

STATE OF
COLORADO

Carter - DNR, Jocelyn <jocelyn.carter@state.co.us>

Pueblo Cement Plant and Limestone Quarry, Permit M-2002-004, Q2 2024 Exceedance Response

Amy Rodrigues <aveek@gcc.com>

Mon, Jun 24, 2024 at 9:11 AM

To: "Carter - DNR, Jocelyn" <jocelyn.carter@state.co.us>

Cc: Amy Eschberger - DNR <amy.eschberger@state.co.us>, "Lennberg - DNR, Patrick" <patrick.lennberg@state.co.us>, Landon Beck <lbeck@slrconsulting.com>, Vance Sarah <svance@gcc.com>

Hi Jocelyn,

Please see attached response to DRMS's 2Q 2024 Exceedance Response. Let me know if you have any questions.

Thanks,

Amy



Amy Rodrigues
Environmental Engineer

O: 719-647-6861

C: 928-308-8838

GCC.com

From: Carter - DNR, Jocelyn <jocelyn.carter@state.co.us>**Sent:** Tuesday, June 18, 2024 3:31 PM**To:** Amy Rodrigues <aveek@gcc.com>**Cc:** Amy Eschberger - DNR <amy.eschberger@state.co.us>; Lennberg - DNR, Patrick <patrick.lennberg@state.co.us>**Subject:** Pueblo Cement Plant and Limestone Quarry, Permit M-2002-004, Q2 2024 Exceedance Response

Good afternoon Amy,

[Quoted text hidden]

2 attachments



GCC M2002004 ExceedanceNotificationResponse 6.24.2024.pdf
294K



L87864.pdf
572K



June 24, 2024

Submitted via email (jocelyn.carter@state.co.us)

Ms. Jocelyn Carter
Division of Reclamation Mining and Safety
1313 Sherman St., Rm. 215
Denver, CO 80203

RE: GCC Rio Grande, Inc., Pueblo Plant, Reclamation Permit No. M-2002-004, Response to 2Q 2024 Monitoring Well Exceedance Notification

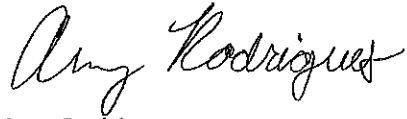
Dear Ms. Carter,

The dissolved selenium concentration value reported in the data table for MW-11 in the email with subject line M-2002-004 GCC Pueblo – Notification of GW Discharge Exceedance 2Q 2024, dated June 18, 2024, at 14:46, was erroneous due to a data entry typo in that email data table. Upon receipt of your letter RE: Notice of Groundwater Discharge Exceedance Quarter 2, 20234, Pueblo Cement and Limestone, Permit# M-2002-004, dated June 18, 2024, the lab report for the sample in question was reviewed and the lab-reported dissolved selenium concentration was 48.7 µg/L (specifically reported by the lab in mg/L as 0.0487). An image of the MW-11 Q2 results for dissolved metals with selenium highlighted has been provided here to further document the DRMS notification typo. The full lab reports for all samples and analyses will be provided as usual with the quarterly groundwater data report for Q2, due to DRMS on August 1, 2024, but to ensure clarity and resolution of this issue, the lab report L87864 PDF has been attached here.

With respect to the question regarding the TR-12 monitoring wells status, the wells MW-15 through MW-24 have been installed, developed, and instrumented with permanent sampling pumps, which was finished in May 2024. The TR-12 well installation report to DRMS is being wrapped up now and is planned for submittal to DRMS by close of business on June 28, 2024. These new monitoring wells include a subset of dry (to date) wells. This includes Fort Hayes MW-15 and MW-17, which are upgradient of the quarry. Fort Hayes well MW-19, which is located cross-gradient (east) from the quarry, is wet and post-development it was estimated to produce 0.5 gpm. The initial groundwater sample was collected at MW-19 on June 10, 2024, with the lab report for the standard GW-Compliance suite expected approximately June 26, 2024. MW-20, the Codell Sandstone monitoring well paired with MW-19, is wet, and post-development it was estimated to produced 0.1 gpm. The initial groundwater sample was also collected at MW-20 on June 26, 2024, with the lab report for the standard GW-Compliance suite also expected approximately June 26, 2024. All field and lab data for the new TR-12 monitoring wells will be included with the field and lab data for the original monitoring wells in the Q2 quarterly compliance report, due to DRMS on August 1, 2024.

