U	1.0	0.80	0.40	ug/L		10/13/23 10:10	1
Chloroethane	1.6	U	4.0	1.6	1.4	ug/L		10/13/23 10:10	1

# Client Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

**Client Sample ID: Field Blank**

**Lab Sample ID: 280-182246-2**

**Date Collected: 09/29/23 14:53**

**Matrix: Water**

**Date Received: 10/03/23 09:35**

**Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Vinyl chloride	1.0	U	2.0	1.0	0.51	ug/L		10/13/23 10:10	1
Methylene Chloride	1.8	U	2.0	1.8	0.94	ug/L		10/13/23 10:10	1
Carbon disulfide	0.80	U	2.0	0.80	0.63	ug/L		10/13/23 10:10	1
Bromoform	1.8	U	2.0	1.8	1.2	ug/L		10/13/23 10:10	1
Dichlorobromomethane	0.50	U	1.0	0.50	0.39	ug/L		10/13/23 10:10	1
1,1-Dichloroethane	0.80	U	1.0	0.80	0.22	ug/L		10/13/23 10:10	1
1,1-Dichloroethene	0.80	U	1.0	0.80	0.23	ug/L		10/13/23 10:10	1
Trichlorofluoromethane	0.80	U	2.0	0.80	0.57	ug/L		10/13/23 10:10	1
Dichlorodifluoromethane	2.5	U	3.0	2.5	0.96	ug/L		10/13/23 10:10	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.8	U	3.0	1.8	0.73	ug/L		10/13/23 10:10	1
1,2-Dichloropropane	0.80	U	1.0	0.80	0.52	ug/L		10/13/23 10:10	1
2-Butanone (MEK)	12	U	15	12	6.0	ug/L		10/13/23 10:10	1
1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27	ug/L		10/13/23 10:10	1
Trichloroethene	0.40	U	1.0	0.40	0.30	ug/L		10/13/23 10:10	1
Methyl acetate	4.0	U	5.0	4.0	1.6	ug/L		10/13/23 10:10	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21	ug/L		10/13/23 10:10	1
1,2,3-Trichlorobenzene	0.80	U	2.0	0.80	0.70	ug/L		10/13/23 10:10	1
Hexachlorobutadiene	1.8	U	2.0	1.8	1.2	ug/L		10/13/23 10:10	1
Naphthalene	0.80	U	2.0	0.80	0.63	ug/L		10/13/23 10:10	1
o-Xylene	0.40	U	1.0	0.40	0.33	ug/L		10/13/23 10:10	1
2-Chlorotoluene	0.40	U	1.0	0.40	0.34	ug/L		10/13/23 10:10	1
1,2-Dichlorobenzene	0.50	U	1.0	0.50	0.37	ug/L		10/13/23 10:10	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.15	ug/L		10/13/23 10:10	1
1,2-Dibromo-3-Chloropropane	4.0	U	5.0	4.0	1.8	ug/L		10/13/23 10:10	1
1,2,3-Trichloropropane	1.8	U	2.5	1.8	0.86	ug/L		10/13/23 10:10	1
Ethyl methacrylate	2.0	U	3.0	2.0	0.86	ug/L		10/13/23 10:10	1
tert-Butylbenzene	0.80	U	1.0	0.80	0.42	ug/L		10/13/23 10:10	1
Isopropylbenzene	0.50	U	1.0	0.50	0.36	ug/L		10/13/23 10:10	1
4-Isopropyltoluene	0.80	U	1.0	0.80	0.43	ug/L		10/13/23 10:10	1
1,2-Dichloroethene, Total	0.40	U	1.0	0.40	0.32	ug/L		10/13/23 10:10	1
1,3-Dichloropropene, Total	0.80	U	2.0	0.80	0.63	ug/L		10/13/23 10:10	1
Trihalomethanes, Total	0.80	U	1.0	0.80	0.36	ug/L		10/13/23 10:10	1
Total BTEX	0.40	U	1.0	0.40	0.30	ug/L		10/13/23 10:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		81 - 118		10/13/23 10:10	1
Dibromofluoromethane (Surr)	100		80 - 119		10/13/23 10:10	1
Toluene-d8 (Surr)	99		89 - 112		10/13/23 10:10	1
4-Bromofluorobenzene (Surr)	102		85 - 114		10/13/23 10:10	1

**Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1'-Biphenyl	8.0	U	10	8.0	1.2	ug/L		10/08/23 14:34	1
2,4-Dichlorophenol	8.0	U	10	8.0	0.64	ug/L		10/08/23 14:34	1
2,4-Dimethylphenol	8.0	U Q	10	8.0	1.4	ug/L		10/08/23 14:34	1
2,4-Dinitrophenol	20	U	30	20	13	ug/L		10/08/23 14:34	1
2,4-Dinitrotoluene	8.0	U	10	8.0	1.4	ug/L		10/08/23 14:34	1
2,4,6-Trichlorophenol	8.0	U	10	8.0	0.71	ug/L		10/08/23 14:34	1
2,4,5-Trichlorophenol	8.0	U	10	8.0	0.90	ug/L		10/08/23 14:34	1
2,2'-oxybis[1-chloropropane]	8.0	U	10	8.0	1.3	ug/L		10/08/23 14:34	1

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# Client Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

**Client Sample ID: Field Blank**

**Lab Sample ID: 280-182246-2**

**Date Collected: 09/29/23 14:53**

**Matrix: Water**

**Date Received: 10/03/23 09:35**

**Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Di-n-butyl phthalate	0.64	J	4.0	3.2	0.45	ug/L		10/08/23 14:34	1
Di-n-octyl phthalate	8.0	U Q	10	8.0	3.6	ug/L		10/08/23 14:34	1
Benzo[a]anthracene	3.2	U	4.0	3.2	0.39	ug/L		10/08/23 14:34	1
Benzo[a]pyrene	3.2	U M	4.0	3.2	0.50	ug/L		10/08/23 14:34	1
Benzo[b]fluoranthene	3.2	U	4.0	3.2	1.2	ug/L		10/08/23 14:34	1
Benzo[g,h,i]perylene	3.2	U	4.0	3.2	0.51	ug/L		10/08/23 14:34	1
Benzo[k]fluoranthene	3.2	U	4.0	3.2	0.40	ug/L		10/08/23 14:34	1
Acenaphthene	3.2	U	4.0	3.2	0.96	ug/L		10/08/23 14:34	1
Acenaphthylene	3.2	U	4.0	3.2	0.75	ug/L		10/08/23 14:34	1
Acetophenone	8.0	U	10	8.0	0.68	ug/L		10/08/23 14:34	1
Anthracene	3.2	U	4.0	3.2	0.58	ug/L		10/08/23 14:34	1
Atrazine	3.2	U	10	3.2	0.65	ug/L		10/08/23 14:34	1
Benzaldehyde	3.2	U	5.0	3.2	1.2	ug/L		10/08/23 14:34	1
Butyl benzyl phthalate	3.2	U M	4.0	3.2	1.5	ug/L		10/08/23 14:34	1
Caprolactam	10	U	15	10	5.5	ug/L		10/08/23 14:34	1
Chrysene	3.2	U	4.0	3.2	2.0	ug/L		10/08/23 14:34	1
Dibenz(a,h)anthracene	8.0	U	10	8.0	0.58	ug/L		10/08/23 14:34	1
Dibenzofuran	3.2	U	4.0	3.2	0.95	ug/L		10/08/23 14:34	1
Diethyl phthalate	3.2	U	4.0	3.2	0.59	ug/L		10/08/23 14:34	1
Hexachlorobenzene	8.0	U	10	8.0	0.86	ug/L		10/08/23 14:34	1
Hexachlorocyclopentadiene	48	U Q	50	48	16	ug/L		10/08/23 14:34	1
Hexachlorobutadiene	8.0	U	10	8.0	2.9	ug/L		10/08/23 14:34	1
Hexachloroethane	8.0	U	10	8.0	4.5	ug/L		10/08/23 14:34	1
Fluoranthene	3.2	U	4.0	3.2	0.50	ug/L		10/08/23 14:34	1
Fluorene	3.2	U	4.0	3.2	0.78	ug/L		10/08/23 14:34	1
Indeno[1,2,3-cd]pyrene	8.0	U Q	10	8.0	1.3	ug/L		10/08/23 14:34	1
Isophorone	8.0	U	10	8.0	2.0	ug/L		10/08/23 14:34	1
N-Nitrosodi-n-propylamine	8.0	U	10	8.0	1.9	ug/L		10/08/23 14:34	1
N-Nitrosodiphenylamine	8.0	U	10	8.0	0.77	ug/L		10/08/23 14:34	1
Naphthalene	3.2	U	4.0	3.2	1.5	ug/L		10/08/23 14:34	1
Nitrobenzene	8.0	U	10	8.0	1.3	ug/L		10/08/23 14:34	1
Pentachlorophenol	48	U	50	48	20	ug/L		10/08/23 14:34	1
Phenanthrene	3.2	U	4.0	3.2	1.6	ug/L		10/08/23 14:34	1
Phenol	8.0	U	10	8.0	0.92	ug/L		10/08/23 14:34	1
Pyrene	8.0	U	10	8.0	0.53	ug/L		10/08/23 14:34	1
2-Chloronaphthalene	3.2	U	4.0	3.2	1.3	ug/L		10/08/23 14:34	1
2-Chlorophenol	8.0	U	10	8.0	0.68	ug/L		10/08/23 14:34	1
2-Methylnaphthalene	3.2	U	4.0	3.2	1.2	ug/L		10/08/23 14:34	1
2-Methylphenol	8.0	U	10	8.0	0.77	ug/L		10/08/23 14:34	1
2-Nitroaniline	3.2	U	10	3.2	2.6	ug/L		10/08/23 14:34	1
2-Nitrophenol	8.0	U	10	8.0	3.5	ug/L		10/08/23 14:34	1
3,3'-Dichlorobenzidine	30	U	50	30	3.4	ug/L		10/08/23 14:34	1
3-Nitroaniline	8.0	U	10	8.0	3.3	ug/L		10/08/23 14:34	1
4,6-Dinitro-2-methylphenol	30	U	50	30	4.0	ug/L		10/08/23 14:34	1
4-Bromophenyl phenyl ether	8.0	U	10	8.0	1.0	ug/L		10/08/23 14:34	1
4-Nitroaniline	8.0	U	10	8.0	2.6	ug/L		10/08/23 14:34	1
4-Nitrophenol	13	U M	25	13	9.1	ug/L		10/08/23 14:34	1
Bis(2-chloroethoxy)methane	8.0	U	10	8.0	0.81	ug/L		10/08/23 14:34	1
Bis(2-chloroethyl)ether	8.0	U	10	8.0	2.0	ug/L		10/08/23 14:34	1

# Client Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

**Client Sample ID: Field Blank**

**Lab Sample ID: 280-182246-2**

**Date Collected: 09/29/23 14:53**

**Matrix: Water**

**Date Received: 10/03/23 09:35**

**Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
<b>Bis(2-ethylhexyl) phthalate</b>	<b>10</b>		10	8.0	3.3	ug/L		10/08/23 14:34	1
2,6-Dinitrotoluene	8.0	U	10	8.0	1.4	ug/L		10/08/23 14:34	1
4-Chloro-3-methylphenol	8.0	U	10	8.0	0.69	ug/L		10/08/23 14:34	1
4-Chloroaniline	13	U	20	13	6.3	ug/L		10/08/23 14:34	1
4-Chlorophenyl phenyl ether	8.0	U	10	8.0	1.2	ug/L		10/08/23 14:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	74		19 - 119	10/06/23 13:02	10/08/23 14:34	1
Phenol-d5 (Surr)	59		10 - 115	10/06/23 13:02	10/08/23 14:34	1
Nitrobenzene-d5 (Surr)	81		44 - 120	10/06/23 13:02	10/08/23 14:34	1
2-Fluorobiphenyl	80		44 - 119	10/06/23 13:02	10/08/23 14:34	1
2,4,6-Tribromophenol (Surr)	97		43 - 140	10/06/23 13:02	10/08/23 14:34	1
Terphenyl-d14 (Surr)	122		50 - 134	10/06/23 13:02	10/08/23 14:34	1

**Method: SW846 8011 - EDB, DBCP, and 1,2,3-TCP (GC)**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide	0.014	U M	0.020	0.014	0.0036	ug/L		10/05/23 00:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	96		70 - 130	10/04/23 12:28	10/05/23 00:21	1

**Method: SW846 6010D - Metals (ICP)**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	64	U	200	64	24	ug/L		10/20/23 07:33	1
Magnesium	15	U	200	15	4.2	ug/L		10/20/23 07:33	1
Potassium	940	U	3000	940	240	ug/L		10/20/23 07:33	1
<b>Sodium</b>	<b>140</b>	<b>J</b>	1000	320	97	ug/L		10/20/23 07:33	1

**Method: SW846 6010D - Metals (ICP) - Dissolved**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
<b>Iron</b>	<b>9.3</b>	<b>J</b>	100	34	9.1	ug/L		10/19/23 19:04	1
Manganese	1.8	U	10	1.8	0.45	ug/L		10/19/23 19:04	1

**Method: SW846 6020B - Metals (ICP/MS)**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	2.0	U Q	5.0	2.0	0.50	ug/L		10/20/23 08:34	1
Lead	0.70	U	1.0	0.70	0.23	ug/L		10/20/23 08:34	1

**General Chemistry**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide (EPA 300.0)	0.40	U	0.50	0.40	0.23	mg/L		10/18/23 00:43	1
Chloride (EPA 300.0)	2.5	U	3.0	2.5	1.0	mg/L		10/18/23 00:43	1
Sulfate (EPA 300.0)	2.5	U	5.0	2.5	1.0	mg/L		10/18/23 00:43	1
Nitrate Nitrite as N (EPA 353.2)	0.080	U	0.10	0.080	0.044	mg/L		10/06/23 12:39	1
Alkalinity (SM 2320B)	6.4	U	10	6.4	3.1	mg/L		10/05/23 00:50	1

# Client Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

**Client Sample ID: WUABFFMW-01-BP**

**Lab Sample ID: 280-182246-3**

**Date Collected: 09/29/23 16:44**

**Matrix: Water**

**Date Received: 10/03/23 09:35**

**Method: SW846 8260D - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylbenzene	0.40	U	1.0	0.40	0.30	ug/L		10/13/23 13:00	1
Styrene	0.80	U	1.0	0.80	0.36	ug/L		10/13/23 13:00	1
cis-1,3-Dichloropropene	1.8	U	2.0	1.8	0.63	ug/L		10/13/23 13:00	1
trans-1,3-Dichloropropene	1.8	U	2.0	1.8	0.65	ug/L		10/13/23 13:00	1
N-Propylbenzene	0.80	U	1.0	0.80	0.53	ug/L		10/13/23 13:00	1
n-Butylbenzene	0.80	U	1.0	0.80	0.48	ug/L		10/13/23 13:00	1
4-Chlorotoluene	0.80	U	1.0	0.80	0.21	ug/L		10/13/23 13:00	1
1,4-Dichlorobenzene	0.50	U	1.0	0.50	0.39	ug/L		10/13/23 13:00	1
Ethylene Dibromide	0.80	U	1.0	0.80	0.40	ug/L		10/13/23 13:00	1
3-Chloro-1-propene	0.40	U	2.0	0.40	0.17	ug/L		10/13/23 13:00	1
1,2-Dichloroethane	0.80	U	1.0	0.80	0.54	ug/L		10/13/23 13:00	1
Acrylonitrile	8.0	U	20	8.0	4.5	ug/L		10/13/23 13:00	1
Vinyl acetate	2.0	U	3.0	2.0	0.94	ug/L		10/13/23 13:00	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98	ug/L		10/13/23 13:00	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.37	ug/L		10/13/23 13:00	1
Bromobenzene	0.50	U	1.0	0.50	0.40	ug/L		10/13/23 13:00	1
Methylcyclohexane	0.40	U	1.0	0.40	0.31	ug/L		10/13/23 13:00	1
Toluene	0.40	U	1.0	0.40	0.32	ug/L		10/13/23 13:00	1
Chlorobenzene	0.80	U	1.0	0.80	0.42	ug/L		10/13/23 13:00	1
Tetrahydrofuran	6.4	U	7.0	6.4	2.0	ug/L		10/13/23 13:00	1
Hexane	0.80	U	2.0	0.80	0.16	ug/L		10/13/23 13:00	1
trans-1,4-Dichloro-2-butene	1.6	U	3.0	1.6	1.4	ug/L		10/13/23 13:00	1
Cyclohexane	0.80	U	1.0	0.80	0.44	ug/L		10/13/23 13:00	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.58	ug/L		10/13/23 13:00	1
Chlorodibromomethane	1.8	U	2.0	1.8	0.62	ug/L		10/13/23 13:00	1
Tetrachloroethene	0.80	U	1.0	0.80	0.40	ug/L		10/13/23 13:00	1
sec-Butylbenzene	0.80	U	1.0	0.80	0.45	ug/L		10/13/23 13:00	1
1,3-Dichloropropane	0.80	U	1.0	0.80	0.38	ug/L		10/13/23 13:00	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.32	ug/L		10/13/23 13:00	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	0.37	ug/L		10/13/23 13:00	1
Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25	ug/L		10/13/23 13:00	1
m-Xylene & p-Xylene	0.80	U	2.0	0.80	0.36	ug/L		10/13/23 13:00	1
1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.33	ug/L		10/13/23 13:00	1
Carbon tetrachloride	0.80	U	1.0	0.80	0.57	ug/L		10/13/23 13:00	1
1,1-Dichloropropene	0.80	U	1.0	0.80	0.42	ug/L		10/13/23 13:00	1
2-Hexanone	4.0	U	5.0	4.0	1.7	ug/L		10/13/23 13:00	1
2,2-Dichloropropane	0.80	U	1.0	0.80	0.38	ug/L		10/13/23 13:00	1
Ethyl ether	0.80	U	2.0	0.80	0.35	ug/L		10/13/23 13:00	1
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.58	ug/L		10/13/23 13:00	1
Acetone	8.0	U	15	8.0	6.6	ug/L		10/13/23 13:00	1
Chloroform	0.80	U	1.0	0.80	0.36	ug/L		10/13/23 13:00	1
Benzene	0.80	U	1.0	0.80	0.31	ug/L		10/13/23 13:00	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.39	ug/L		10/13/23 13:00	1
Bromomethane	4.0	U	5.0	4.0	2.4	ug/L		10/13/23 13:00	1
Chloromethane	1.0	U	2.0	1.0	0.75	ug/L		10/13/23 13:00	1
Iodomethane	4.0	U	5.0	4.0	2.6	ug/L		10/13/23 13:00	1
Dibromomethane	0.40	U	1.0	0.40	0.34	ug/L		10/13/23 13:00	1
Chlorobromomethane	0.80	U	1.0	0.80	0.40	ug/L		10/13/23 13:00	1
Chloroethane	1.6	U	4.0	1.6	1.4	ug/L		10/13/23 13:00	1

# Client Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

**Client Sample ID: WUABFFMW-01-BP**

**Lab Sample ID: 280-182246-3**

Date Collected: 09/29/23 16:44

Matrix: Water

Date Received: 10/03/23 09:35

**Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Vinyl chloride	1.0	U	2.0	1.0	0.51	ug/L		10/13/23 13:00	1
Methylene Chloride	1.8	U	2.0	1.8	0.94	ug/L		10/13/23 13:00	1
Carbon disulfide	0.80	U	2.0	0.80	0.63	ug/L		10/13/23 13:00	1
Bromoform	1.8	U	2.0	1.8	1.2	ug/L		10/13/23 13:00	1
Dichlorobromomethane	0.50	U	1.0	0.50	0.39	ug/L		10/13/23 13:00	1
1,1-Dichloroethane	0.80	U	1.0	0.80	0.22	ug/L		10/13/23 13:00	1
1,1-Dichloroethene	0.80	U	1.0	0.80	0.23	ug/L		10/13/23 13:00	1
Trichlorofluoromethane	0.80	U	2.0	0.80	0.57	ug/L		10/13/23 13:00	1
Dichlorodifluoromethane	2.5	U	3.0	2.5	0.96	ug/L		10/13/23 13:00	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.8	U	3.0	1.8	0.73	ug/L		10/13/23 13:00	1
1,2-Dichloropropane	0.80	U	1.0	0.80	0.52	ug/L		10/13/23 13:00	1
2-Butanone (MEK)	12	U	15	12	6.0	ug/L		10/13/23 13:00	1
1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27	ug/L		10/13/23 13:00	1
Trichloroethene	0.40	U	1.0	0.40	0.30	ug/L		10/13/23 13:00	1
Methyl acetate	4.0	U	5.0	4.0	1.6	ug/L		10/13/23 13:00	1
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21	ug/L		10/13/23 13:00	1
1,2,3-Trichlorobenzene	0.80	U	2.0	0.80	0.70	ug/L		10/13/23 13:00	1
Hexachlorobutadiene	1.8	U	2.0	1.8	1.2	ug/L		10/13/23 13:00	1
Naphthalene	0.80	U	2.0	0.80	0.63	ug/L		10/13/23 13:00	1
o-Xylene	0.40	U	1.0	0.40	0.33	ug/L		10/13/23 13:00	1
2-Chlorotoluene	0.40	U	1.0	0.40	0.34	ug/L		10/13/23 13:00	1
1,2-Dichlorobenzene	0.50	U	1.0	0.50	0.37	ug/L		10/13/23 13:00	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.15	ug/L		10/13/23 13:00	1
1,2-Dibromo-3-Chloropropane	4.0	U	5.0	4.0	1.8	ug/L		10/13/23 13:00	1
1,2,3-Trichloropropane	1.8	U	2.5	1.8	0.86	ug/L		10/13/23 13:00	1
Ethyl methacrylate	2.0	U	3.0	2.0	0.86	ug/L		10/13/23 13:00	1
tert-Butylbenzene	0.80	U	1.0	0.80	0.42	ug/L		10/13/23 13:00	1
Isopropylbenzene	0.50	U	1.0	0.50	0.36	ug/L		10/13/23 13:00	1
4-Isopropyltoluene	0.80	U	1.0	0.80	0.43	ug/L		10/13/23 13:00	1
1,2-Dichloroethene, Total	0.40	U	1.0	0.40	0.32	ug/L		10/13/23 13:00	1
1,3-Dichloropropene, Total	0.80	U	2.0	0.80	0.63	ug/L		10/13/23 13:00	1
Trihalomethanes, Total	0.80	U	1.0	0.80	0.36	ug/L		10/13/23 13:00	1
Total BTEX	0.40	U	1.0	0.40	0.30	ug/L		10/13/23 13:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		81 - 118		10/13/23 13:00	1
Dibromofluoromethane (Surr)	97		80 - 119		10/13/23 13:00	1
Toluene-d8 (Surr)	100		89 - 112		10/13/23 13:00	1
4-Bromofluorobenzene (Surr)	100		85 - 114		10/13/23 13:00	1

**Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1'-Biphenyl	8.0	U	10	8.0	1.2	ug/L		10/08/23 14:56	1
2,4-Dichlorophenol	8.0	U	10	8.0	0.64	ug/L		10/08/23 14:56	1
2,4-Dimethylphenol	8.0	U Q	10	8.0	1.4	ug/L		10/08/23 14:56	1
2,4-Dinitrophenol	20	U	30	20	13	ug/L		10/08/23 14:56	1
2,4-Dinitrotoluene	8.0	U	10	8.0	1.4	ug/L		10/08/23 14:56	1
2,4,6-Trichlorophenol	8.0	U	10	8.0	0.71	ug/L		10/08/23 14:56	1
2,4,5-Trichlorophenol	8.0	U	10	8.0	0.90	ug/L		10/08/23 14:56	1
2,2'-oxybis[1-chloropropane]	8.0	U	10	8.0	1.3	ug/L		10/08/23 14:56	1

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# Client Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

**Client Sample ID: WUABFFMW-01-BP**

**Lab Sample ID: 280-182246-3**

Date Collected: 09/29/23 16:44

Matrix: Water

Date Received: 10/03/23 09:35

**Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Di-n-butyl phthalate	3.2	U	4.0	3.2	0.45	ug/L		10/08/23 14:56	1
Di-n-octyl phthalate	8.0	U Q	10	8.0	3.6	ug/L		10/08/23 14:56	1
Benzo[a]anthracene	3.2	U	4.0	3.2	0.39	ug/L		10/08/23 14:56	1
Benzo[a]pyrene	3.2	U M	4.0	3.2	0.50	ug/L		10/08/23 14:56	1
Benzo[b]fluoranthene	3.2	U	4.0	3.2	1.2	ug/L		10/08/23 14:56	1
Benzo[g,h,i]perylene	3.2	U	4.0	3.2	0.51	ug/L		10/08/23 14:56	1
Benzo[k]fluoranthene	3.2	U	4.0	3.2	0.40	ug/L		10/08/23 14:56	1
Acenaphthene	3.2	U	4.0	3.2	0.96	ug/L		10/08/23 14:56	1
Acenaphthylene	3.2	U	4.0	3.2	0.75	ug/L		10/08/23 14:56	1
Acetophenone	8.0	U	10	8.0	0.68	ug/L		10/08/23 14:56	1
Anthracene	3.2	U	4.0	3.2	0.58	ug/L		10/08/23 14:56	1
Atrazine	3.2	U	10	3.2	0.65	ug/L		10/08/23 14:56	1
<b>Benzaldehyde</b>	<b>1.2</b>	<b>J</b>	5.0	3.2	1.2	ug/L		10/08/23 14:56	1
Butyl benzyl phthalate	3.2	U	4.0	3.2	1.5	ug/L		10/08/23 14:56	1
Caprolactam	10	U M	15	10	5.5	ug/L		10/08/23 14:56	1
Chrysene	3.2	U	4.0	3.2	2.0	ug/L		10/08/23 14:56	1
Dibenz(a,h)anthracene	8.0	U	10	8.0	0.58	ug/L		10/08/23 14:56	1
Dibenzofuran	3.2	U	4.0	3.2	0.95	ug/L		10/08/23 14:56	1
Diethyl phthalate	3.2	U	4.0	3.2	0.59	ug/L		10/08/23 14:56	1
Hexachlorobenzene	8.0	U	10	8.0	0.86	ug/L		10/08/23 14:56	1
Hexachlorocyclopentadiene	48	U Q	50	48	16	ug/L		10/08/23 14:56	1
Hexachlorobutadiene	8.0	U	10	8.0	2.9	ug/L		10/08/23 14:56	1
Hexachloroethane	8.0	U	10	8.0	4.5	ug/L		10/08/23 14:56	1
Fluoranthene	3.2	U	4.0	3.2	0.50	ug/L		10/08/23 14:56	1
Fluorene	3.2	U	4.0	3.2	0.78	ug/L		10/08/23 14:56	1
Indeno[1,2,3-cd]pyrene	8.0	U Q	10	8.0	1.3	ug/L		10/08/23 14:56	1
Isophorone	8.0	U	10	8.0	2.0	ug/L		10/08/23 14:56	1
N-Nitrosodi-n-propylamine	8.0	U	10	8.0	1.9	ug/L		10/08/23 14:56	1
N-Nitrosodiphenylamine	8.0	U	10	8.0	0.77	ug/L		10/08/23 14:56	1
Naphthalene	3.2	U	4.0	3.2	1.5	ug/L		10/08/23 14:56	1
Nitrobenzene	8.0	U	10	8.0	1.3	ug/L		10/08/23 14:56	1
Pentachlorophenol	48	U	50	48	20	ug/L		10/08/23 14:56	1
Phenanthrene	3.2	U	4.0	3.2	1.6	ug/L		10/08/23 14:56	1
Phenol	8.0	U	10	8.0	0.92	ug/L		10/08/23 14:56	1
Pyrene	8.0	U	10	8.0	0.53	ug/L		10/08/23 14:56	1
2-Chloronaphthalene	3.2	U	4.0	3.2	1.3	ug/L		10/08/23 14:56	1
2-Chlorophenol	8.0	U	10	8.0	0.68	ug/L		10/08/23 14:56	1
2-Methylnaphthalene	3.2	U	4.0	3.2	1.2	ug/L		10/08/23 14:56	1
2-Methylphenol	8.0	U	10	8.0	0.77	ug/L		10/08/23 14:56	1
2-Nitroaniline	3.2	U	10	3.2	2.6	ug/L		10/08/23 14:56	1
2-Nitrophenol	8.0	U	10	8.0	3.5	ug/L		10/08/23 14:56	1
3,3'-Dichlorobenzidine	30	U	50	30	3.4	ug/L		10/08/23 14:56	1
3-Nitroaniline	8.0	U	10	8.0	3.3	ug/L		10/08/23 14:56	1
4,6-Dinitro-2-methylphenol	30	U	50	30	4.0	ug/L		10/08/23 14:56	1
4-Bromophenyl phenyl ether	8.0	U	10	8.0	1.0	ug/L		10/08/23 14:56	1
4-Nitroaniline	8.0	U	10	8.0	2.6	ug/L		10/08/23 14:56	1
4-Nitrophenol	13	U M	25	13	9.1	ug/L		10/08/23 14:56	1
Bis(2-chloroethoxy)methane	8.0	U	10	8.0	0.81	ug/L		10/08/23 14:56	1
Bis(2-chloroethyl)ether	8.0	U	10	8.0	2.0	ug/L		10/08/23 14:56	1

# Client Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

**Client Sample ID: WUABFFMW-01-BP**

**Lab Sample ID: 280-182246-3**

Date Collected: 09/29/23 16:44

Matrix: Water

Date Received: 10/03/23 09:35

**Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	4.2	J	10	8.0	3.3	ug/L		10/08/23 14:56	1
2,6-Dinitrotoluene	8.0	U	10	8.0	1.4	ug/L		10/08/23 14:56	1
4-Chloro-3-methylphenol	8.0	U	10	8.0	0.69	ug/L		10/08/23 14:56	1
4-Chloroaniline	13	U	20	13	6.3	ug/L		10/08/23 14:56	1
4-Chlorophenyl phenyl ether	8.0	U	10	8.0	1.2	ug/L		10/08/23 14:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	57		19 - 119	10/06/23 13:02	10/08/23 14:56	1
Phenol-d5 (Surr)	46		10 - 115	10/06/23 13:02	10/08/23 14:56	1
Nitrobenzene-d5 (Surr)	61		44 - 120	10/06/23 13:02	10/08/23 14:56	1
2-Fluorobiphenyl	61		44 - 119	10/06/23 13:02	10/08/23 14:56	1
2,4,6-Tribromophenol (Surr)	66		43 - 140	10/06/23 13:02	10/08/23 14:56	1
Terphenyl-d14 (Surr)	88		50 - 134	10/06/23 13:02	10/08/23 14:56	1

**Method: SW846 8011 - EDB, DBCP, and 1,2,3-TCP (GC)**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide	0.014	U M	0.020	0.014	0.0037	ug/L		10/05/23 00:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	87		70 - 130	10/04/23 12:28	10/05/23 00:44	1

**Method: SW846 6010D - Metals (ICP)**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	34000		200	64	24	ug/L		10/20/23 07:37	1
Magnesium	4700		200	15	4.2	ug/L		10/20/23 07:37	1
Potassium	3300		3000	940	240	ug/L		10/20/23 07:37	1
Sodium	27000		1000	320	97	ug/L		10/20/23 07:37	1

**Method: SW846 6010D - Metals (ICP) - Dissolved**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	31	J	100	34	9.1	ug/L		10/19/23 19:08	1
Manganese	290		10	1.8	0.45	ug/L		10/19/23 19:08	1

**Method: SW846 6020B - Metals (ICP/MS)**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	0.96	J	5.0	2.0	0.50	ug/L		10/26/23 16:53	1
Lead	0.70	U	1.0	0.70	0.23	ug/L		10/20/23 08:36	1

**General Chemistry**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide (EPA 300.0)	0.40	U M	0.50	0.40	0.23	mg/L		10/18/23 00:54	1
Chloride (EPA 300.0)	9.0		3.0	2.5	1.0	mg/L		10/18/23 00:54	1
Sulfate (EPA 300.0)	30		5.0	2.5	1.0	mg/L		10/18/23 00:54	1
Nitrate Nitrite as N (EPA 353.2)	0.051	J	0.10	0.080	0.044	mg/L		10/06/23 12:41	1
Alkalinity (SM 2320B)	120		10	6.4	3.1	mg/L		10/05/23 00:44	1



# Client Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

**Client Sample ID: Equip Rinsate**

**Lab Sample ID: 280-182246-4**

**Date Collected: 09/29/23 17:36**

**Matrix: Water**

**Date Received: 10/03/23 09:35**

**Method: SW846 8260D - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylbenzene	0.40	U	1.0	0.40	0.30	ug/L		10/13/23 10:31	1
Styrene	0.80	U	1.0	0.80	0.36	ug/L		10/13/23 10:31	1
cis-1,3-Dichloropropene	1.8	U	2.0	1.8	0.63	ug/L		10/13/23 10:31	1
trans-1,3-Dichloropropene	1.8	U	2.0	1.8	0.65	ug/L		10/13/23 10:31	1
N-Propylbenzene	0.80	U	1.0	0.80	0.53	ug/L		10/13/23 10:31	1
n-Butylbenzene	0.80	U	1.0	0.80	0.48	ug/L		10/13/23 10:31	1
4-Chlorotoluene	0.80	U	1.0	0.80	0.21	ug/L		10/13/23 10:31	1
1,4-Dichlorobenzene	0.50	U	1.0	0.50	0.39	ug/L		10/13/23 10:31	1
Ethylene Dibromide	0.80	U	1.0	0.80	0.40	ug/L		10/13/23 10:31	1
3-Chloro-1-propene	0.40	U	2.0	0.40	0.17	ug/L		10/13/23 10:31	1
1,2-Dichloroethane	0.80	U	1.0	0.80	0.54	ug/L		10/13/23 10:31	1
Acrylonitrile	8.0	U	20	8.0	4.5	ug/L		10/13/23 10:31	1
Vinyl acetate	2.0	U	3.0	2.0	0.94	ug/L		10/13/23 10:31	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98	ug/L		10/13/23 10:31	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.37	ug/L		10/13/23 10:31	1
Bromobenzene	0.50	U	1.0	0.50	0.40	ug/L		10/13/23 10:31	1
Methylcyclohexane	0.40	U	1.0	0.40	0.31	ug/L		10/13/23 10:31	1
Toluene	0.40	U	1.0	0.40	0.32	ug/L		10/13/23 10:31	1
Chlorobenzene	0.80	U	1.0	0.80	0.42	ug/L		10/13/23 10:31	1
Tetrahydrofuran	6.4	U	7.0	6.4	2.0	ug/L		10/13/23 10:31	1
Hexane	0.80	U	2.0	0.80	0.16	ug/L		10/13/23 10:31	1
trans-1,4-Dichloro-2-butene	1.6	U	3.0	1.6	1.4	ug/L		10/13/23 10:31	1
Cyclohexane	0.80	U	1.0	0.80	0.44	ug/L		10/13/23 10:31	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.58	ug/L		10/13/23 10:31	1
Chlorodibromomethane	1.8	U	2.0	1.8	0.62	ug/L		10/13/23 10:31	1
Tetrachloroethene	0.80	U	1.0	0.80	0.40	ug/L		10/13/23 10:31	1
sec-Butylbenzene	0.80	U	1.0	0.80	0.45	ug/L		10/13/23 10:31	1
1,3-Dichloropropane	0.80	U	1.0	0.80	0.38	ug/L		10/13/23 10:31	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.32	ug/L		10/13/23 10:31	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	0.37	ug/L		10/13/23 10:31	1
Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25	ug/L		10/13/23 10:31	1
m-Xylene & p-Xylene	0.80	U	2.0	0.80	0.36	ug/L		10/13/23 10:31	1
1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.33	ug/L		10/13/23 10:31	1
Carbon tetrachloride	0.80	U	1.0	0.80	0.57	ug/L		10/13/23 10:31	1
1,1-Dichloropropene	0.80	U	1.0	0.80	0.42	ug/L		10/13/23 10:31	1
2-Hexanone	4.0	U	5.0	4.0	1.7	ug/L		10/13/23 10:31	1
2,2-Dichloropropane	0.80	U	1.0	0.80	0.38	ug/L		10/13/23 10:31	1
Ethyl ether	0.80	U	2.0	0.80	0.35	ug/L		10/13/23 10:31	1
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.58	ug/L		10/13/23 10:31	1
Acetone	8.0	U	15	8.0	6.6	ug/L		10/13/23 10:31	1
Chloroform	0.80	U	1.0	0.80	0.36	ug/L		10/13/23 10:31	1
Benzene	0.80	U	1.0	0.80	0.31	ug/L		10/13/23 10:31	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.39	ug/L		10/13/23 10:31	1
Bromomethane	4.0	U	5.0	4.0	2.4	ug/L		10/13/23 10:31	1
Chloromethane	1.0	U	2.0	1.0	0.75	ug/L		10/13/23 10:31	1
Iodomethane	4.0	U	5.0	4.0	2.6	ug/L		10/13/23 10:31	1
Dibromomethane	0.40	U	1.0	0.40	0.34	ug/L		10/13/23 10:31	1
Chlorobromomethane	0.80	U	1.0	0.80	0.40	ug/L		10/13/23 10:31	1
Chloroethane	1.6	U	4.0	1.6	1.4	ug/L		10/13/23 10:31	1

# Client Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

**Client Sample ID: Equip Rinsate**

**Lab Sample ID: 280-182246-4**

Date Collected: 09/29/23 17:36

Matrix: Water

Date Received: 10/03/23 09:35

**Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Vinyl chloride	1.0	U	2.0	1.0	0.51	ug/L		10/13/23 10:31	1
Methylene Chloride	1.8	U	2.0	1.8	0.94	ug/L		10/13/23 10:31	1
Carbon disulfide	0.80	U	2.0	0.80	0.63	ug/L		10/13/23 10:31	1
Bromoform	1.8	U	2.0	1.8	1.2	ug/L		10/13/23 10:31	1
Dichlorobromomethane	0.50	U	1.0	0.50	0.39	ug/L		10/13/23 10:31	1
1,1-Dichloroethane	0.80	U	1.0	0.80	0.22	ug/L		10/13/23 10:31	1
1,1-Dichloroethene	0.80	U	1.0	0.80	0.23	ug/L		10/13/23 10:31	1
Trichlorofluoromethane	0.80	U	2.0	0.80	0.57	ug/L		10/13/23 10:31	1
Dichlorodifluoromethane	2.5	U	3.0	2.5	0.96	ug/L		10/13/23 10:31	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.8	U	3.0	1.8	0.73	ug/L		10/13/23 10:31	1
1,2-Dichloropropane	0.80	U	1.0	0.80	0.52	ug/L		10/13/23 10:31	1
2-Butanone (MEK)	12	U	15	12	6.0	ug/L		10/13/23 10:31	1
1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27	ug/L		10/13/23 10:31	1
Trichloroethene	0.40	U	1.0	0.40	0.30	ug/L		10/13/23 10:31	1
Methyl acetate	4.0	U	5.0	4.0	1.6	ug/L		10/13/23 10:31	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21	ug/L		10/13/23 10:31	1
1,2,3-Trichlorobenzene	0.80	U	2.0	0.80	0.70	ug/L		10/13/23 10:31	1
Hexachlorobutadiene	1.8	U	2.0	1.8	1.2	ug/L		10/13/23 10:31	1
Naphthalene	0.80	U	2.0	0.80	0.63	ug/L		10/13/23 10:31	1
o-Xylene	0.40	U	1.0	0.40	0.33	ug/L		10/13/23 10:31	1
2-Chlorotoluene	0.40	U	1.0	0.40	0.34	ug/L		10/13/23 10:31	1
1,2-Dichlorobenzene	0.50	U	1.0	0.50	0.37	ug/L		10/13/23 10:31	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.15	ug/L		10/13/23 10:31	1
1,2-Dibromo-3-Chloropropane	4.0	U	5.0	4.0	1.8	ug/L		10/13/23 10:31	1
1,2,3-Trichloropropane	1.8	U	2.5	1.8	0.86	ug/L		10/13/23 10:31	1
Ethyl methacrylate	2.0	U	3.0	2.0	0.86	ug/L		10/13/23 10:31	1
tert-Butylbenzene	0.80	U	1.0	0.80	0.42	ug/L		10/13/23 10:31	1
Isopropylbenzene	0.50	U	1.0	0.50	0.36	ug/L		10/13/23 10:31	1
4-Isopropyltoluene	0.80	U	1.0	0.80	0.43	ug/L		10/13/23 10:31	1
1,2-Dichloroethene, Total	0.40	U	1.0	0.40	0.32	ug/L		10/13/23 10:31	1
1,3-Dichloropropene, Total	0.80	U	2.0	0.80	0.63	ug/L		10/13/23 10:31	1
Trihalomethanes, Total	0.80	U	1.0	0.80	0.36	ug/L		10/13/23 10:31	1
Total BTEX	0.40	U	1.0	0.40	0.30	ug/L		10/13/23 10:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		81 - 118		10/13/23 10:31	1
Dibromofluoromethane (Surr)	98		80 - 119		10/13/23 10:31	1
Toluene-d8 (Surr)	100		89 - 112		10/13/23 10:31	1
4-Bromofluorobenzene (Surr)	101		85 - 114		10/13/23 10:31	1

**Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1'-Biphenyl	8.0	U	10	8.0	1.2	ug/L		10/08/23 15:18	1
2,4-Dichlorophenol	8.0	U	10	8.0	0.64	ug/L		10/08/23 15:18	1
2,4-Dimethylphenol	8.0	U Q	10	8.0	1.4	ug/L		10/08/23 15:18	1
2,4-Dinitrophenol	20	U	30	20	13	ug/L		10/08/23 15:18	1
2,4-Dinitrotoluene	8.0	U	10	8.0	1.4	ug/L		10/08/23 15:18	1
2,4,6-Trichlorophenol	8.0	U	10	8.0	0.71	ug/L		10/08/23 15:18	1
2,4,5-Trichlorophenol	8.0	U	10	8.0	0.90	ug/L		10/08/23 15:18	1
2,2'-oxybis[1-chloropropane]	8.0	U	10	8.0	1.3	ug/L		10/08/23 15:18	1

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# Client Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

**Client Sample ID: Equip Rinsate**

**Lab Sample ID: 280-182246-4**

**Date Collected: 09/29/23 17:36**

**Matrix: Water**

**Date Received: 10/03/23 09:35**

**Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Di-n-butyl phthalate	3.2	U	4.0	3.2	0.45	ug/L		10/08/23 15:18	1
Di-n-octyl phthalate	8.0	U Q	10	8.0	3.6	ug/L		10/08/23 15:18	1
Benzo[a]anthracene	3.2	U	4.0	3.2	0.39	ug/L		10/08/23 15:18	1
Benzo[a]pyrene	3.2	U M	4.0	3.2	0.50	ug/L		10/08/23 15:18	1
Benzo[b]fluoranthene	3.2	U	4.0	3.2	1.2	ug/L		10/08/23 15:18	1
Benzo[g,h,i]perylene	3.2	U	4.0	3.2	0.51	ug/L		10/08/23 15:18	1
Benzo[k]fluoranthene	3.2	U	4.0	3.2	0.40	ug/L		10/08/23 15:18	1
Acenaphthene	3.2	U	4.0	3.2	0.96	ug/L		10/08/23 15:18	1
Acenaphthylene	3.2	U	4.0	3.2	0.75	ug/L		10/08/23 15:18	1
Acetophenone	8.0	U	10	8.0	0.68	ug/L		10/08/23 15:18	1
Anthracene	3.2	U	4.0	3.2	0.58	ug/L		10/08/23 15:18	1
Atrazine	3.2	U	10	3.2	0.65	ug/L		10/08/23 15:18	1
Benzaldehyde	3.2	U	5.0	3.2	1.2	ug/L		10/08/23 15:18	1
Butyl benzyl phthalate	3.2	U	4.0	3.2	1.5	ug/L		10/08/23 15:18	1
Caprolactam	10	U	15	10	5.5	ug/L		10/08/23 15:18	1
Chrysene	3.2	U	4.0	3.2	2.0	ug/L		10/08/23 15:18	1
Dibenz(a,h)anthracene	8.0	U	10	8.0	0.58	ug/L		10/08/23 15:18	1
Dibenzofuran	3.2	U	4.0	3.2	0.95	ug/L		10/08/23 15:18	1
Diethyl phthalate	3.2	U	4.0	3.2	0.59	ug/L		10/08/23 15:18	1
Hexachlorobenzene	8.0	U	10	8.0	0.86	ug/L		10/08/23 15:18	1
Hexachlorocyclopentadiene	48	U Q	50	48	16	ug/L		10/08/23 15:18	1
Hexachlorobutadiene	8.0	U	10	8.0	2.9	ug/L		10/08/23 15:18	1
Hexachloroethane	8.0	U	10	8.0	4.5	ug/L		10/08/23 15:18	1
Fluoranthene	3.2	U	4.0	3.2	0.50	ug/L		10/08/23 15:18	1
Fluorene	3.2	U	4.0	3.2	0.78	ug/L		10/08/23 15:18	1
Indeno[1,2,3-cd]pyrene	8.0	U Q	10	8.0	1.3	ug/L		10/08/23 15:18	1
Isophorone	8.0	U	10	8.0	2.0	ug/L		10/08/23 15:18	1
N-Nitrosodi-n-propylamine	8.0	U	10	8.0	1.9	ug/L		10/08/23 15:18	1
N-Nitrosodiphenylamine	8.0	U	10	8.0	0.77	ug/L		10/08/23 15:18	1
Naphthalene	3.2	U	4.0	3.2	1.5	ug/L		10/08/23 15:18	1
Nitrobenzene	8.0	U	10	8.0	1.3	ug/L		10/08/23 15:18	1
Pentachlorophenol	48	U	50	48	20	ug/L		10/08/23 15:18	1
Phenanthrene	3.2	U	4.0	3.2	1.6	ug/L		10/08/23 15:18	1
Phenol	8.0	U	10	8.0	0.92	ug/L		10/08/23 15:18	1
Pyrene	8.0	U	10	8.0	0.53	ug/L		10/08/23 15:18	1
2-Chloronaphthalene	3.2	U	4.0	3.2	1.3	ug/L		10/08/23 15:18	1
2-Chlorophenol	8.0	U	10	8.0	0.68	ug/L		10/08/23 15:18	1
2-Methylnaphthalene	3.2	U	4.0	3.2	1.2	ug/L		10/08/23 15:18	1
2-Methylphenol	8.0	U	10	8.0	0.77	ug/L		10/08/23 15:18	1
2-Nitroaniline	3.2	U	10	3.2	2.6	ug/L		10/08/23 15:18	1
2-Nitrophenol	8.0	U	10	8.0	3.5	ug/L		10/08/23 15:18	1
3,3'-Dichlorobenzidine	30	U	50	30	3.4	ug/L		10/08/23 15:18	1
3-Nitroaniline	8.0	U	10	8.0	3.3	ug/L		10/08/23 15:18	1
4,6-Dinitro-2-methylphenol	30	U	50	30	4.0	ug/L		10/08/23 15:18	1
4-Bromophenyl phenyl ether	8.0	U	10	8.0	1.0	ug/L		10/08/23 15:18	1
4-Nitroaniline	8.0	U	10	8.0	2.6	ug/L		10/08/23 15:18	1
4-Nitrophenol	13	U M	25	13	9.1	ug/L		10/08/23 15:18	1
Bis(2-chloroethoxy)methane	8.0	U	10	8.0	0.81	ug/L		10/08/23 15:18	1
Bis(2-chloroethyl)ether	8.0	U	10	8.0	2.0	ug/L		10/08/23 15:18	1

# Client Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

**Client Sample ID: Equip Rinsate**

**Lab Sample ID: 280-182246-4**

Date Collected: 09/29/23 17:36

Matrix: Water

Date Received: 10/03/23 09:35

**Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
<b>Bis(2-ethylhexyl) phthalate</b>	<b>4.5</b>	<b>J</b>	10	8.0	3.3	ug/L		10/08/23 15:18	1
2,6-Dinitrotoluene	8.0	U	10	8.0	1.4	ug/L		10/08/23 15:18	1
4-Chloro-3-methylphenol	8.0	U	10	8.0	0.69	ug/L		10/08/23 15:18	1
4-Chloroaniline	13	U	20	13	6.3	ug/L		10/08/23 15:18	1
4-Chlorophenyl phenyl ether	8.0	U	10	8.0	1.2	ug/L		10/08/23 15:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	78		19 - 119	10/06/23 13:02	10/08/23 15:18	1
Phenol-d5 (Surr)	61		10 - 115	10/06/23 13:02	10/08/23 15:18	1
Nitrobenzene-d5 (Surr)	84		44 - 120	10/06/23 13:02	10/08/23 15:18	1
2-Fluorobiphenyl	85		44 - 119	10/06/23 13:02	10/08/23 15:18	1
2,4,6-Tribromophenol (Surr)	94		43 - 140	10/06/23 13:02	10/08/23 15:18	1
Terphenyl-d14 (Surr)	122		50 - 134	10/06/23 13:02	10/08/23 15:18	1

**Method: SW846 8011 - EDB, DBCP, and 1,2,3-TCP (GC)**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide	0.014	U M	0.020	0.014	0.0036	ug/L		10/05/23 01:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	89		70 - 130	10/04/23 12:28	10/05/23 01:08	1

**Method: SW846 6010D - Metals (ICP)**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
<b>Calcium</b>	<b>76</b>	<b>J</b>	200	64	24	ug/L		10/22/23 21:07	1
Magnesium	15	U	200	15	4.2	ug/L		10/22/23 21:07	1
Potassium	940	U	3000	940	240	ug/L		10/22/23 21:07	1
<b>Sodium</b>	<b>100</b>	<b>J</b>	1000	320	97	ug/L		10/22/23 21:07	1

**Method: SW846 6010D - Metals (ICP) - Dissolved**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
<b>Iron</b>	<b>11</b>	<b>J</b>	100	34	9.1	ug/L		10/19/23 19:12	1
<b>Manganese</b>	<b>1.5</b>	<b>J</b>	10	1.8	0.45	ug/L		10/19/23 19:12	1

**Method: SW846 6020B - Metals (ICP/MS)**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	2.0	U	5.0	2.0	0.50	ug/L		10/23/23 23:04	1
Lead	0.70	U	1.0	0.70	0.23	ug/L		10/23/23 23:04	1

**General Chemistry**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide (EPA 300.0)	0.40	U	0.50	0.40	0.23	mg/L		10/18/23 01:05	1
Chloride (EPA 300.0)	2.5	U	3.0	2.5	1.0	mg/L		10/18/23 01:05	1
Sulfate (EPA 300.0)	2.5	U	5.0	2.5	1.0	mg/L		10/18/23 01:05	1
<b>Nitrate Nitrite as N (EPA 353.2)</b>	<b>0.068</b>	<b>J</b>	0.10	0.080	0.044	mg/L		10/06/23 12:43	1
Alkalinity (SM 2320B)	6.4	U	10	6.4	3.1	mg/L		10/05/23 00:55	1

# Client Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

**Client Sample ID: Trip Blank**

**Lab Sample ID: 280-182246-5**

**Date Collected: 09/29/23 10:32**

**Matrix: Water**

**Date Received: 10/03/23 09:35**

**Method: SW846 8260D - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylbenzene	0.40	U	1.0	0.40	0.30	ug/L		10/11/23 10:53	1
Styrene	0.80	U	1.0	0.80	0.36	ug/L		10/11/23 10:53	1
cis-1,3-Dichloropropene	1.8	U	2.0	1.8	0.63	ug/L		10/11/23 10:53	1
trans-1,3-Dichloropropene	1.8	U	2.0	1.8	0.65	ug/L		10/11/23 10:53	1
N-Propylbenzene	0.80	U	1.0	0.80	0.53	ug/L		10/11/23 10:53	1
n-Butylbenzene	0.80	U	1.0	0.80	0.48	ug/L		10/11/23 10:53	1
4-Chlorotoluene	0.80	U	1.0	0.80	0.21	ug/L		10/11/23 10:53	1
1,4-Dichlorobenzene	0.50	U	1.0	0.50	0.39	ug/L		10/11/23 10:53	1
Ethylene Dibromide	0.80	U	1.0	0.80	0.40	ug/L		10/11/23 10:53	1
3-Chloro-1-propene	0.40	U	2.0	0.40	0.17	ug/L		10/11/23 10:53	1
1,2-Dichloroethane	0.80	U	1.0	0.80	0.54	ug/L		10/11/23 10:53	1
Acrylonitrile	8.0	U	20	8.0	4.5	ug/L		10/11/23 10:53	1
Vinyl acetate	2.0	U	3.0	2.0	0.94	ug/L		10/11/23 10:53	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98	ug/L		10/11/23 10:53	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.37	ug/L		10/11/23 10:53	1
Bromobenzene	0.50	U	1.0	0.50	0.40	ug/L		10/11/23 10:53	1
Methylcyclohexane	0.40	U	1.0	0.40	0.31	ug/L		10/11/23 10:53	1
Toluene	0.40	U	1.0	0.40	0.32	ug/L		10/11/23 10:53	1
Chlorobenzene	0.80	U	1.0	0.80	0.42	ug/L		10/11/23 10:53	1
Tetrahydrofuran	6.4	U	7.0	6.4	2.0	ug/L		10/11/23 10:53	1
Hexane	0.80	U	2.0	0.80	0.16	ug/L		10/11/23 10:53	1
trans-1,4-Dichloro-2-butene	1.6	U	3.0	1.6	1.4	ug/L		10/11/23 10:53	1
Cyclohexane	0.80	U	1.0	0.80	0.44	ug/L		10/11/23 10:53	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.58	ug/L		10/11/23 10:53	1
Chlorodibromomethane	1.8	U	2.0	1.8	0.62	ug/L		10/11/23 10:53	1
Tetrachloroethene	0.80	U	1.0	0.80	0.40	ug/L		10/11/23 10:53	1
sec-Butylbenzene	0.80	U	1.0	0.80	0.45	ug/L		10/11/23 10:53	1
1,3-Dichloropropane	0.80	U	1.0	0.80	0.38	ug/L		10/11/23 10:53	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.32	ug/L		10/11/23 10:53	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	0.37	ug/L		10/11/23 10:53	1
Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25	ug/L		10/11/23 10:53	1
m-Xylene & p-Xylene	0.80	U	2.0	0.80	0.36	ug/L		10/11/23 10:53	1
1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.33	ug/L		10/11/23 10:53	1
Carbon tetrachloride	0.80	U	1.0	0.80	0.57	ug/L		10/11/23 10:53	1
1,1-Dichloropropene	0.80	U	1.0	0.80	0.42	ug/L		10/11/23 10:53	1
2-Hexanone	4.0	U	5.0	4.0	1.7	ug/L		10/11/23 10:53	1
2,2-Dichloropropane	0.80	U	1.0	0.80	0.38	ug/L		10/11/23 10:53	1
Ethyl ether	0.80	U	2.0	0.80	0.35	ug/L		10/11/23 10:53	1
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.58	ug/L		10/11/23 10:53	1
Acetone	8.0	U	15	8.0	6.6	ug/L		10/11/23 10:53	1
Chloroform	0.80	U	1.0	0.80	0.36	ug/L		10/11/23 10:53	1
Benzene	0.80	U	1.0	0.80	0.31	ug/L		10/11/23 10:53	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.39	ug/L		10/11/23 10:53	1
Bromomethane	4.0	U	5.0	4.0	2.4	ug/L		10/11/23 10:53	1
Chloromethane	1.0	U	2.0	1.0	0.75	ug/L		10/11/23 10:53	1
Iodomethane	4.0	U	5.0	4.0	2.6	ug/L		10/11/23 10:53	1
Dibromomethane	0.40	U	1.0	0.40	0.34	ug/L		10/11/23 10:53	1
Chlorobromomethane	0.80	U	1.0	0.80	0.40	ug/L		10/11/23 10:53	1
Chloroethane	1.6	U	4.0	1.6	1.4	ug/L		10/11/23 10:53	1

# Client Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

**Client Sample ID: Trip Blank**

**Lab Sample ID: 280-182246-5**

**Date Collected: 09/29/23 10:32**

**Matrix: Water**

**Date Received: 10/03/23 09:35**

**Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Vinyl chloride	1.0	U	2.0	1.0	0.51	ug/L		10/11/23 10:53	1
Methylene Chloride	1.8	U	2.0	1.8	0.94	ug/L		10/11/23 10:53	1
Carbon disulfide	0.80	U	2.0	0.80	0.63	ug/L		10/11/23 10:53	1
Bromoform	1.8	U	2.0	1.8	1.2	ug/L		10/11/23 10:53	1
Dichlorobromomethane	0.50	U	1.0	0.50	0.39	ug/L		10/11/23 10:53	1
1,1-Dichloroethane	0.80	U	1.0	0.80	0.22	ug/L		10/11/23 10:53	1
1,1-Dichloroethene	0.80	U	1.0	0.80	0.23	ug/L		10/11/23 10:53	1
Trichlorofluoromethane	0.80	U	2.0	0.80	0.57	ug/L		10/11/23 10:53	1
Dichlorodifluoromethane	2.5	U	3.0	2.5	0.96	ug/L		10/11/23 10:53	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.8	U	3.0	1.8	0.73	ug/L		10/11/23 10:53	1
1,2-Dichloropropane	0.80	U	1.0	0.80	0.52	ug/L		10/11/23 10:53	1
2-Butanone (MEK)	12	U	15	12	6.0	ug/L		10/11/23 10:53	1
1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27	ug/L		10/11/23 10:53	1
Trichloroethene	0.40	U	1.0	0.40	0.30	ug/L		10/11/23 10:53	1
Methyl acetate	4.0	U	5.0	4.0	1.6	ug/L		10/11/23 10:53	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21	ug/L		10/11/23 10:53	1
1,2,3-Trichlorobenzene	0.80	U	2.0	0.80	0.70	ug/L		10/11/23 10:53	1
Hexachlorobutadiene	1.8	U	2.0	1.8	1.2	ug/L		10/11/23 10:53	1
Naphthalene	0.80	U	2.0	0.80	0.63	ug/L		10/11/23 10:53	1
o-Xylene	0.40	U	1.0	0.40	0.33	ug/L		10/11/23 10:53	1
2-Chlorotoluene	0.40	U	1.0	0.40	0.34	ug/L		10/11/23 10:53	1
1,2-Dichlorobenzene	0.50	U	1.0	0.50	0.37	ug/L		10/11/23 10:53	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.15	ug/L		10/11/23 10:53	1
1,2-Dibromo-3-Chloropropane	4.0	U	5.0	4.0	1.8	ug/L		10/11/23 10:53	1
1,2,3-Trichloropropane	1.8	U	2.5	1.8	0.86	ug/L		10/11/23 10:53	1
Ethyl methacrylate	2.0	U	3.0	2.0	0.86	ug/L		10/11/23 10:53	1
tert-Butylbenzene	0.80	U	1.0	0.80	0.42	ug/L		10/11/23 10:53	1
Isopropylbenzene	0.50	U	1.0	0.50	0.36	ug/L		10/11/23 10:53	1
4-Isopropyltoluene	0.80	U	1.0	0.80	0.43	ug/L		10/11/23 10:53	1
1,2-Dichloroethene, Total	0.40	U	1.0	0.40	0.32	ug/L		10/11/23 10:53	1
1,3-Dichloropropene, Total	0.80	U	2.0	0.80	0.63	ug/L		10/11/23 10:53	1
Trihalomethanes, Total	0.80	U	1.0	0.80	0.36	ug/L		10/11/23 10:53	1
Total BTEX	0.40	U	1.0	0.40	0.30	ug/L		10/11/23 10:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		81 - 118		10/11/23 10:53	1
Dibromofluoromethane (Surr)	98		80 - 119		10/11/23 10:53	1
Toluene-d8 (Surr)	98		89 - 112		10/11/23 10:53	1
4-Bromofluorobenzene (Surr)	101		85 - 114		10/11/23 10:53	1

# Default Detection Limits

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

## Method: 8260D - Volatile Organic Compounds (GC/MS)

Analyte	LOQ	DL	Units
1,1,1,2-Tetrachloroethane	1.0	0.58	ug/L
1,1,1-Trichloroethane	1.0	0.39	ug/L
1,1,2,2-Tetrachloroethane	1.0	0.21	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	3.0	0.73	ug/L
1,1,2-Trichloroethane	1.0	0.27	ug/L
1,1-Dichloroethane	1.0	0.22	ug/L
1,1-Dichloroethene	1.0	0.23	ug/L
1,1-Dichloropropene	1.0	0.42	ug/L
1,2,3-Trichlorobenzene	2.0	0.70	ug/L
1,2,3-Trichloropropane	2.5	0.86	ug/L
1,2,4-Trichlorobenzene	1.0	0.58	ug/L
1,2,4-Trimethylbenzene	1.0	0.15	ug/L
1,2-Dibromo-3-Chloropropane	5.0	1.8	ug/L
1,2-Dichlorobenzene	1.0	0.37	ug/L
1,2-Dichloroethane	1.0	0.54	ug/L
1,2-Dichloroethene, Total	1.0	0.32	ug/L
1,2-Dichloropropane	1.0	0.52	ug/L
1,3,5-Trimethylbenzene	1.0	0.37	ug/L
1,3-Dichlorobenzene	1.0	0.33	ug/L
1,3-Dichloropropane	1.0	0.38	ug/L
1,3-Dichloropropene, Total	2.0	0.63	ug/L
1,4-Dichlorobenzene	1.0	0.39	ug/L
2,2-Dichloropropane	1.0	0.38	ug/L
2-Butanone (MEK)	15	6.0	ug/L
2-Chlorotoluene	1.0	0.34	ug/L
2-Hexanone	5.0	1.7	ug/L
3-Chloro-1-propene	2.0	0.17	ug/L
4-Chlorotoluene	1.0	0.21	ug/L
4-Isopropyltoluene	1.0	0.43	ug/L
4-Methyl-2-pentanone (MIBK)	5.0	0.98	ug/L
Acetone	15	6.6	ug/L
Acrylonitrile	20	4.5	ug/L
Benzene	1.0	0.31	ug/L
Bromobenzene	1.0	0.40	ug/L
Bromoform	2.0	1.2	ug/L
Bromomethane	5.0	2.4	ug/L
Carbon disulfide	2.0	0.63	ug/L
Carbon tetrachloride	1.0	0.57	ug/L
Chlorobenzene	1.0	0.42	ug/L
Chlorobromomethane	1.0	0.40	ug/L
Chlorodibromomethane	2.0	0.62	ug/L
Chloroethane	4.0	1.4	ug/L
Chloroform	1.0	0.36	ug/L
Chloromethane	2.0	0.75	ug/L
cis-1,2-Dichloroethene	1.0	0.32	ug/L
cis-1,3-Dichloropropene	2.0	0.63	ug/L
Cyclohexane	1.0	0.44	ug/L
Dibromomethane	1.0	0.34	ug/L
Dichlorobromomethane	1.0	0.39	ug/L
Dichlorodifluoromethane	3.0	0.96	ug/L
Ethyl ether	2.0	0.35	ug/L
Ethyl methacrylate	3.0	0.86	ug/L
Ethylbenzene	1.0	0.30	ug/L



## Default Detection Limits

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

### Method: 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	LOQ	DL	Units
Ethylene Dibromide	1.0	0.40	ug/L
Hexachlorobutadiene	2.0	1.2	ug/L
Hexane	2.0	0.16	ug/L
Iodomethane	5.0	2.6	ug/L
Isopropylbenzene	1.0	0.36	ug/L
Methyl acetate	5.0	1.6	ug/L
Methyl tert-butyl ether	5.0	0.25	ug/L
Methylcyclohexane	1.0	0.31	ug/L
Methylene Chloride	2.0	0.94	ug/L
m-Xylene & p-Xylene	2.0	0.36	ug/L
Naphthalene	2.0	0.63	ug/L
n-Butylbenzene	1.0	0.48	ug/L
N-Propylbenzene	1.0	0.53	ug/L
o-Xylene	1.0	0.33	ug/L
sec-Butylbenzene	1.0	0.45	ug/L
Styrene	1.0	0.36	ug/L
tert-Butylbenzene	1.0	0.42	ug/L
Tetrachloroethene	1.0	0.40	ug/L
Tetrahydrofuran	7.0	2.0	ug/L
Toluene	1.0	0.32	ug/L
Total BTEX	1.0	0.30	ug/L
trans-1,2-Dichloroethene	1.0	0.37	ug/L
trans-1,3-Dichloropropene	2.0	0.65	ug/L
trans-1,4-Dichloro-2-butene	3.0	1.4	ug/L
Trichloroethene	1.0	0.30	ug/L
Trichlorofluoromethane	2.0	0.57	ug/L
Trihalomethanes, Total	1.0	0.36	ug/L
Vinyl acetate	3.0	0.94	ug/L
Vinyl chloride	2.0	0.51	ug/L

### Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Prep: 3510C

Analyte	LOQ	DL	Units
1,1'-Biphenyl	10	1.2	ug/L
2,2'-oxybis[1-chloropropane]	10	1.3	ug/L
2,4,5-Trichlorophenol	10	0.90	ug/L
2,4,6-Trichlorophenol	10	0.71	ug/L
2,4-Dichlorophenol	10	0.64	ug/L
2,4-Dimethylphenol	10	1.4	ug/L
2,4-Dinitrophenol	30	13	ug/L
2,4-Dinitrotoluene	10	1.4	ug/L
2,6-Dinitrotoluene	10	1.4	ug/L
2-Chloronaphthalene	4.0	1.3	ug/L
2-Chlorophenol	10	0.68	ug/L
2-Methylnaphthalene	4.0	1.2	ug/L
2-Methylphenol	10	0.77	ug/L
2-Nitroaniline	10	2.6	ug/L
2-Nitrophenol	10	3.5	ug/L
3,3'-Dichlorobenzidine	50	3.4	ug/L
3-Nitroaniline	10	3.3	ug/L
4,6-Dinitro-2-methylphenol	50	4.0	ug/L
4-Bromophenyl phenyl ether	10	1.0	ug/L



## Default Detection Limits

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

### Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Prep: 3510C

Analyte	LOQ	DL	Units
4-Chloro-3-methylphenol	10	0.69	ug/L
4-Chloroaniline	20	6.3	ug/L
4-Chlorophenyl phenyl ether	10	1.2	ug/L
4-Nitroaniline	10	2.6	ug/L
4-Nitrophenol	25	9.1	ug/L
Acenaphthene	4.0	0.96	ug/L
Acenaphthylene	4.0	0.75	ug/L
Acetophenone	10	0.68	ug/L
Anthracene	4.0	0.58	ug/L
Atrazine	10	0.65	ug/L
Benzaldehyde	5.0	1.2	ug/L
Benzo[a]anthracene	4.0	0.39	ug/L
Benzo[a]pyrene	4.0	0.50	ug/L
Benzo[b]fluoranthene	4.0	1.2	ug/L
Benzo[g,h,i]perylene	4.0	0.51	ug/L
Benzo[k]fluoranthene	4.0	0.40	ug/L
Bis(2-chloroethoxy)methane	10	0.81	ug/L
Bis(2-chloroethyl)ether	10	2.0	ug/L
Bis(2-ethylhexyl) phthalate	10	3.3	ug/L
Butyl benzyl phthalate	4.0	1.5	ug/L
Caprolactam	15	5.5	ug/L
Chrysene	4.0	2.0	ug/L
Dibenz(a,h)anthracene	10	0.58	ug/L
Dibenzofuran	4.0	0.95	ug/L
Diethyl phthalate	4.0	0.59	ug/L
Di-n-butyl phthalate	4.0	0.45	ug/L
Di-n-octyl phthalate	10	3.6	ug/L
Fluoranthene	4.0	0.50	ug/L
Fluorene	4.0	0.78	ug/L
Hexachlorobenzene	10	0.86	ug/L
Hexachlorobutadiene	10	2.9	ug/L
Hexachlorocyclopentadiene	50	16	ug/L
Hexachloroethane	10	4.5	ug/L
Indeno[1,2,3-cd]pyrene	10	1.3	ug/L
Isophorone	10	2.0	ug/L
Naphthalene	4.0	1.5	ug/L
Nitrobenzene	10	1.3	ug/L
N-Nitrosodi-n-propylamine	10	1.9	ug/L
N-Nitrosodiphenylamine	10	0.77	ug/L
Pentachlorophenol	50	20	ug/L
Phenanthrene	4.0	1.6	ug/L
Phenol	10	0.92	ug/L
Pyrene	10	0.53	ug/L

### Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Prep: 8011

Analyte	LOQ	DL	Units
Ethylene Dibromide	0.020	0.0037	ug/L

### Method: 6010D - Metals (ICP)

Prep: 3020A

# Default Detection Limits

Client: John Shomaker and Associates Inc  
Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

## Method: 6010D - Metals (ICP)

Prep: 3020A

Analyte	LOQ	DL	Units
Calcium	200	24	ug/L
Magnesium	200	4.2	ug/L
Potassium	3000	240	ug/L
Sodium	1000	97	ug/L

## Method: 6010D - Metals (ICP) - Dissolved

Prep: 3005A

Analyte	LOQ	DL	Units
Iron	100	9.1	ug/L
Manganese	10	0.45	ug/L

## Method: 6020B - Metals (ICP/MS)

Prep: 3020A

Analyte	LOQ	DL	Units
Arsenic	5.0	0.50	ug/L
Lead	1.0	0.23	ug/L

## General Chemistry

Analyte	LOQ	DL	Units
Bromide	0.50	0.23	mg/L
Chloride	3.0	1.0	mg/L
Sulfate	5.0	1.0	mg/L
Nitrate Nitrite as N	0.10	0.044	mg/L
Alkalinity	10	3.1	mg/L

# Surrogate Summary

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

## Method: 8260D - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (81-118)	DBFM (80-119)	TOL (89-112)	BFB (85-114)
280-182246-1	WUABFFMW-01 PDB	98	98	100	101
280-182246-2	Field Blank	100	100	99	102
280-182246-3	WUABFFMW-01-BP	100	97	100	100
280-182246-4	Equip Rinsate	97	98	100	101
280-182246-5	Trip Blank	98	98	98	101
LCS 280-629278/4	Lab Control Sample	101	100	100	101
LCS 280-629597/4	Lab Control Sample	99	99	100	104
LCSD 280-629278/6	Lab Control Sample Dup	100	100	102	102
LCSD 280-629597/6	Lab Control Sample Dup	101	101	99	103
MB 280-629278/9	Method Blank	100	99	100	102
MB 280-629597/9	Method Blank	99	99	98	101

### Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)  
 DBFM = Dibromofluoromethane (Surr)  
 TOL = Toluene-d8 (Surr)  
 BFB = 4-Bromofluorobenzene (Surr)

## Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		2FP (19-119)	PHL (10-115)	NBZ (44-120)	FBP (44-119)	TBP (43-140)	TPHL (50-134)
280-182246-1	WUABFFMW-01 PDB	58	49	64	66	79	100
280-182246-2	Field Blank	74	59	81	80	97	122
280-182246-3	WUABFFMW-01-BP	57	46	61	61	66	88
280-182246-4	Equip Rinsate	78	61	84	85	94	122
LCS 280-628746/2-A	Lab Control Sample	62	55	79	84	94	93
LCSD 280-628746/3-A	Lab Control Sample Dup	60	50	77	82	95	99
MB 280-628746/1-A	Method Blank	66	52	60	60	66	96

### Surrogate Legend

2FP = 2-Fluorophenol (Surr)  
 PHL = Phenol-d5 (Surr)  
 NBZ = Nitrobenzene-d5 (Surr)  
 FBP = 2-Fluorobiphenyl  
 TBP = 2,4,6-Tribromophenol (Surr)  
 TPHL = Terphenyl-d14 (Surr)

## Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		12DBP1 (70-130)
280-182246-1	WUABFFMW-01 PDB	94
280-182246-2	Field Blank	96
280-182246-3	WUABFFMW-01-BP	87
280-182246-4	Equip Rinsate	89
LCS 280-628442/2-A	Lab Control Sample	101

# Surrogate Summary

Client: John Shomaker and Associates Inc  
Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

## Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC) (Continued)

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	12DBP1 (70-130)
LCSD 280-628442/3-A	Lab Control Sample Dup	100

#### Surrogate Legend

12DBP = 1,2-Dibromopropane

## Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	12DBP2 (70-130)
MB 280-628442/1-A	Method Blank	91

#### Surrogate Legend

12DBP = 1,2-Dibromopropane

# QC Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

## Method: 8260D - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-629278/9

Matrix: Water

Analysis Batch: 629278

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
	Result	Qualifier							
Ethylbenzene	0.40	U	1.0	0.40	0.30	ug/L		10/11/23 09:27	1
Styrene	0.80	U	1.0	0.80	0.36	ug/L		10/11/23 09:27	1
cis-1,3-Dichloropropene	1.8	U	2.0	1.8	0.63	ug/L		10/11/23 09:27	1
trans-1,3-Dichloropropene	1.8	U	2.0	1.8	0.65	ug/L		10/11/23 09:27	1
N-Propylbenzene	0.80	U	1.0	0.80	0.53	ug/L		10/11/23 09:27	1
n-Butylbenzene	0.80	U	1.0	0.80	0.48	ug/L		10/11/23 09:27	1
4-Chlorotoluene	0.80	U	1.0	0.80	0.21	ug/L		10/11/23 09:27	1
1,4-Dichlorobenzene	0.50	U	1.0	0.50	0.39	ug/L		10/11/23 09:27	1
Ethylene Dibromide	0.80	U	1.0	0.80	0.40	ug/L		10/11/23 09:27	1
3-Chloro-1-propene	0.40	U	2.0	0.40	0.17	ug/L		10/11/23 09:27	1
1,2-Dichloroethane	0.80	U	1.0	0.80	0.54	ug/L		10/11/23 09:27	1
Acrylonitrile	8.0	U	20	8.0	4.5	ug/L		10/11/23 09:27	1
Vinyl acetate	2.0	U	3.0	2.0	0.94	ug/L		10/11/23 09:27	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98	ug/L		10/11/23 09:27	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.37	ug/L		10/11/23 09:27	1
Bromobenzene	0.50	U	1.0	0.50	0.40	ug/L		10/11/23 09:27	1
Methylcyclohexane	0.40	U	1.0	0.40	0.31	ug/L		10/11/23 09:27	1
Toluene	0.40	U	1.0	0.40	0.32	ug/L		10/11/23 09:27	1
Chlorobenzene	0.80	U	1.0	0.80	0.42	ug/L		10/11/23 09:27	1
Tetrahydrofuran	6.4	U	7.0	6.4	2.0	ug/L		10/11/23 09:27	1
Hexane	0.80	U	2.0	0.80	0.16	ug/L		10/11/23 09:27	1
trans-1,4-Dichloro-2-butene	1.6	U	3.0	1.6	1.4	ug/L		10/11/23 09:27	1
Cyclohexane	0.80	U	1.0	0.80	0.44	ug/L		10/11/23 09:27	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.58	ug/L		10/11/23 09:27	1
Chlorodibromomethane	1.8	U	2.0	1.8	0.62	ug/L		10/11/23 09:27	1
Tetrachloroethene	0.80	U	1.0	0.80	0.40	ug/L		10/11/23 09:27	1
sec-Butylbenzene	0.80	U	1.0	0.80	0.45	ug/L		10/11/23 09:27	1
1,3-Dichloropropane	0.80	U	1.0	0.80	0.38	ug/L		10/11/23 09:27	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.32	ug/L		10/11/23 09:27	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	0.37	ug/L		10/11/23 09:27	1
Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25	ug/L		10/11/23 09:27	1
m-Xylene & p-Xylene	0.80	U	2.0	0.80	0.36	ug/L		10/11/23 09:27	1
1,3-Dichlorobenzene	0.40	U M	1.0	0.40	0.33	ug/L		10/11/23 09:27	1
Carbon tetrachloride	0.80	U	1.0	0.80	0.57	ug/L		10/11/23 09:27	1
1,1-Dichloropropene	0.80	U	1.0	0.80	0.42	ug/L		10/11/23 09:27	1
2-Hexanone	4.0	U	5.0	4.0	1.7	ug/L		10/11/23 09:27	1
2,2-Dichloropropane	0.80	U	1.0	0.80	0.38	ug/L		10/11/23 09:27	1
Ethyl ether	0.80	U	2.0	0.80	0.35	ug/L		10/11/23 09:27	1
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.58	ug/L		10/11/23 09:27	1
Acetone	8.0	U	15	8.0	6.6	ug/L		10/11/23 09:27	1
Chloroform	0.80	U	1.0	0.80	0.36	ug/L		10/11/23 09:27	1
Benzene	0.80	U	1.0	0.80	0.31	ug/L		10/11/23 09:27	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.39	ug/L		10/11/23 09:27	1
Bromomethane	4.0	U	5.0	4.0	2.4	ug/L		10/11/23 09:27	1
Chloromethane	1.0	U	2.0	1.0	0.75	ug/L		10/11/23 09:27	1
Iodomethane	4.0	U	5.0	4.0	2.6	ug/L		10/11/23 09:27	1
Dibromomethane	0.40	U	1.0	0.40	0.34	ug/L		10/11/23 09:27	1
Chlorobromomethane	0.80	U	1.0	0.80	0.40	ug/L		10/11/23 09:27	1

# QC Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

## Method: 8260D - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 280-629278/9**  
**Matrix: Water**  
**Analysis Batch: 629278**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloroethane	1.6	U	4.0	1.6	1.4	ug/L		10/11/23 09:27	1
Vinyl chloride	1.0	U	2.0	1.0	0.51	ug/L		10/11/23 09:27	1
Methylene Chloride	1.8	U	2.0	1.8	0.94	ug/L		10/11/23 09:27	1
Carbon disulfide	0.80	U	2.0	0.80	0.63	ug/L		10/11/23 09:27	1
Bromoform	1.8	U	2.0	1.8	1.2	ug/L		10/11/23 09:27	1
Dichlorobromomethane	0.50	U	1.0	0.50	0.39	ug/L		10/11/23 09:27	1
1,1-Dichloroethane	0.80	U	1.0	0.80	0.22	ug/L		10/11/23 09:27	1
1,1-Dichloroethene	0.80	U	1.0	0.80	0.23	ug/L		10/11/23 09:27	1
Trichlorofluoromethane	0.80	U	2.0	0.80	0.57	ug/L		10/11/23 09:27	1
Dichlorodifluoromethane	2.5	U	3.0	2.5	0.96	ug/L		10/11/23 09:27	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.8	U	3.0	1.8	0.73	ug/L		10/11/23 09:27	1
1,2-Dichloropropane	0.80	U	1.0	0.80	0.52	ug/L		10/11/23 09:27	1
2-Butanone (MEK)	12	U	15	12	6.0	ug/L		10/11/23 09:27	1
1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27	ug/L		10/11/23 09:27	1
Trichloroethene	0.40	U	1.0	0.40	0.30	ug/L		10/11/23 09:27	1
Methyl acetate	4.0	U	5.0	4.0	1.6	ug/L		10/11/23 09:27	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21	ug/L		10/11/23 09:27	1
1,2,3-Trichlorobenzene	0.80	U	2.0	0.80	0.70	ug/L		10/11/23 09:27	1
Hexachlorobutadiene	1.8	U	2.0	1.8	1.2	ug/L		10/11/23 09:27	1
Naphthalene	0.80	U	2.0	0.80	0.63	ug/L		10/11/23 09:27	1
o-Xylene	0.40	U	1.0	0.40	0.33	ug/L		10/11/23 09:27	1
2-Chlorotoluene	0.40	U	1.0	0.40	0.34	ug/L		10/11/23 09:27	1
1,2-Dichlorobenzene	0.50	U	1.0	0.50	0.37	ug/L		10/11/23 09:27	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.15	ug/L		10/11/23 09:27	1
1,2-Dibromo-3-Chloropropane	4.0	U	5.0	4.0	1.8	ug/L		10/11/23 09:27	1
1,2,3-Trichloropropane	1.8	U	2.5	1.8	0.86	ug/L		10/11/23 09:27	1
Ethyl methacrylate	2.0	U	3.0	2.0	0.86	ug/L		10/11/23 09:27	1
tert-Butylbenzene	0.80	U	1.0	0.80	0.42	ug/L		10/11/23 09:27	1
Isopropylbenzene	0.50	U	1.0	0.50	0.36	ug/L		10/11/23 09:27	1
4-Isopropyltoluene	0.80	U	1.0	0.80	0.43	ug/L		10/11/23 09:27	1
1,2-Dichloroethene, Total	0.40	U	1.0	0.40	0.32	ug/L		10/11/23 09:27	1
1,3-Dichloropropene, Total	0.80	U	2.0	0.80	0.63	ug/L		10/11/23 09:27	1
Trihalomethanes, Total	0.80	U	1.0	0.80	0.36	ug/L		10/11/23 09:27	1
Total BTEX	0.40	U	1.0	0.40	0.30	ug/L		10/11/23 09:27	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		81 - 118		10/11/23 09:27	1
Dibromofluoromethane (Surr)	99		80 - 119		10/11/23 09:27	1
Toluene-d8 (Surr)	100		89 - 112		10/11/23 09:27	1
4-Bromofluorobenzene (Surr)	102		85 - 114		10/11/23 09:27	1

**Lab Sample ID: LCS 280-629278/4**  
**Matrix: Water**  
**Analysis Batch: 629278**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	50.0	51.3		ug/L		103	79 - 121
Styrene	50.0	53.4		ug/L		107	78 - 123

# QC Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

## Method: 8260D - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 280-629278/4**  
**Matrix: Water**  
**Analysis Batch: 629278**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
cis-1,3-Dichloropropene	50.0	47.4		ug/L		95	75 - 124
trans-1,3-Dichloropropene	50.0	49.0		ug/L		98	73 - 127
N-Propylbenzene	50.0	50.3		ug/L		101	76 - 126
n-Butylbenzene	50.0	51.1		ug/L		102	75 - 128
4-Chlorotoluene	50.0	50.4		ug/L		101	78 - 122
1,4-Dichlorobenzene	50.0	47.5		ug/L		95	79 - 118
Ethylene Dibromide	50.0	55.9		ug/L		112	77 - 121
3-Chloro-1-propene	50.0	54.7		ug/L		109	68 - 130
1,2-Dichloroethane	50.0	49.1		ug/L		98	73 - 128
Acrylonitrile	500	552		ug/L		110	63 - 135
Vinyl acetate	100	111		ug/L		111	54 - 146
4-Methyl-2-pentanone (MIBK)	200	233		ug/L		117	67 - 130
1,3,5-Trimethylbenzene	50.0	52.0		ug/L		104	75 - 124
Bromobenzene	50.0	51.6		ug/L		103	80 - 120
Methylcyclohexane	50.0	48.6		ug/L		97	72 - 132
Toluene	50.0	50.2		ug/L		100	80 - 121
Chlorobenzene	50.0	49.7		ug/L		99	82 - 118
Tetrahydrofuran	100	114		ug/L		114	57 - 133
Hexane	50.0	50.1		ug/L		100	48 - 143
trans-1,4-Dichloro-2-butene	50.0	44.7		ug/L		89	43 - 140
Cyclohexane	50.0	48.5		ug/L		97	71 - 130
1,2,4-Trichlorobenzene	50.0	47.8		ug/L		96	69 - 130
Chlorodibromomethane	50.0	55.3		ug/L		111	74 - 126
Tetrachloroethene	50.0	49.6		ug/L		99	74 - 129
sec-Butylbenzene	50.0	50.2		ug/L		100	77 - 126
1,3-Dichloropropane	50.0	52.5		ug/L		105	80 - 119
cis-1,2-Dichloroethene	50.0	50.6		ug/L		101	78 - 123
trans-1,2-Dichloroethene	50.0	49.6		ug/L		99	75 - 124
Methyl tert-butyl ether	50.0	55.6		ug/L		111	71 - 124
m-Xylene & p-Xylene	50.0	50.7		ug/L		101	80 - 121
1,3-Dichlorobenzene	50.0	50.5		ug/L		101	80 - 119
Carbon tetrachloride	50.0	43.4		ug/L		87	72 - 136
1,1-Dichloropropene	50.0	49.2		ug/L		98	79 - 125
2-Hexanone	200	231		ug/L		115	57 - 139
2,2-Dichloropropane	50.0	44.7		ug/L		89	60 - 139
Ethyl ether	50.0	52.8		ug/L		106	68 - 129
1,1,1,2-Tetrachloroethane	50.0	45.9		ug/L		92	78 - 124
Acetone	200	209		ug/L		104	39 - 160
Chloroform	50.0	50.8		ug/L		102	79 - 124
Benzene	50.0	51.4		ug/L		103	79 - 120
1,1,1-Trichloroethane	50.0	51.4		ug/L		103	74 - 131
Bromomethane	50.0	47.8		ug/L		96	53 - 141
Chloromethane	50.0	52.5		ug/L		105	50 - 139
Iodomethane	50.0	45.8		ug/L		92	69 - 131
Dibromomethane	50.0	52.0		ug/L		104	79 - 123
Chlorobromomethane	50.0	50.5		ug/L		101	78 - 123
Chloroethane	50.0	57.3		ug/L		115	60 - 138
Vinyl chloride	50.0	51.3		ug/L		103	58 - 137
Methylene Chloride	50.0	51.3		ug/L		103	74 - 124



# QC Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

## Method: 8260D - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 280-629278/4**  
**Matrix: Water**  
**Analysis Batch: 629278**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Carbon disulfide	50.0	47.8		ug/L		96	64 - 133
Bromoform	50.0	44.8		ug/L		90	66 - 130
Dichlorobromomethane	50.0	52.6		ug/L		105	79 - 125
1,1-Dichloroethane	50.0	50.7		ug/L		101	77 - 125
1,1-Dichloroethene	50.0	47.7		ug/L		95	71 - 131
Trichlorofluoromethane	50.0	49.7		ug/L		99	65 - 141
Dichlorodifluoromethane	50.0	51.5		ug/L		103	32 - 152
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	48.3		ug/L		97	70 - 136
1,2-Dichloropropane	50.0	51.2		ug/L		102	78 - 122
2-Butanone (MEK)	200	217		ug/L		109	56 - 143
1,1,2-Trichloroethane	50.0	53.3		ug/L		107	80 - 119
Trichloroethene	50.0	48.7		ug/L		97	79 - 123
Methyl acetate	100	112		ug/L		112	56 - 136
1,1,2,2-Tetrachloroethane	50.0	53.8		ug/L		108	71 - 121
1,2,3-Trichlorobenzene	50.0	42.7		ug/L		85	69 - 129
Hexachlorobutadiene	50.0	40.4		ug/L		81	66 - 134
Naphthalene	50.0	48.9		ug/L		98	61 - 128
o-Xylene	50.0	52.0		ug/L		104	78 - 122
2-Chlorotoluene	50.0	49.5		ug/L		99	79 - 122
1,2-Dichlorobenzene	50.0	49.9		ug/L		100	80 - 119
1,2,4-Trimethylbenzene	50.0	51.6		ug/L		103	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	47.3		ug/L		95	62 - 128
1,2,3-Trichloropropane	50.0	53.0		ug/L		106	73 - 122
Ethyl methacrylate	50.0	52.2		ug/L		104	72 - 126
tert-Butylbenzene	50.0	50.6		ug/L		101	78 - 124
Isopropylbenzene	50.0	50.5		ug/L		101	72 - 131
4-Isopropyltoluene	50.0	51.7		ug/L		103	77 - 127
1,2-Dichloroethene, Total	100	100		ug/L		100	79 - 121
1,3-Dichloropropene, Total	100	96.4		ug/L		96	77 - 123
Trihalomethanes, Total	200	204		ug/L		102	66 - 130
Total BTEX	250	256		ug/L		102	78 - 122

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		81 - 118
Dibromofluoromethane (Surr)	100		80 - 119
Toluene-d8 (Surr)	100		89 - 112
4-Bromofluorobenzene (Surr)	101		85 - 114

**Lab Sample ID: LCSD 280-629278/6**  
**Matrix: Water**  
**Analysis Batch: 629278**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ethylbenzene	50.0	51.6		ug/L		103	79 - 121	1	20
Styrene	50.0	53.5		ug/L		107	78 - 123	0	20
cis-1,3-Dichloropropene	50.0	48.4		ug/L		97	75 - 124	2	20
trans-1,3-Dichloropropene	50.0	49.8		ug/L		100	73 - 127	2	20
N-Propylbenzene	50.0	50.1		ug/L		100	76 - 126	0	20

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# QC Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

## Method: 8260D - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS D 280-629278/6**  
**Matrix: Water**  
**Analysis Batch: 629278**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS D Result	LCS D Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
n-Butylbenzene	50.0	51.6		ug/L		103	75 - 128	1	20
4-Chlorotoluene	50.0	50.8		ug/L		102	78 - 122	1	20
1,4-Dichlorobenzene	50.0	48.1		ug/L		96	79 - 118	1	20
Ethylene Dibromide	50.0	56.5		ug/L		113	77 - 121	1	20
3-Chloro-1-propene	50.0	53.7		ug/L		107	68 - 130	2	20
1,2-Dichloroethane	50.0	48.2		ug/L		96	73 - 128	2	20
Acrylonitrile	500	548		ug/L		110	63 - 135	1	20
Vinyl acetate	100	103		ug/L		103	54 - 146	7	20
4-Methyl-2-pentanone (MIBK)	200	229		ug/L		115	67 - 130	2	20
1,3,5-Trimethylbenzene	50.0	53.0		ug/L		106	75 - 124	2	20
Bromobenzene	50.0	51.5		ug/L		103	80 - 120	0	20
Methylcyclohexane	50.0	47.7		ug/L		95	72 - 132	2	20
Toluene	50.0	49.5		ug/L		99	80 - 121	1	20
Chlorobenzene	50.0	50.0		ug/L		100	82 - 118	1	20
Tetrahydrofuran	100	110		ug/L		110	57 - 133	4	20
Hexane	50.0	49.6		ug/L		99	48 - 143	1	20
trans-1,4-Dichloro-2-butene	50.0	45.7		ug/L		91	43 - 140	2	20
Cyclohexane	50.0	47.8		ug/L		96	71 - 130	2	20
1,2,4-Trichlorobenzene	50.0	49.0		ug/L		98	69 - 130	3	20
Chlorodibromomethane	50.0	55.4		ug/L		111	74 - 126	0	20
Tetrachloroethene	50.0	50.5		ug/L		101	74 - 129	2	20
sec-Butylbenzene	50.0	49.8		ug/L		100	77 - 126	1	20
1,3-Dichloropropane	50.0	53.7		ug/L		107	80 - 119	2	20
cis-1,2-Dichloroethene	50.0	49.7		ug/L		99	78 - 123	2	20
trans-1,2-Dichloroethene	50.0	48.8		ug/L		98	75 - 124	2	20
Methyl tert-butyl ether	50.0	55.2		ug/L		110	71 - 124	1	20
m-Xylene & p-Xylene	50.0	51.2		ug/L		102	80 - 121	1	20
1,3-Dichlorobenzene	50.0	50.4		ug/L		101	80 - 119	0	20
Carbon tetrachloride	50.0	43.5		ug/L		87	72 - 136	0	20
1,1-Dichloropropene	50.0	48.2		ug/L		96	79 - 125	2	20
2-Hexanone	200	231		ug/L		115	57 - 139	0	20
2,2-Dichloropropane	50.0	43.4		ug/L		87	60 - 139	3	20
Ethyl ether	50.0	51.5		ug/L		103	68 - 129	3	20
1,1,1,2-Tetrachloroethane	50.0	47.3		ug/L		95	78 - 124	3	20
Acetone	200	207		ug/L		104	39 - 160	1	20
Chloroform	50.0	50.7		ug/L		101	79 - 124	0	20
Benzene	50.0	50.7		ug/L		101	79 - 120	1	20
1,1,1-Trichloroethane	50.0	51.0		ug/L		102	74 - 131	1	20
Bromomethane	50.0	48.1		ug/L		96	53 - 141	1	20
Chloromethane	50.0	53.1		ug/L		106	50 - 139	1	20
Iodomethane	50.0	45.2		ug/L		90	69 - 131	1	20
Dibromomethane	50.0	52.7		ug/L		105	79 - 123	1	20
Chlorobromomethane	50.0	49.2		ug/L		98	78 - 123	3	20
Chloroethane	50.0	53.8		ug/L		108	60 - 138	6	20
Vinyl chloride	50.0	51.2		ug/L		102	58 - 137	0	20
Methylene Chloride	50.0	51.3		ug/L		103	74 - 124	0	20
Carbon disulfide	50.0	47.1		ug/L		94	64 - 133	2	20
Bromoform	50.0	45.4		ug/L		91	66 - 130	1	20
Dichlorobromomethane	50.0	52.4		ug/L		105	79 - 125	0	20

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# QC Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

## Method: 8260D - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 280-629278/6**  
**Matrix: Water**  
**Analysis Batch: 629278**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1-Dichloroethane	50.0	50.7		ug/L		101	77 - 125	0	20
1,1-Dichloroethene	50.0	48.3		ug/L		97	71 - 131	1	20
Trichlorofluoromethane	50.0	49.4		ug/L		99	65 - 141	1	20
Dichlorodifluoromethane	50.0	53.3		ug/L		107	32 - 152	3	20
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	48.4		ug/L		97	70 - 136	0	20
1,2-Dichloropropane	50.0	50.8		ug/L		102	78 - 122	1	20
2-Butanone (MEK)	200	214		ug/L		107	56 - 143	2	20
1,1,2-Trichloroethane	50.0	53.4		ug/L		107	80 - 119	0	20
Trichloroethene	50.0	50.8		ug/L		102	79 - 123	4	20
Methyl acetate	100	111		ug/L		111	56 - 136	1	20
1,1,1,2-Tetrachloroethane	50.0	53.2		ug/L		106	71 - 121	1	20
1,2,3-Trichlorobenzene	50.0	44.9		ug/L		90	69 - 129	5	20
Hexachlorobutadiene	50.0	42.0		ug/L		84	66 - 134	4	20
Naphthalene	50.0	48.9		ug/L		98	61 - 128	0	20
o-Xylene	50.0	52.3		ug/L		105	78 - 122	1	20
2-Chlorotoluene	50.0	49.9		ug/L		100	79 - 122	1	20
1,2-Dichlorobenzene	50.0	50.6		ug/L		101	80 - 119	1	20
1,2,4-Trimethylbenzene	50.0	52.2		ug/L		104	76 - 124	1	20
1,2-Dibromo-3-Chloropropane	50.0	46.0		ug/L		92	62 - 128	3	20
1,2,3-Trichloropropane	50.0	53.7		ug/L		107	73 - 122	1	20
Ethyl methacrylate	50.0	54.0		ug/L		108	72 - 126	3	20
tert-Butylbenzene	50.0	51.3		ug/L		103	78 - 124	1	20
Isopropylbenzene	50.0	50.4		ug/L		101	72 - 131	0	20
4-Isopropyltoluene	50.0	52.6		ug/L		105	77 - 127	2	20
1,2-Dichloroethene, Total	100	98.5		ug/L		99	79 - 121	2	20
1,3-Dichloropropene, Total	100	98.2		ug/L		98	77 - 123	2	20
Trihalomethanes, Total	200	204		ug/L		102	66 - 130	0	20
Total BTEX	250	255		ug/L		102	78 - 122	0	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		81 - 118
Dibromofluoromethane (Surr)	100		80 - 119
Toluene-d8 (Surr)	102		89 - 112
4-Bromofluorobenzene (Surr)	102		85 - 114

**Lab Sample ID: MB 280-629597/9**  
**Matrix: Water**  
**Analysis Batch: 629597**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylbenzene	0.40	U	1.0	0.40	0.30	ug/L		10/13/23 09:06	1
Styrene	0.80	U	1.0	0.80	0.36	ug/L		10/13/23 09:06	1
cis-1,3-Dichloropropene	1.8	U	2.0	1.8	0.63	ug/L		10/13/23 09:06	1
trans-1,3-Dichloropropene	1.8	U	2.0	1.8	0.65	ug/L		10/13/23 09:06	1
N-Propylbenzene	0.80	U	1.0	0.80	0.53	ug/L		10/13/23 09:06	1
n-Butylbenzene	0.80	U	1.0	0.80	0.48	ug/L		10/13/23 09:06	1
4-Chlorotoluene	0.80	U	1.0	0.80	0.21	ug/L		10/13/23 09:06	1
1,4-Dichlorobenzene	0.50	U	1.0	0.50	0.39	ug/L		10/13/23 09:06	1

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# QC Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

## Method: 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-629597/9

Matrix: Water

Analysis Batch: 629597

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide	0.80	U	1.0	0.80	0.40	ug/L		10/13/23 09:06	1
3-Chloro-1-propene	0.40	U	2.0	0.40	0.17	ug/L		10/13/23 09:06	1
1,2-Dichloroethane	0.80	U	1.0	0.80	0.54	ug/L		10/13/23 09:06	1
Acrylonitrile	8.0	U	20	8.0	4.5	ug/L		10/13/23 09:06	1
Vinyl acetate	2.0	U	3.0	2.0	0.94	ug/L		10/13/23 09:06	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98	ug/L		10/13/23 09:06	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.37	ug/L		10/13/23 09:06	1
Bromobenzene	0.50	U	1.0	0.50	0.40	ug/L		10/13/23 09:06	1
Methylcyclohexane	0.40	U	1.0	0.40	0.31	ug/L		10/13/23 09:06	1
Toluene	0.40	U	1.0	0.40	0.32	ug/L		10/13/23 09:06	1
Chlorobenzene	0.80	U	1.0	0.80	0.42	ug/L		10/13/23 09:06	1
Tetrahydrofuran	6.4	U	7.0	6.4	2.0	ug/L		10/13/23 09:06	1
Hexane	0.80	U	2.0	0.80	0.16	ug/L		10/13/23 09:06	1
trans-1,4-Dichloro-2-butene	1.6	U	3.0	1.6	1.4	ug/L		10/13/23 09:06	1
Cyclohexane	0.80	U	1.0	0.80	0.44	ug/L		10/13/23 09:06	1
1,2,4-Trichlorobenzene	0.80	U	1.0	0.80	0.58	ug/L		10/13/23 09:06	1
Chlorodibromomethane	1.8	U	2.0	1.8	0.62	ug/L		10/13/23 09:06	1
Tetrachloroethene	0.80	U	1.0	0.80	0.40	ug/L		10/13/23 09:06	1
sec-Butylbenzene	0.80	U	1.0	0.80	0.45	ug/L		10/13/23 09:06	1
1,3-Dichloropropane	0.80	U	1.0	0.80	0.38	ug/L		10/13/23 09:06	1
cis-1,2-Dichloroethene	0.40	U	1.0	0.40	0.32	ug/L		10/13/23 09:06	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	0.37	ug/L		10/13/23 09:06	1
Methyl tert-butyl ether	0.80	U	5.0	0.80	0.25	ug/L		10/13/23 09:06	1
m-Xylene & p-Xylene	0.80	U	2.0	0.80	0.36	ug/L		10/13/23 09:06	1
1,3-Dichlorobenzene	0.40	U	1.0	0.40	0.33	ug/L		10/13/23 09:06	1
Carbon tetrachloride	0.80	U	1.0	0.80	0.57	ug/L		10/13/23 09:06	1
1,1-Dichloropropene	0.80	U	1.0	0.80	0.42	ug/L		10/13/23 09:06	1
2-Hexanone	4.0	U	5.0	4.0	1.7	ug/L		10/13/23 09:06	1
2,2-Dichloropropane	0.80	U	1.0	0.80	0.38	ug/L		10/13/23 09:06	1
Ethyl ether	0.80	U	2.0	0.80	0.35	ug/L		10/13/23 09:06	1
1,1,1,2-Tetrachloroethane	0.80	U	1.0	0.80	0.58	ug/L		10/13/23 09:06	1
Acetone	8.0	U	15	8.0	6.6	ug/L		10/13/23 09:06	1
Chloroform	0.80	U	1.0	0.80	0.36	ug/L		10/13/23 09:06	1
Benzene	0.80	U	1.0	0.80	0.31	ug/L		10/13/23 09:06	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.39	ug/L		10/13/23 09:06	1
Bromomethane	4.0	U	5.0	4.0	2.4	ug/L		10/13/23 09:06	1
Chloromethane	1.0	U	2.0	1.0	0.75	ug/L		10/13/23 09:06	1
Iodomethane	4.0	U	5.0	4.0	2.6	ug/L		10/13/23 09:06	1
Dibromomethane	0.40	U	1.0	0.40	0.34	ug/L		10/13/23 09:06	1
Chlorobromomethane	0.80	U	1.0	0.80	0.40	ug/L		10/13/23 09:06	1
Chloroethane	1.6	U	4.0	1.6	1.4	ug/L		10/13/23 09:06	1
Vinyl chloride	1.0	U	2.0	1.0	0.51	ug/L		10/13/23 09:06	1
Methylene Chloride	1.8	U	2.0	1.8	0.94	ug/L		10/13/23 09:06	1
Carbon disulfide	0.80	U	2.0	0.80	0.63	ug/L		10/13/23 09:06	1
Bromoform	1.8	U	2.0	1.8	1.2	ug/L		10/13/23 09:06	1
Dichlorobromomethane	0.50	U	1.0	0.50	0.39	ug/L		10/13/23 09:06	1
1,1-Dichloroethane	0.80	U	1.0	0.80	0.22	ug/L		10/13/23 09:06	1
1,1-Dichloroethene	0.80	U	1.0	0.80	0.23	ug/L		10/13/23 09:06	1
Trichlorofluoromethane	0.80	U	2.0	0.80	0.57	ug/L		10/13/23 09:06	1

# QC Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

## Method: 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-629597/9

Matrix: Water

Analysis Batch: 629597

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB MB		LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
	Result	Qualifier							
Dichlorodifluoromethane	2.5	U	3.0	2.5	0.96	ug/L		10/13/23 09:06	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.8	U	3.0	1.8	0.73	ug/L		10/13/23 09:06	1
1,2-Dichloropropane	0.80	U	1.0	0.80	0.52	ug/L		10/13/23 09:06	1
2-Butanone (MEK)	12	U	15	12	6.0	ug/L		10/13/23 09:06	1
1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27	ug/L		10/13/23 09:06	1
Trichloroethene	0.40	U	1.0	0.40	0.30	ug/L		10/13/23 09:06	1
Methyl acetate	4.0	U	5.0	4.0	1.6	ug/L		10/13/23 09:06	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21	ug/L		10/13/23 09:06	1
1,2,3-Trichlorobenzene	0.80	U	2.0	0.80	0.70	ug/L		10/13/23 09:06	1
Hexachlorobutadiene	1.8	U	2.0	1.8	1.2	ug/L		10/13/23 09:06	1
Naphthalene	0.80	U	2.0	0.80	0.63	ug/L		10/13/23 09:06	1
o-Xylene	0.40	U	1.0	0.40	0.33	ug/L		10/13/23 09:06	1
2-Chlorotoluene	0.40	U	1.0	0.40	0.34	ug/L		10/13/23 09:06	1
1,2-Dichlorobenzene	0.50	U	1.0	0.50	0.37	ug/L		10/13/23 09:06	1
1,2,4-Trimethylbenzene	0.40	U	1.0	0.40	0.15	ug/L		10/13/23 09:06	1
1,2-Dibromo-3-Chloropropane	4.0	U	5.0	4.0	1.8	ug/L		10/13/23 09:06	1
1,2,3-Trichloropropane	1.8	U	2.5	1.8	0.86	ug/L		10/13/23 09:06	1
Ethyl methacrylate	2.0	U	3.0	2.0	0.86	ug/L		10/13/23 09:06	1
tert-Butylbenzene	0.80	U	1.0	0.80	0.42	ug/L		10/13/23 09:06	1
Isopropylbenzene	0.50	U	1.0	0.50	0.36	ug/L		10/13/23 09:06	1
4-Isopropyltoluene	0.80	U	1.0	0.80	0.43	ug/L		10/13/23 09:06	1
1,2-Dichloroethene, Total	0.40	U	1.0	0.40	0.32	ug/L		10/13/23 09:06	1
1,3-Dichloropropene, Total	0.80	U	2.0	0.80	0.63	ug/L		10/13/23 09:06	1
Trihalomethanes, Total	0.80	U	1.0	0.80	0.36	ug/L		10/13/23 09:06	1
Total BTEX	0.40	U	1.0	0.40	0.30	ug/L		10/13/23 09:06	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	99		81 - 118		10/13/23 09:06	1
Dibromofluoromethane (Surr)	99		80 - 119		10/13/23 09:06	1
Toluene-d8 (Surr)	98		89 - 112		10/13/23 09:06	1
4-Bromofluorobenzene (Surr)	101		85 - 114		10/13/23 09:06	1

Lab Sample ID: LCS 280-629597/4

Matrix: Water

Analysis Batch: 629597

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Styrene	50.0	51.7		ug/L		103	78 - 123
cis-1,3-Dichloropropene	50.0	46.8		ug/L		94	75 - 124
trans-1,3-Dichloropropene	50.0	49.4		ug/L		99	73 - 127
N-Propylbenzene	50.0	50.5		ug/L		101	76 - 126
n-Butylbenzene	50.0	50.7		ug/L		101	75 - 128
4-Chlorotoluene	50.0	50.2		ug/L		100	78 - 122
1,4-Dichlorobenzene	50.0	46.9		ug/L		94	79 - 118
Ethylene Dibromide	50.0	54.7		ug/L		109	77 - 121
3-Chloro-1-propene	50.0	54.0		ug/L		108	68 - 130
1,2-Dichloroethane	50.0	47.5		ug/L		95	73 - 128

# QC Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

## Method: 8260D - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 280-629597/4**

**Matrix: Water**

**Analysis Batch: 629597**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acrylonitrile	500	554		ug/L		111	63 - 135
Vinyl acetate	100	113		ug/L		113	54 - 146
4-Methyl-2-pentanone (MIBK)	200	229		ug/L		114	67 - 130
1,3,5-Trimethylbenzene	50.0	51.4		ug/L		103	75 - 124
Bromobenzene	50.0	49.8		ug/L		100	80 - 120
Methylcyclohexane	50.0	47.4		ug/L		95	72 - 132
Toluene	50.0	49.6		ug/L		99	80 - 121
Chlorobenzene	50.0	49.3		ug/L		99	82 - 118
Tetrahydrofuran	100	111		ug/L		111	57 - 133
Hexane	50.0	49.0		ug/L		98	48 - 143
trans-1,4-Dichloro-2-butene	50.0	51.3		ug/L		103	43 - 140
Cyclohexane	50.0	47.5		ug/L		95	71 - 130
1,2,4-Trichlorobenzene	50.0	48.1		ug/L		96	69 - 130
Chlorodibromomethane	50.0	54.4		ug/L		109	74 - 126
Tetrachloroethene	50.0	48.1		ug/L		96	74 - 129
sec-Butylbenzene	50.0	49.3		ug/L		99	77 - 126
1,3-Dichloropropane	50.0	52.0		ug/L		104	80 - 119
cis-1,2-Dichloroethene	50.0	50.1		ug/L		100	78 - 123
trans-1,2-Dichloroethene	50.0	48.9		ug/L		98	75 - 124
Methyl tert-butyl ether	50.0	55.2		ug/L		110	71 - 124
m-Xylene & p-Xylene	50.0	50.5		ug/L		101	80 - 121
1,3-Dichlorobenzene	50.0	50.3		ug/L		101	80 - 119
Carbon tetrachloride	50.0	43.0		ug/L		86	72 - 136
1,1-Dichloropropene	50.0	48.3		ug/L		97	79 - 125
2-Hexanone	200	224		ug/L		112	57 - 139
2,2-Dichloropropane	50.0	44.3		ug/L		89	60 - 139
Ethyl ether	50.0	51.6		ug/L		103	68 - 129
1,1,1,2-Tetrachloroethane	50.0	45.1		ug/L		90	78 - 124
Acetone	200	197		ug/L		99	39 - 160
Chloroform	50.0	49.6		ug/L		99	79 - 124
Benzene	50.0	50.5		ug/L		101	79 - 120
1,1,1-Trichloroethane	50.0	50.1		ug/L		100	74 - 131
Bromomethane	50.0	47.1		ug/L		94	53 - 141
Chloromethane	50.0	50.7		ug/L		101	50 - 139
Iodomethane	50.0	44.5		ug/L		89	69 - 131
Dibromomethane	50.0	52.5		ug/L		105	79 - 123
Chlorobromomethane	50.0	49.7		ug/L		99	78 - 123
Chloroethane	50.0	55.3		ug/L		111	60 - 138
Vinyl chloride	50.0	49.8		ug/L		100	58 - 137
Methylene Chloride	50.0	51.0		ug/L		102	74 - 124
Carbon disulfide	50.0	48.3		ug/L		97	64 - 133
Bromoform	50.0	45.9		ug/L		92	66 - 130
Dichlorobromomethane	50.0	52.3		ug/L		105	79 - 125
1,1-Dichloroethane	50.0	50.2		ug/L		100	77 - 125
1,1-Dichloroethene	50.0	48.2		ug/L		96	71 - 131
Trichlorofluoromethane	50.0	47.2		ug/L		94	65 - 141
Dichlorodifluoromethane	50.0	44.5		ug/L		89	32 - 152
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	46.0		ug/L		92	70 - 136

# QC Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

## Method: 8260D - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 280-629597/4**  
**Matrix: Water**  
**Analysis Batch: 629597**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2-Dichloropropane	50.0	51.5		ug/L		103	78 - 122
2-Butanone (MEK)	200	213		ug/L		107	56 - 143
1,1,2-Trichloroethane	50.0	53.2		ug/L		106	80 - 119
Trichloroethene	50.0	48.2		ug/L		96	79 - 123
Methyl acetate	100	112		ug/L		112	56 - 136
1,1,2,2-Tetrachloroethane	50.0	54.3		ug/L		109	71 - 121
1,2,3-Trichlorobenzene	50.0	43.7		ug/L		87	69 - 129
Hexachlorobutadiene	50.0	41.2		ug/L		82	66 - 134
Naphthalene	50.0	48.8		ug/L		98	61 - 128
o-Xylene	50.0	50.7		ug/L		101	78 - 122
2-Chlorotoluene	50.0	49.7		ug/L		99	79 - 122
1,2-Dichlorobenzene	50.0	49.6		ug/L		99	80 - 119
1,2,4-Trimethylbenzene	50.0	51.2		ug/L		102	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	46.4		ug/L		93	62 - 128
1,2,3-Trichloropropane	50.0	52.0		ug/L		104	73 - 122
Ethyl methacrylate	50.0	52.8		ug/L		106	72 - 126
tert-Butylbenzene	50.0	49.9		ug/L		100	78 - 124
Isopropylbenzene	50.0	50.3		ug/L		101	72 - 131
4-Isopropyltoluene	50.0	51.9		ug/L		104	77 - 127
1,2-Dichloroethene, Total	100	99.0		ug/L		99	79 - 121
1,3-Dichloropropene, Total	100	96.2		ug/L		96	77 - 123
Trihalomethanes, Total	200	202		ug/L		101	66 - 130
Total BTEX	250	252		ug/L		101	78 - 122

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		81 - 118
Dibromofluoromethane (Surr)	99		80 - 119
Toluene-d8 (Surr)	100		89 - 112
4-Bromofluorobenzene (Surr)	104		85 - 114

**Lab Sample ID: LCS D 280-629597/6**  
**Matrix: Water**  
**Analysis Batch: 629597**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS D Result	LCS D Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ethylbenzene	50.0	49.4		ug/L		99	79 - 121	2	20
Styrene	50.0	50.9		ug/L		102	78 - 123	2	20
cis-1,3-Dichloropropene	50.0	46.8		ug/L		94	75 - 124	0	20
trans-1,3-Dichloropropene	50.0	51.1		ug/L		102	73 - 127	3	20
N-Propylbenzene	50.0	50.0		ug/L		100	76 - 126	1	20
n-Butylbenzene	50.0	50.4		ug/L		101	75 - 128	0	20
4-Chlorotoluene	50.0	50.5		ug/L		101	78 - 122	1	20
1,4-Dichlorobenzene	50.0	47.8		ug/L		96	79 - 118	2	20
Ethylene Dibromide	50.0	54.7		ug/L		109	77 - 121	0	20
3-Chloro-1-propene	50.0	54.3		ug/L		109	68 - 130	1	20
1,2-Dichloroethane	50.0	48.2		ug/L		96	73 - 128	2	20
Acrylonitrile	500	556		ug/L		111	63 - 135	0	20
Vinyl acetate	100	105		ug/L		105	54 - 146	7	20



# QC Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

## Method: 8260D - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS D 280-629597/6**

**Matrix: Water**

**Analysis Batch: 629597**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS D Result	LCS D Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
4-Methyl-2-pentanone (MIBK)	200	229		ug/L		114	67 - 130	0	20
1,3,5-Trimethylbenzene	50.0	51.7		ug/L		103	75 - 124	1	20
Bromobenzene	50.0	49.8		ug/L		100	80 - 120	0	20
Methylcyclohexane	50.0	48.9		ug/L		98	72 - 132	3	20
Toluene	50.0	50.7		ug/L		101	80 - 121	2	20
Chlorobenzene	50.0	48.2		ug/L		96	82 - 118	2	20
Tetrahydrofuran	100	115		ug/L		115	57 - 133	4	20
Hexane	50.0	49.0		ug/L		98	48 - 143	0	20
trans-1,4-Dichloro-2-butene	50.0	50.1		ug/L		100	43 - 140	2	20
Cyclohexane	50.0	48.4		ug/L		97	71 - 130	2	20
1,2,4-Trichlorobenzene	50.0	48.3		ug/L		97	69 - 130	0	20
Chlorodibromomethane	50.0	54.3		ug/L		109	74 - 126	0	20
Tetrachloroethene	50.0	48.8		ug/L		98	74 - 129	1	20
sec-Butylbenzene	50.0	49.5		ug/L		99	77 - 126	0	20
1,3-Dichloropropane	50.0	51.3		ug/L		103	80 - 119	1	20
cis-1,2-Dichloroethene	50.0	50.7		ug/L		101	78 - 123	1	20
trans-1,2-Dichloroethene	50.0	49.7		ug/L		99	75 - 124	2	20
Methyl tert-butyl ether	50.0	56.1		ug/L		112	71 - 124	2	20
m-Xylene & p-Xylene	50.0	49.5		ug/L		99	80 - 121	2	20
1,3-Dichlorobenzene	50.0	49.6		ug/L		99	80 - 119	1	20
Carbon tetrachloride	50.0	43.3		ug/L		87	72 - 136	1	20
1,1-Dichloropropene	50.0	49.4		ug/L		99	79 - 125	2	20
2-Hexanone	200	223		ug/L		111	57 - 139	1	20
2,2-Dichloropropane	50.0	44.9		ug/L		90	60 - 139	1	20
Ethyl ether	50.0	52.3		ug/L		105	68 - 129	1	20
1,1,1,2-Tetrachloroethane	50.0	45.5		ug/L		91	78 - 124	1	20
Acetone	200	194		ug/L		97	39 - 160	2	20
Chloroform	50.0	50.6		ug/L		101	79 - 124	2	20
Benzene	50.0	51.0		ug/L		102	79 - 120	1	20
1,1,1-Trichloroethane	50.0	50.8		ug/L		102	74 - 131	1	20
Bromomethane	50.0	48.3		ug/L		97	53 - 141	3	20
Chloromethane	50.0	50.5		ug/L		101	50 - 139	0	20
Iodomethane	50.0	45.6		ug/L		91	69 - 131	2	20
Dibromomethane	50.0	52.2		ug/L		104	79 - 123	1	20
Chlorobromomethane	50.0	50.4		ug/L		101	78 - 123	1	20
Chloroethane	50.0	55.3		ug/L		111	60 - 138	0	20
Vinyl chloride	50.0	49.1		ug/L		98	58 - 137	1	20
Methylene Chloride	50.0	51.9		ug/L		104	74 - 124	2	20
Carbon disulfide	50.0	48.5		ug/L		97	64 - 133	1	20
Bromoform	50.0	44.7		ug/L		89	66 - 130	2	20
Dichlorobromomethane	50.0	53.4		ug/L		107	79 - 125	2	20
1,1-Dichloroethane	50.0	51.3		ug/L		103	77 - 125	2	20
1,1-Dichloroethene	50.0	48.3		ug/L		97	71 - 131	0	20
Trichlorofluoromethane	50.0	46.5		ug/L		93	65 - 141	2	20
Dichlorodifluoromethane	50.0	44.6		ug/L		89	32 - 152	0	20
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	45.9		ug/L		92	70 - 136	0	20
1,2-Dichloropropane	50.0	51.9		ug/L		104	78 - 122	1	20
2-Butanone (MEK)	200	216		ug/L		108	56 - 143	1	20

# QC Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

## Method: 8260D - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 280-629597/6**  
**Matrix: Water**  
**Analysis Batch: 629597**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,2-Trichloroethane	50.0	53.6		ug/L		107	80 - 119	1	20
Trichloroethene	50.0	48.8		ug/L		98	79 - 123	1	20
Methyl acetate	100	112		ug/L		112	56 - 136	1	20
1,1,2,2-Tetrachloroethane	50.0	52.9		ug/L		106	71 - 121	3	20
1,2,3-Trichlorobenzene	50.0	45.9		ug/L		92	69 - 129	5	20
Hexachlorobutadiene	50.0	41.7		ug/L		83	66 - 134	1	20
Naphthalene	50.0	50.5		ug/L		101	61 - 128	3	20
o-Xylene	50.0	50.6		ug/L		101	78 - 122	0	20
2-Chlorotoluene	50.0	49.8		ug/L		100	79 - 122	0	20
1,2-Dichlorobenzene	50.0	49.5		ug/L		99	80 - 119	0	20
1,2,4-Trimethylbenzene	50.0	52.0		ug/L		104	76 - 124	1	20
1,2-Dibromo-3-Chloropropane	50.0	47.2		ug/L		94	62 - 128	2	20
1,2,3-Trichloropropane	50.0	51.5		ug/L		103	73 - 122	1	20
Ethyl methacrylate	50.0	52.9		ug/L		106	72 - 126	0	20
tert-Butylbenzene	50.0	50.3		ug/L		101	78 - 124	1	20
Isopropylbenzene	50.0	49.8		ug/L		100	72 - 131	1	20
4-Isopropyltoluene	50.0	51.1		ug/L		102	77 - 127	2	20
1,2-Dichloroethene, Total	100	100		ug/L		100	79 - 121	1	20
1,3-Dichloropropene, Total	100	97.9		ug/L		98	77 - 123	2	20
Trihalomethanes, Total	200	203		ug/L		102	66 - 130	0	20
Total BTEX	250	251		ug/L		100	78 - 122	0	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		81 - 118
Dibromofluoromethane (Surr)	101		80 - 119
Toluene-d8 (Surr)	99		89 - 112
4-Bromofluorobenzene (Surr)	103		85 - 114

## Method: 8270E - Semivolatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 280-628746/1-A**  
**Matrix: Water**  
**Analysis Batch: 628919**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 628746**

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1'-Biphenyl	8.0	U	10	8.0	1.2	ug/L		10/08/23 10:30	1
2,4-Dichlorophenol	8.0	U	10	8.0	0.64	ug/L		10/08/23 10:30	1
2,4-Dimethylphenol	8.0	U	10	8.0	1.4	ug/L		10/08/23 10:30	1
2,4-Dinitrophenol	20	U	30	20	13	ug/L		10/08/23 10:30	1
2,4-Dinitrotoluene	8.0	U	10	8.0	1.4	ug/L		10/08/23 10:30	1
2,4,6-Trichlorophenol	8.0	U	10	8.0	0.71	ug/L		10/08/23 10:30	1
2,4,5-Trichlorophenol	8.0	U	10	8.0	0.90	ug/L		10/08/23 10:30	1
2,2'-oxybis[1-chloropropane]	8.0	U	10	8.0	1.3	ug/L		10/08/23 10:30	1
Di-n-butyl phthalate	0.892	J	4.0	3.2	0.45	ug/L		10/08/23 10:30	1
Di-n-octyl phthalate	8.0	U	10	8.0	3.6	ug/L		10/08/23 10:30	1
Benzo[a]anthracene	3.2	U	4.0	3.2	0.39	ug/L		10/08/23 10:30	1
Benzo[a]pyrene	3.2	U M	4.0	3.2	0.50	ug/L		10/08/23 10:30	1
Benzo[b]fluoranthene	3.2	U	4.0	3.2	1.2	ug/L		10/08/23 10:30	1
Benzo[g,h,i]perylene	3.2	U	4.0	3.2	0.51	ug/L		10/08/23 10:30	1

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# QC Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

## Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 280-628746/1-A**  
**Matrix: Water**  
**Analysis Batch: 628919**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 628746**

Analyte	MB	MB	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
	Result	Qualifier							
Benzo[k]fluoranthene	3.2	U	4.0	3.2	0.40	ug/L		10/08/23 10:30	1
Acenaphthene	3.2	U	4.0	3.2	0.96	ug/L		10/08/23 10:30	1
Acenaphthylene	3.2	U	4.0	3.2	0.75	ug/L		10/08/23 10:30	1
Acetophenone	8.0	U	10	8.0	0.68	ug/L		10/08/23 10:30	1
Anthracene	3.2	U	4.0	3.2	0.58	ug/L		10/08/23 10:30	1
Atrazine	3.2	U	10	3.2	0.65	ug/L		10/08/23 10:30	1
Benzaldehyde	3.2	U	5.0	3.2	1.2	ug/L		10/08/23 10:30	1
Butyl benzyl phthalate	3.2	U	4.0	3.2	1.5	ug/L		10/08/23 10:30	1
Caprolactam	10	U M	15	10	5.5	ug/L		10/08/23 10:30	1
Chrysene	3.2	U	4.0	3.2	2.0	ug/L		10/08/23 10:30	1
Dibenz(a,h)anthracene	8.0	U	10	8.0	0.58	ug/L		10/08/23 10:30	1
Dibenzofuran	3.2	U	4.0	3.2	0.95	ug/L		10/08/23 10:30	1
Diethyl phthalate	3.2	U	4.0	3.2	0.59	ug/L		10/08/23 10:30	1
Hexachlorobenzene	8.0	U	10	8.0	0.86	ug/L		10/08/23 10:30	1
Hexachlorocyclopentadiene	48	U	50	48	16	ug/L		10/08/23 10:30	1
Hexachlorobutadiene	8.0	U	10	8.0	2.9	ug/L		10/08/23 10:30	1
Hexachloroethane	8.0	U	10	8.0	4.5	ug/L		10/08/23 10:30	1
Fluoranthene	3.2	U	4.0	3.2	0.50	ug/L		10/08/23 10:30	1
Fluorene	3.2	U	4.0	3.2	0.78	ug/L		10/08/23 10:30	1
Indeno[1,2,3-cd]pyrene	8.0	U	10	8.0	1.3	ug/L		10/08/23 10:30	1
Isophorone	8.0	U	10	8.0	2.0	ug/L		10/08/23 10:30	1
N-Nitrosodi-n-propylamine	8.0	U	10	8.0	1.9	ug/L		10/08/23 10:30	1
N-Nitrosodiphenylamine	8.0	U M	10	8.0	0.77	ug/L		10/08/23 10:30	1
Naphthalene	3.2	U	4.0	3.2	1.5	ug/L		10/08/23 10:30	1
Nitrobenzene	8.0	U	10	8.0	1.3	ug/L		10/08/23 10:30	1
Pentachlorophenol	48	U	50	48	20	ug/L		10/08/23 10:30	1
Phenanthrene	3.2	U	4.0	3.2	1.6	ug/L		10/08/23 10:30	1
Phenol	8.0	U	10	8.0	0.92	ug/L		10/08/23 10:30	1
Pyrene	8.0	U	10	8.0	0.53	ug/L		10/08/23 10:30	1
2-Chloronaphthalene	3.2	U	4.0	3.2	1.3	ug/L		10/08/23 10:30	1
2-Chlorophenol	8.0	U	10	8.0	0.68	ug/L		10/08/23 10:30	1
2-Methylnaphthalene	3.2	U	4.0	3.2	1.2	ug/L		10/08/23 10:30	1
2-Methylphenol	8.0	U	10	8.0	0.77	ug/L		10/08/23 10:30	1
2-Nitroaniline	3.2	U	10	3.2	2.6	ug/L		10/08/23 10:30	1
2-Nitrophenol	8.0	U	10	8.0	3.5	ug/L		10/08/23 10:30	1
3,3'-Dichlorobenzidine	30	U	50	30	3.4	ug/L		10/08/23 10:30	1
3-Nitroaniline	8.0	U	10	8.0	3.3	ug/L		10/08/23 10:30	1
4,6-Dinitro-2-methylphenol	30	U	50	30	4.0	ug/L		10/08/23 10:30	1
4-Bromophenyl phenyl ether	8.0	U	10	8.0	1.0	ug/L		10/08/23 10:30	1
4-Nitroaniline	8.0	U	10	8.0	2.6	ug/L		10/08/23 10:30	1
4-Nitrophenol	13	U M	25	13	9.1	ug/L		10/08/23 10:30	1
Bis(2-chloroethoxy)methane	8.0	U	10	8.0	0.81	ug/L		10/08/23 10:30	1
Bis(2-chloroethyl)ether	8.0	U	10	8.0	2.0	ug/L		10/08/23 10:30	1
Bis(2-ethylhexyl) phthalate	4.43	J	10	8.0	3.3	ug/L		10/08/23 10:30	1
2,6-Dinitrotoluene	8.0	U	10	8.0	1.4	ug/L		10/08/23 10:30	1
4-Chloro-3-methylphenol	8.0	U	10	8.0	0.69	ug/L		10/08/23 10:30	1
4-Chloroaniline	13	U	20	13	6.3	ug/L		10/08/23 10:30	1
4-Chlorophenyl phenyl ether	8.0	U	10	8.0	1.2	ug/L		10/08/23 10:30	1

# QC Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

## Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 280-628746/1-A**  
**Matrix: Water**  
**Analysis Batch: 628919**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 628746**

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorophenol (Surr)	66		19 - 119	10/06/23 13:02	10/08/23 10:30	1
Phenol-d5 (Surr)	52		10 - 115	10/06/23 13:02	10/08/23 10:30	1
Nitrobenzene-d5 (Surr)	60		44 - 120	10/06/23 13:02	10/08/23 10:30	1
2-Fluorobiphenyl	60		44 - 119	10/06/23 13:02	10/08/23 10:30	1
2,4,6-Tribromophenol (Surr)	66		43 - 140	10/06/23 13:02	10/08/23 10:30	1
Terphenyl-d14 (Surr)	96		50 - 134	10/06/23 13:02	10/08/23 10:30	1

**Lab Sample ID: LCS 280-628746/2-A**  
**Matrix: Water**  
**Analysis Batch: 628919**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 628746**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	Limits
1,1'-Biphenyl	80.0	66.7		ug/L		83		49 - 115
2,4-Dichlorophenol	80.0	69.7		ug/L		87		47 - 121
2,4-Dimethylphenol	80.0	73.1		ug/L		91		31 - 124
2,4-Dinitrophenol	160	120		ug/L		75		23 - 143
2,4-Dinitrotoluene	80.0	77.7		ug/L		97		57 - 128
2,4,6-Trichlorophenol	80.0	73.7		ug/L		92		50 - 125
2,4,5-Trichlorophenol	80.0	73.2		ug/L		91		53 - 123
2,2'-oxybis[1-chloropropane]	80.0	58.2		ug/L		73		32 - 120
Di-n-butyl phthalate	80.0	79.8		ug/L		100		59 - 127
Di-n-octyl phthalate	80.0	62.3		ug/L		78		51 - 140
Benzo[a]anthracene	80.0	77.1		ug/L		96		58 - 125
Benzo[a]pyrene	80.0	63.1		ug/L		79		54 - 128
Benzo[b]fluoranthene	80.0	76.1		ug/L		95		53 - 131
Benzo[g,h,i]perylene	80.0	74.5		ug/L		93		50 - 134
Benzo[k]fluoranthene	80.0	79.3		ug/L		99		57 - 129
Acenaphthene	80.0	69.6		ug/L		87		47 - 122
Acenaphthylene	80.0	67.6		ug/L		85		41 - 130
Acetophenone	80.0	67.4		ug/L		84		46 - 118
Anthracene	80.0	76.9		ug/L		96		57 - 123
Atrazine	80.0	74.3		ug/L		93		44 - 142
Benzaldehyde	80.0	65.1		ug/L		81		12 - 120
Butyl benzyl phthalate	80.0	73.0		ug/L		91		53 - 134
Caprolactam	80.0	57.0		ug/L		71		10 - 120
Chrysene	80.0	74.2		ug/L		93		59 - 123
Dibenz(a,h)anthracene	80.0	65.4		ug/L		82		51 - 134
Dibenzofuran	80.0	71.5		ug/L		89		53 - 118
Diethyl phthalate	80.0	75.8		ug/L		95		56 - 125
Hexachlorobenzene	80.0	72.4		ug/L		90		53 - 125
Hexachlorocyclopentadiene	160	112		ug/L		70		10 - 120
Hexachlorobutadiene	80.0	39.0		ug/L		49		22 - 124
Hexachloroethane	80.0	33.5		ug/L		42		21 - 115
Fluoranthene	80.0	77.2		ug/L		96		57 - 128
Fluorene	80.0	73.3		ug/L		92		52 - 124
Indeno[1,2,3-cd]pyrene	80.0	59.5		ug/L		74		52 - 134
Isophorone	80.0	69.6		ug/L		87		42 - 124
N-Nitrosodi-n-propylamine	80.0	70.3		ug/L		88		49 - 119

# QC Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

## Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 280-628746/2-A**

**Matrix: Water**

**Analysis Batch: 628919**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 628746**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
N-Nitrosodiphenylamine	80.0	75.5		ug/L		94	51 - 123	
Naphthalene	80.0	55.4		ug/L		69	40 - 121	
Nitrobenzene	80.0	63.6		ug/L		80	45 - 121	
Pentachlorophenol	160	122		ug/L		76	35 - 138	
Phenanthrene	80.0	75.3		ug/L		94	59 - 120	
Phenol	80.0	43.4		ug/L		54	28 - 120	
Pyrene	80.0	73.9		ug/L		92	57 - 126	
2-Chloronaphthalene	80.0	67.6		ug/L		85	40 - 116	
2-Chlorophenol	80.0	57.6		ug/L		72	38 - 117	
2-Methylnaphthalene	80.0	59.4		ug/L		74	40 - 121	
2-Methylphenol	80.0	64.8		ug/L		81	30 - 117	
2-Nitroaniline	80.0	75.0		ug/L		94	55 - 127	
2-Nitrophenol	80.0	65.3		ug/L		82	47 - 123	
3,3'-Dichlorobenzidine	160	150		ug/L		94	27 - 129	
3-Nitroaniline	80.0	76.3		ug/L		95	41 - 128	
4,6-Dinitro-2-methylphenol	160	148		ug/L		93	44 - 137	
4-Bromophenyl phenyl ether	80.0	74.9		ug/L		94	55 - 124	
4-Nitroaniline	80.0	78.7		ug/L		98	49 - 122	
4-Nitrophenol	160	98.1		ug/L		61	31 - 120	
Bis(2-chloroethoxy)methane	80.0	69.3		ug/L		87	48 - 120	
Bis(2-chloroethyl)ether	80.0	61.5		ug/L		77	43 - 118	
Bis(2-ethylhexyl) phthalate	80.0	71.8		ug/L		90	55 - 135	
2,6-Dinitrotoluene	80.0	77.0		ug/L		96	57 - 124	
4-Chloro-3-methylphenol	80.0	75.2		ug/L		94	52 - 119	
4-Chloroaniline	80.0	65.6		ug/L		82	33 - 117	
4-Chlorophenyl phenyl ether	80.0	71.1		ug/L		89	53 - 121	

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2-Fluorophenol (Surr)	62		19 - 119
Phenol-d5 (Surr)	55		10 - 115
Nitrobenzene-d5 (Surr)	79		44 - 120
2-Fluorobiphenyl	84		44 - 119
2,4,6-Tribromophenol (Surr)	94		43 - 140
Terphenyl-d14 (Surr)	93		50 - 134

**Lab Sample ID: LCSD 280-628746/3-A**

**Matrix: Water**

**Analysis Batch: 628919**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 628746**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	
							Limits	RPD	Limit	
1,1'-Biphenyl	80.0	66.3		ug/L		83	49 - 115	1	20	
2,4-Dichlorophenol	80.0	71.6		ug/L		90	47 - 121	3	20	
2,4-Dimethylphenol	80.0	78.0		ug/L		97	31 - 124	6	20	
2,4-Dinitrophenol	160	131		ug/L		82	23 - 143	9	20	
2,4-Dinitrotoluene	80.0	82.4		ug/L		103	57 - 128	6	20	
2,4,6-Trichlorophenol	80.0	76.8		ug/L		96	50 - 125	4	20	
2,4,5-Trichlorophenol	80.0	76.9		ug/L		96	53 - 123	5	20	
2,2'-oxybis[1-chloropropane]	80.0	59.3		ug/L		74	32 - 120	2	20	

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# QC Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

## Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 280-628746/3-A**  
**Matrix: Water**  
**Analysis Batch: 628919**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 628746**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD
							Limits	RPD	
Di-n-butyl phthalate	80.0	87.2		ug/L		109	59 - 127	9	20
Di-n-octyl phthalate	80.0	72.7		ug/L		91	51 - 140	15	20
Benzo[a]anthracene	80.0	83.8		ug/L		105	58 - 125	8	20
Benzo[a]pyrene	80.0	70.3		ug/L		88	54 - 128	11	20
Benzo[b]fluoranthene	80.0	85.4		ug/L		107	53 - 131	12	20
Benzo[g,h,i]perylene	80.0	75.9		ug/L		95	50 - 134	2	20
Benzo[k]fluoranthene	80.0	82.8		ug/L		103	57 - 129	4	20
Acenaphthene	80.0	71.9		ug/L		90	47 - 122	3	20
Acenaphthylene	80.0	68.5		ug/L		86	41 - 130	1	20
Acetophenone	80.0	69.8		ug/L		87	46 - 118	4	20
Anthracene	80.0	82.2		ug/L		103	57 - 123	7	20
Atrazine	80.0	79.8		ug/L		100	44 - 142	7	20
Benzaldehyde	80.0	63.7		ug/L		80	12 - 120	2	50
Butyl benzyl phthalate	80.0	82.1		ug/L		103	53 - 134	12	20
Caprolactam	80.0	58.9		ug/L		74	10 - 120	3	20
Chrysene	80.0	78.1		ug/L		98	59 - 123	5	20
Dibenz(a,h)anthracene	80.0	71.7		ug/L		90	51 - 134	9	20
Dibenzofuran	80.0	73.3		ug/L		92	53 - 118	3	20
Diethyl phthalate	80.0	79.7		ug/L		100	56 - 125	5	20
Hexachlorobenzene	80.0	77.8		ug/L		97	53 - 125	7	20
Hexachlorocyclopentadiene	160	105		ug/L		66	10 - 120	6	20
Hexachlorobutadiene	80.0	32.2		ug/L		40	22 - 124	19	20
Hexachloroethane	80.0	27.4		ug/L		34	21 - 115	20	20
Fluoranthene	80.0	82.5		ug/L		103	57 - 128	7	20
Fluorene	80.0	76.2		ug/L		95	52 - 124	4	20
Indeno[1,2,3-cd]pyrene	80.0	63.3		ug/L		79	52 - 134	6	20
Isophorone	80.0	73.5		ug/L		92	42 - 124	5	20
N-Nitrosodi-n-propylamine	80.0	72.8		ug/L		91	49 - 119	4	20
N-Nitrosodiphenylamine	80.0	81.3		ug/L		102	51 - 123	7	20
Naphthalene	80.0	51.7		ug/L		65	40 - 121	7	20
Nitrobenzene	80.0	64.5		ug/L		81	45 - 121	1	20
Pentachlorophenol	160	140		ug/L		88	35 - 138	14	20
Phenanthrene	80.0	79.8		ug/L		100	59 - 120	6	20
Phenol	80.0	42.7		ug/L		53	28 - 120	1	20
Pyrene	80.0	79.9		ug/L		100	57 - 126	8	20
2-Chloronaphthalene	80.0	67.1		ug/L		84	40 - 116	1	20
2-Chlorophenol	80.0	59.7		ug/L		75	38 - 117	3	20
2-Methylnaphthalene	80.0	58.0		ug/L		72	40 - 121	2	20
2-Methylphenol	80.0	65.1		ug/L		81	30 - 117	0	20
2-Nitroaniline	80.0	80.0		ug/L		100	55 - 127	6	20
2-Nitrophenol	80.0	68.1		ug/L		85	47 - 123	4	20
3,3'-Dichlorobenzidine	160	162		ug/L		101	27 - 129	8	20
3-Nitroaniline	80.0	81.8		ug/L		102	41 - 128	7	20
4,6-Dinitro-2-methylphenol	160	163		ug/L		102	44 - 137	9	20
4-Bromophenyl phenyl ether	80.0	78.0		ug/L		98	55 - 124	4	20
4-Nitroaniline	80.0	81.0		ug/L		101	49 - 122	3	20
4-Nitrophenol	160	96.0		ug/L		60	31 - 120	2	20
Bis(2-chloroethoxy)methane	80.0	72.9		ug/L		91	48 - 120	5	20
Bis(2-chloroethyl)ether	80.0	61.7		ug/L		77	43 - 118	0	20

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# QC Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

## Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 280-628746/3-A**  
**Matrix: Water**  
**Analysis Batch: 628919**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 628746**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bis(2-ethylhexyl) phthalate	80.0	79.7		ug/L		100	55 - 135	10	20
2,6-Dinitrotoluene	80.0	81.7		ug/L		102	57 - 124	6	20
4-Chloro-3-methylphenol	80.0	79.8		ug/L		100	52 - 119	6	20
4-Chloroaniline	80.0	72.9		ug/L		91	33 - 117	10	20
4-Chlorophenyl phenyl ether	80.0	73.6		ug/L		92	53 - 121	4	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorophenol (Surr)	60		19 - 119
Phenol-d5 (Surr)	50		10 - 115
Nitrobenzene-d5 (Surr)	77		44 - 120
2-Fluorobiphenyl	82		44 - 119
2,4,6-Tribromophenol (Surr)	95		43 - 140
Terphenyl-d14 (Surr)	99		50 - 134

## Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

**Lab Sample ID: MB 280-628442/1-A**  
**Matrix: Water**  
**Analysis Batch: 628449**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 628442**

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide	0.014	U M	0.020	0.014	0.0037	ug/L		10/04/23 16:27	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	91		70 - 130	10/04/23 12:28	10/04/23 16:27	1

**Lab Sample ID: LCS 280-628442/2-A**  
**Matrix: Water**  
**Analysis Batch: 628449**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 628442**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylene Dibromide	0.250	0.256		ug/L		102	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dibromopropane	101		70 - 130

**Lab Sample ID: LCSD 280-628442/3-A**  
**Matrix: Water**  
**Analysis Batch: 628449**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 628442**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ethylene Dibromide	0.250	0.211		ug/L		84	70 - 130	19	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dibromopropane	100		70 - 130



# QC Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

## Method: 6010D - Metals (ICP)

**Lab Sample ID: MB 280-630184/1-A**  
**Matrix: Water**  
**Analysis Batch: 630480**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 630184**

Analyte	MB MB		LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
	Result	Qualifier							
Calcium	64	U	200	64	24	ug/L		10/20/23 05:05	1
Magnesium	15	U	200	15	4.2	ug/L		10/20/23 05:05	1
Potassium	940	U	3000	940	240	ug/L		10/20/23 05:05	1
Sodium	178	J	1000	320	97	ug/L		10/20/23 05:05	1

**Lab Sample ID: LCS 280-630184/2-A**  
**Matrix: Water**  
**Analysis Batch: 630480**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 630184**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	Limits
Magnesium	50000	48900		ug/L		98	85 - 113	
Potassium	50000	51300		ug/L		103	86 - 114	
Sodium	50000	49100		ug/L		98	87 - 115	

**Lab Sample ID: MB 280-630619/1-A**  
**Matrix: Water**  
**Analysis Batch: 630762**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 630619**

Analyte	MB MB		LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
	Result	Qualifier							
Calcium	24.2	J	200	64	24	ug/L		10/22/23 20:59	1
Magnesium	5.04	J	200	15	4.2	ug/L		10/22/23 20:59	1
Potassium	940	U	3000	940	240	ug/L		10/22/23 20:59	1
Sodium	320	U	1000	320	97	ug/L		10/22/23 20:59	1

**Lab Sample ID: LCS 280-630619/2-A**  
**Matrix: Water**  
**Analysis Batch: 630762**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 630619**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	Limits
Magnesium	50000	52900		ug/L		106	85 - 113	
Potassium	50000	51400		ug/L		103	86 - 114	
Sodium	50000	51900		ug/L		104	87 - 115	

**Lab Sample ID: MB 280-629983/1-B**  
**Matrix: Water**  
**Analysis Batch: 630471**

**Client Sample ID: Method Blank**  
**Prep Type: Dissolved**  
**Prep Batch: 630208**

Analyte	MB MB		LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
	Result	Qualifier							
Iron	16.0	J	100	34	9.1	ug/L		10/19/23 18:03	1
Manganese	1.8	U	10	1.8	0.45	ug/L		10/19/23 18:03	1

**Lab Sample ID: LCS 280-629983/2-C**  
**Matrix: Water**  
**Analysis Batch: 630471**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Dissolved**  
**Prep Batch: 630208**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	Limits
Manganese	1000	1020		ug/L		102	90 - 114	

# QC Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

## Method: 6020B - Metals (ICP/MS)

**Lab Sample ID: MB 280-630184/1-A**  
**Matrix: Water**  
**Analysis Batch: 630521**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 630184**

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	2.0	U	5.0	2.0	0.50	ug/L		10/19/23 18:58	1
Lead	0.70	U	1.0	0.70	0.23	ug/L		10/19/23 18:58	1

**Lab Sample ID: LCS 280-630184/27-A**  
**Matrix: Water**  
**Analysis Batch: 630521**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 630184**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	40.0	34.8		ug/L		87	84 - 116
Lead	40.0	37.2		ug/L		93	88 - 115

**Lab Sample ID: MB 280-630619/1-A**  
**Matrix: Water**  
**Analysis Batch: 630862**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 630619**

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	2.0	U	5.0	2.0	0.50	ug/L		10/23/23 22:59	1
Lead	0.70	U	1.0	0.70	0.23	ug/L		10/23/23 22:59	1

**Lab Sample ID: LCS 280-630619/24-B**  
**Matrix: Water**  
**Analysis Batch: 630862**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 630619**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	40.0	41.2		ug/L		103	84 - 116
Lead	40.0	39.2		ug/L		98	88 - 115

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 280-630049/6**  
**Matrix: Water**  
**Analysis Batch: 630049**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	0.40	U	0.50	0.40	0.23	mg/L		10/17/23 17:01	1
Chloride	2.5	U	3.0	2.5	1.0	mg/L		10/17/23 17:01	1
Sulfate	2.5	U	5.0	2.5	1.0	mg/L		10/17/23 17:01	1

**Lab Sample ID: LCS 280-630049/4**  
**Matrix: Water**  
**Analysis Batch: 630049**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	5.00	5.23	M	mg/L		105	90 - 110
Chloride	100	98.7		mg/L		99	90 - 110
Sulfate	100	99.4		mg/L		99	90 - 110

# QC Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

## Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 280-630049/5  
 Matrix: Water  
 Analysis Batch: 630049

Client Sample ID: Lab Control Sample Dup  
 Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromide	5.00	5.16	M	mg/L		103	90 - 110	1	10
Chloride	100	98.5		mg/L		99	90 - 110	0	10
Sulfate	100	99.1		mg/L		99	90 - 110	0	10

Lab Sample ID: MRL 280-630049/3  
 Matrix: Water  
 Analysis Batch: 630049

Client Sample ID: Lab Control Sample  
 Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	0.500	0.487	J	mg/L		97	50 - 150
Chloride	5.00	4.99		mg/L		100	50 - 150
Sulfate	5.00	4.93	J	mg/L		99	50 - 150

## Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 280-628849/61  
 Matrix: Water  
 Analysis Batch: 628849

Client Sample ID: Method Blank  
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	0.080	U	0.10	0.080	0.044	mg/L		10/06/23 11:39	1

Lab Sample ID: LCS 280-628849/60  
 Matrix: Water  
 Analysis Batch: 628849

Client Sample ID: Lab Control Sample  
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	5.00	4.94		mg/L		99	90 - 110

## Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-628623/5  
 Matrix: Water  
 Analysis Batch: 628623

Client Sample ID: Method Blank  
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	3.44	J	10	6.4	3.1	mg/L		10/04/23 22:23	1

Lab Sample ID: LCS 280-628623/4  
 Matrix: Water  
 Analysis Batch: 628623

Client Sample ID: Lab Control Sample  
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	200	207		mg/L		103	89 - 110

# QC Sample Results

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

## Method: SM 2320B - Alkalinity (Continued)

**Lab Sample ID: MB 280-629032/5**  
**Matrix: Water**  
**Analysis Batch: 629032**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	4.00	J	10	6.4	3.1	mg/L		10/06/23 19:00	1

**Lab Sample ID: LCS 280-629032/4**  
**Matrix: Water**  
**Analysis Batch: 629032**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	200	208		mg/L		104	89 - 110

# QC Association Summary

Client: John Shomaker and Associates Inc  
Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

## GC/MS VOA

### Analysis Batch: 629278

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-182246-5	Trip Blank	Total/NA	Water	8260D	
MB 280-629278/9	Method Blank	Total/NA	Water	8260D	
LCS 280-629278/4	Lab Control Sample	Total/NA	Water	8260D	
LCSD 280-629278/6	Lab Control Sample Dup	Total/NA	Water	8260D	

### Analysis Batch: 629597

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-182246-1	WUABFFMW-01 PDB	Total/NA	Water	8260D	
280-182246-2	Field Blank	Total/NA	Water	8260D	
280-182246-3	WUABFFMW-01-BP	Total/NA	Water	8260D	
280-182246-4	Equip Rinsate	Total/NA	Water	8260D	
MB 280-629597/9	Method Blank	Total/NA	Water	8260D	
LCS 280-629597/4	Lab Control Sample	Total/NA	Water	8260D	
LCSD 280-629597/6	Lab Control Sample Dup	Total/NA	Water	8260D	

## GC/MS Semi VOA

### Prep Batch: 628746

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-182246-1	WUABFFMW-01 PDB	Total/NA	Water	3510C	
280-182246-2	Field Blank	Total/NA	Water	3510C	
280-182246-3	WUABFFMW-01-BP	Total/NA	Water	3510C	
280-182246-4	Equip Rinsate	Total/NA	Water	3510C	
MB 280-628746/1-A	Method Blank	Total/NA	Water	3510C	
LCS 280-628746/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 280-628746/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

### Analysis Batch: 628919

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-182246-1	WUABFFMW-01 PDB	Total/NA	Water	8270E	628746
280-182246-2	Field Blank	Total/NA	Water	8270E	628746
280-182246-3	WUABFFMW-01-BP	Total/NA	Water	8270E	628746
280-182246-4	Equip Rinsate	Total/NA	Water	8270E	628746
MB 280-628746/1-A	Method Blank	Total/NA	Water	8270E	628746
LCS 280-628746/2-A	Lab Control Sample	Total/NA	Water	8270E	628746
LCSD 280-628746/3-A	Lab Control Sample Dup	Total/NA	Water	8270E	628746

## GC Semi VOA

### Prep Batch: 628442

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-182246-1	WUABFFMW-01 PDB	Total/NA	Water	8011	
280-182246-2	Field Blank	Total/NA	Water	8011	
280-182246-3	WUABFFMW-01-BP	Total/NA	Water	8011	
280-182246-4	Equip Rinsate	Total/NA	Water	8011	
MB 280-628442/1-A	Method Blank	Total/NA	Water	8011	
LCS 280-628442/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 280-628442/3-A	Lab Control Sample Dup	Total/NA	Water	8011	

### Analysis Batch: 628449

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-182246-1	WUABFFMW-01 PDB	Total/NA	Water	8011	628442

Eurofins Denver

# QC Association Summary

Client: John Shomaker and Associates Inc  
Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

## GC Semi VOA (Continued)

### Analysis Batch: 628449 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-182246-2	Field Blank	Total/NA	Water	8011	628442
280-182246-3	WUABFFMW-01-BP	Total/NA	Water	8011	628442
280-182246-4	Equip Rinsate	Total/NA	Water	8011	628442
MB 280-628442/1-A	Method Blank	Total/NA	Water	8011	628442
LCS 280-628442/2-A	Lab Control Sample	Total/NA	Water	8011	628442
LCS2D 280-628442/3-A	Lab Control Sample Dup	Total/NA	Water	8011	628442

## Metals

### Filtration Batch: 629983

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-182246-1	WUABFFMW-01 PDB	Dissolved	Water	Filtration	
280-182246-2	Field Blank	Dissolved	Water	Filtration	
280-182246-3	WUABFFMW-01-BP	Dissolved	Water	Filtration	
280-182246-4	Equip Rinsate	Dissolved	Water	Filtration	
MB 280-629983/1-B	Method Blank	Dissolved	Water	Filtration	
LCS 280-629983/2-C	Lab Control Sample	Dissolved	Water	Filtration	

### Prep Batch: 630184

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-182246-1	WUABFFMW-01 PDB	Total/NA	Water	3020A	
280-182246-2	Field Blank	Total/NA	Water	3020A	
280-182246-3	WUABFFMW-01-BP	Total/NA	Water	3020A	
MB 280-630184/1-A	Method Blank	Total/NA	Water	3005A	
LCS 280-630184/27-A	Lab Control Sample	Total/NA	Water	3005A	
LCS 280-630184/2-A	Lab Control Sample	Total/NA	Water	3005A	

### Prep Batch: 630208

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-182246-1	WUABFFMW-01 PDB	Dissolved	Water	3005A	629983
280-182246-2	Field Blank	Dissolved	Water	3005A	629983
280-182246-3	WUABFFMW-01-BP	Dissolved	Water	3005A	629983
280-182246-4	Equip Rinsate	Dissolved	Water	3005A	629983
MB 280-629983/1-B	Method Blank	Dissolved	Water	3005A	629983
LCS 280-629983/2-C	Lab Control Sample	Dissolved	Water	3005A	629983

### Analysis Batch: 630471

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-182246-1	WUABFFMW-01 PDB	Dissolved	Water	6010D	630208
280-182246-2	Field Blank	Dissolved	Water	6010D	630208
280-182246-3	WUABFFMW-01-BP	Dissolved	Water	6010D	630208
280-182246-4	Equip Rinsate	Dissolved	Water	6010D	630208
MB 280-629983/1-B	Method Blank	Dissolved	Water	6010D	630208
LCS 280-629983/2-C	Lab Control Sample	Dissolved	Water	6010D	630208

### Analysis Batch: 630480

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-182246-1	WUABFFMW-01 PDB	Total/NA	Water	6010D	630184
280-182246-2	Field Blank	Total/NA	Water	6010D	630184
280-182246-3	WUABFFMW-01-BP	Total/NA	Water	6010D	630184
MB 280-630184/1-A	Method Blank	Total/NA	Water	6010D	630184

# QC Association Summary

Client: John Shomaker and Associates Inc  
Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

## Metals (Continued)

### Analysis Batch: 630480 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 280-630184/2-A	Lab Control Sample	Total/NA	Water	6010D	630184

### Analysis Batch: 630521

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-182246-1	WUABFFMW-01 PDB	Total/NA	Water	6020B	630184
280-182246-2	Field Blank	Total/NA	Water	6020B	630184
280-182246-3	WUABFFMW-01-BP	Total/NA	Water	6020B	630184
MB 280-630184/1-A	Method Blank	Total/NA	Water	6020B	630184
LCS 280-630184/27-A	Lab Control Sample	Total/NA	Water	6020B	630184

### Analysis Batch: 630600

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-182246-1	WUABFFMW-01 PDB	Total/NA	Water	6020B	630184

### Prep Batch: 630619

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-182246-4	Equip Rinsate	Total/NA	Water	3020A	
MB 280-630619/1-A	Method Blank	Total/NA	Water	3005A	
LCS 280-630619/24-B	Lab Control Sample	Total/NA	Water	3005A	
LCS 280-630619/2-A	Lab Control Sample	Total/NA	Water	3005A	

### Analysis Batch: 630762

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-182246-4	Equip Rinsate	Total/NA	Water	6010D	630619
MB 280-630619/1-A	Method Blank	Total/NA	Water	6010D	630619
LCS 280-630619/2-A	Lab Control Sample	Total/NA	Water	6010D	630619

### Analysis Batch: 630862

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-182246-4	Equip Rinsate	Total/NA	Water	6020B	630619
MB 280-630619/1-A	Method Blank	Total/NA	Water	6020B	630619
LCS 280-630619/24-B	Lab Control Sample	Total/NA	Water	6020B	630619

### Analysis Batch: 631395

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-182246-3	WUABFFMW-01-BP	Total/NA	Water	6020B	630184

## General Chemistry

### Analysis Batch: 628623

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-182246-2	Field Blank	Total/NA	Water	SM 2320B	
280-182246-3	WUABFFMW-01-BP	Total/NA	Water	SM 2320B	
280-182246-4	Equip Rinsate	Total/NA	Water	SM 2320B	
MB 280-628623/5	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-628623/4	Lab Control Sample	Total/NA	Water	SM 2320B	

### Analysis Batch: 628849

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-182246-1	WUABFFMW-01 PDB	Total/NA	Water	353.2	
280-182246-2	Field Blank	Total/NA	Water	353.2	



# QC Association Summary

Client: John Shomaker and Associates Inc  
Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

## General Chemistry (Continued)

### Analysis Batch: 628849 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-182246-3	WUABFFMW-01-BP	Total/NA	Water	353.2	
280-182246-4	Equip Rinsate	Total/NA	Water	353.2	
MB 280-628849/61	Method Blank	Total/NA	Water	353.2	
LCS 280-628849/60	Lab Control Sample	Total/NA	Water	353.2	

### Analysis Batch: 629032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-182246-1	WUABFFMW-01 PDB	Total/NA	Water	SM 2320B	
MB 280-629032/5	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-629032/4	Lab Control Sample	Total/NA	Water	SM 2320B	

### Analysis Batch: 630049

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-182246-1	WUABFFMW-01 PDB	Total/NA	Water	300.0	
280-182246-2	Field Blank	Total/NA	Water	300.0	
280-182246-3	WUABFFMW-01-BP	Total/NA	Water	300.0	
280-182246-4	Equip Rinsate	Total/NA	Water	300.0	
MB 280-630049/6	Method Blank	Total/NA	Water	300.0	
LCS 280-630049/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 280-630049/5	Lab Control Sample Dup	Total/NA	Water	300.0	
MRL 280-630049/3	Lab Control Sample	Total/NA	Water	300.0	

# Lab Chronicle

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

**Client Sample ID: WUABFFMW-01 PDB**

**Lab Sample ID: 280-182246-1**

**Date Collected: 09/29/23 10:32**

**Matrix: Water**

**Date Received: 10/03/23 09:35**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	629597	10/13/23 12:39	TAW	EET DEN
Total/NA	Prep	3510C			125 mL	1 mL	628746	10/06/23 13:02	NFS	EET DEN
Total/NA	Analysis	8270E		1	1 mL	1 mL	628919	10/08/23 14:12	MAB	EET DEN
Total/NA	Prep	8011			34.9 mL	35 mL	628442	10/04/23 12:28	KA	EET DEN
Total/NA	Analysis	8011		1	35 mL	35 mL	628449	10/04/23 23:57	KA	EET DEN
Dissolved	Filtration	Filtration			200 mL	200 mL	629983	10/16/23 17:14	CAF	EET DEN
Dissolved	Prep	3005A			50 mL	50 mL	630208	10/19/23 08:58	CAF	EET DEN
Dissolved	Analysis	6010D		1			630471	10/19/23 19:00	ADL	EET DEN
Total/NA	Prep	3020A			50 mL	50 mL	630184	10/19/23 08:58	AMH	EET DEN
Total/NA	Analysis	6010D		1			630480	10/20/23 07:29	ADL	EET DEN
Total/NA	Prep	3020A			50 mL	50 mL	630184	10/19/23 08:58	AMH	EET DEN
Total/NA	Analysis	6020B		1			630521	10/20/23 07:54	LMT	EET DEN
Total/NA	Prep	3020A			50 mL	50 mL	630184	10/19/23 08:58	AMH	EET DEN
Total/NA	Analysis	6020B		1			630600	10/20/23 14:00	LMT	EET DEN
Total/NA	Analysis	300.0		1	10 mL	10 mL	630049	10/18/23 00:32	EJS	EET DEN
Total/NA	Analysis	353.2		1	100 mL	100 mL	628849	10/06/23 12:37	BCR	EET DEN
Total/NA	Analysis	SM 2320B		1			629032	10/06/23 20:41	LL	EET DEN

**Client Sample ID: Field Blank**

**Lab Sample ID: 280-182246-2**

**Date Collected: 09/29/23 14:53**

**Matrix: Water**

**Date Received: 10/03/23 09:35**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	629597	10/13/23 10:10	TAW	EET DEN
Total/NA	Prep	3510C			125 mL	1 mL	628746	10/06/23 13:02	NFS	EET DEN
Total/NA	Analysis	8270E		1	1 mL	1 mL	628919	10/08/23 14:34	MAB	EET DEN
Total/NA	Prep	8011			35.5 mL	35 mL	628442	10/04/23 12:28	KA	EET DEN
Total/NA	Analysis	8011		1	35 mL	35 mL	628449	10/05/23 00:21	KA	EET DEN
Dissolved	Filtration	Filtration			200 mL	200 mL	629983	10/16/23 17:14	CAF	EET DEN
Dissolved	Prep	3005A			50 mL	50 mL	630208	10/19/23 08:58	CAF	EET DEN
Dissolved	Analysis	6010D		1			630471	10/19/23 19:04	ADL	EET DEN
Total/NA	Prep	3020A			50 mL	50 mL	630184	10/19/23 08:58	AMH	EET DEN
Total/NA	Analysis	6010D		1			630480	10/20/23 07:33	ADL	EET DEN
Total/NA	Prep	3020A			50 mL	50 mL	630184	10/19/23 08:58	AMH	EET DEN
Total/NA	Analysis	6020B		1			630521	10/20/23 08:34	LMT	EET DEN
Total/NA	Analysis	300.0		1	10 mL	10 mL	630049	10/18/23 00:43	EJS	EET DEN
Total/NA	Analysis	353.2		1	100 mL	100 mL	628849	10/06/23 12:39	BCR	EET DEN
Total/NA	Analysis	SM 2320B		1			628623	10/05/23 00:50	LL	EET DEN

# Lab Chronicle

Client: John Shomaker and Associates Inc  
 Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

**Client Sample ID: WUABFFMW-01-BP**

**Lab Sample ID: 280-182246-3**

**Date Collected: 09/29/23 16:44**

**Matrix: Water**

**Date Received: 10/03/23 09:35**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	629597	10/13/23 13:00	TAW	EET DEN
Total/NA	Prep	3510C			125 mL	1 mL	628746	10/06/23 13:02	NFS	EET DEN
Total/NA	Analysis	8270E		1	1 mL	1 mL	628919	10/08/23 14:56	MAB	EET DEN
Total/NA	Prep	8011			35.2 mL	35 mL	628442	10/04/23 12:28	KA	EET DEN
Total/NA	Analysis	8011		1	35 mL	35 mL	628449	10/05/23 00:44	KA	EET DEN
Dissolved	Filtration	Filtration			200 mL	200 mL	629983	10/16/23 17:14	CAF	EET DEN
Dissolved	Prep	3005A			50 mL	50 mL	630208	10/19/23 08:58	CAF	EET DEN
Dissolved	Analysis	6010D		1			630471	10/19/23 19:08	ADL	EET DEN
Total/NA	Prep	3020A			50 mL	50 mL	630184	10/19/23 08:58	AMH	EET DEN
Total/NA	Analysis	6010D		1			630480	10/20/23 07:37	ADL	EET DEN
Total/NA	Prep	3020A			50 mL	50 mL	630184	10/19/23 08:58	AMH	EET DEN
Total/NA	Analysis	6020B		1			630521	10/20/23 08:36	LMT	EET DEN
Total/NA	Prep	3020A			50 mL	50 mL	630184	10/19/23 08:58	AMH	EET DEN
Total/NA	Analysis	6020B		1			631395	10/26/23 16:53	LMT	EET DEN
Total/NA	Analysis	300.0		1	10 mL	10 mL	630049	10/18/23 00:54	EJS	EET DEN
Total/NA	Analysis	353.2		1	100 mL	100 mL	628849	10/06/23 12:41	BCR	EET DEN
Total/NA	Analysis	SM 2320B		1			628623	10/05/23 00:44	LL	EET DEN

**Client Sample ID: Equip Rinsate**

**Lab Sample ID: 280-182246-4**

**Date Collected: 09/29/23 17:36**

**Matrix: Water**

**Date Received: 10/03/23 09:35**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	629597	10/13/23 10:31	TAW	EET DEN
Total/NA	Prep	3510C			125 mL	1 mL	628746	10/06/23 13:02	NFS	EET DEN
Total/NA	Analysis	8270E		1	1 mL	1 mL	628919	10/08/23 15:18	MAB	EET DEN
Total/NA	Prep	8011			35.6 mL	35 mL	628442	10/04/23 12:28	KA	EET DEN
Total/NA	Analysis	8011		1	35 mL	35 mL	628449	10/05/23 01:08	KA	EET DEN
Dissolved	Filtration	Filtration			200 mL	200 mL	629983	10/16/23 17:14	CAF	EET DEN
Dissolved	Prep	3005A			50 mL	50 mL	630208	10/19/23 08:58	CAF	EET DEN
Dissolved	Analysis	6010D		1			630471	10/19/23 19:12	ADL	EET DEN
Total/NA	Prep	3020A			50 mL	50 mL	630619	10/22/23 11:23	AMH	EET DEN
Total/NA	Analysis	6010D		1			630762	10/22/23 21:07	ADL	EET DEN
Total/NA	Prep	3020A			50 mL	50 mL	630619	10/22/23 11:23	AMH	EET DEN
Total/NA	Analysis	6020B		1			630862	10/23/23 23:04	LMT	EET DEN
Total/NA	Analysis	300.0		1	10 mL	10 mL	630049	10/18/23 01:05	EJS	EET DEN
Total/NA	Analysis	353.2		1	100 mL	100 mL	628849	10/06/23 12:43	BCR	EET DEN
Total/NA	Analysis	SM 2320B		1			628623	10/05/23 00:55	LL	EET DEN

# Lab Chronicle

Client: John Shomaker and Associates Inc  
Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

**Client Sample ID: Trip Blank**

**Lab Sample ID: 280-182246-5**

**Date Collected: 09/29/23 10:32**

**Matrix: Water**

**Date Received: 10/03/23 09:35**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	629278	10/11/23 10:53	TAW	EET DEN

**Laboratory References:**

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

# Accreditation/Certification Summary

Client: John Shomaker and Associates Inc  
Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

## Laboratory: Eurofins Denver

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-23

# Method Summary

Client: John Shomaker and Associates Inc  
Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds (GC/MS)	SW846	EET DEN
8270E	Semivolatile Organic Compounds (GC/MS)	SW846	EET DEN
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	EET DEN
6010D	Metals (ICP)	SW846	EET DEN
6020B	Metals (ICP/MS)	SW846	EET DEN
300.0	Anions, Ion Chromatography	EPA	EET DEN
353.2	Nitrogen, Nitrate-Nitrite	EPA	EET DEN
SM 2320B	Alkalinity	SM	EET DEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET DEN
3010A	Preparation, Total Metals	SW846	EET DEN
3020A	Preparation, Total Metals	SW846	EET DEN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET DEN
5030B	Purge and Trap	SW846	EET DEN
8011	Microextraction	SW846	EET DEN
Filtration	Sample Filtration	None	EET DEN

#### Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

#### Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

# Sample Summary

Client: John Shomaker and Associates Inc  
Project/Site: Water Authority Data Gap Well Monitoring

Job ID: 280-182246-1

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-182246-1	WUABFFMW-01 PDB	Water	09/29/23 10:32	10/03/23 09:35
280-182246-2	Field Blank	Water	09/29/23 14:53	10/03/23 09:35
280-182246-3	WUABFFMW-01-BP	Water	09/29/23 16:44	10/03/23 09:35
280-182246-4	Equip Rinsate	Water	09/29/23 17:36	10/03/23 09:35
280-182246-5	Trip Blank	Water	09/29/23 10:32	10/03/23 09:35