If you have any questions or concerns, please contact me at (719) 647-6861.

Sincerely,

A handwritten signature in black ink that reads "Amy Rodrigues". The signature is fluid and cursive, with the first name "Amy" and last name "Rodrigues" clearly legible.

Amy Rodrigues
Environmental Engineer
GCC Rio Grande, Inc.

Attachment

cc (via email)

Sarah Vance, GCC
Landon Beck, SLR Consulting

June 12, 2024

Report to:

Amy Rodrigues
GCC Rio Grande
3372 Lime Road
Pueblo, CO 81004

cc: Landon Beck

Bill to:

Amy Rodrigues
GCC Rio Grande
3372 Lime Road
Pueblo, CO 81004

Project ID:

ACZ Project ID: L87864

Amy Rodrigues:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on May 21, 2024. This project has been assigned to ACZ's project number, L87864. Please reference this number in all future inquiries.

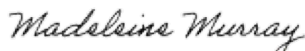
All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L87864. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after June 12, 2025. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

If you have any questions or other needs, please contact your Project Manager.



Madeleine Murray has reviewed
and approved this report.



GCC Rio Grande

Project ID:

Sample ID: MW-11

ACZ Sample ID: **L87864-01**

Date Sampled: 05/20/24 09:32

Date Received: 05/21/24

Sample Matrix: Groundwater

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	EPA 200.7	1	<0.05	U		mg/L	0.05	0.25	06/06/24 16:49	wtc
Arsenic, dissolved	EPA 200.8	1	0.00023	B		mg/L	0.0002	0.001	06/03/24 18:49	gjl
Beryllium, dissolved	EPA 200.7	1	<0.01	U		mg/L	0.01	0.05	06/07/24 18:19	wtc
Boron, dissolved	EPA 200.7	1	0.434			mg/L	0.03	0.1	06/06/24 16:49	wtc
Cadmium, dissolved	EPA 200.8	1	<0.00005	U		mg/L	0.00005	0.00025	06/03/24 18:49	gjl
Calcium, dissolved	EPA 200.7	1	55.2			mg/L	0.1	0.5	06/06/24 16:49	wtc
Chromium, dissolved	EPA 200.7	1	<0.02	U		mg/L	0.02	0.05	06/06/24 16:49	wtc
Cobalt, dissolved	EPA 200.8	1	0.000505			mg/L	0.00005	0.00025	06/03/24 18:49	gjl
Copper, dissolved	EPA 200.7	1	<0.01	U		mg/L	0.01	0.05	06/07/24 18:19	wtc
Iron, dissolved	EPA 200.7	1	<0.06	U		mg/L	0.06	0.15	06/06/24 16:49	wtc
Lead, dissolved	EPA 200.8	1	<0.0001	U		mg/L	0.0001	0.0005	06/03/24 18:49	gjl
Lithium, dissolved	EPA 200.7	1	0.154			mg/L	0.008	0.04	06/07/24 18:19	wtc
Magnesium, dissolved	EPA 200.7	1	31.3			mg/L	0.2	1	06/06/24 16:49	wtc
Manganese, dissolved	EPA 200.7	1	0.013	B		mg/L	0.01	0.05	06/07/24 18:19	wtc
Mercury, dissolved	EPA 245.1	1	<0.0002	U		mg/L	0.0002	0.001	06/05/24 15:45	aeH
Nickel, dissolved	EPA 200.7	1	<0.008	U		mg/L	0.008	0.04	06/06/24 16:49	wtc
Potassium, dissolved	EPA 200.7	1	3.40			mg/L	0.5	1	06/06/24 16:49	wtc
Selenium, dissolved	EPA 200.8	1	0.0487		*	mg/L	0.0001	0.00025	06/03/24 18:49	gjl
Sodium, dissolved	EPA 200.7	1	455			mg/L	0.2	1	06/06/24 16:49	wtc
Vanadium, dissolved	EPA 200.7	1	<0.01	U		mg/L	0.01	0.025	06/06/24 16:49	wtc
Zinc, dissolved	EPA 200.7	1	<0.02	U		mg/L	0.02	0.05	06/07/24 18:19	wtc

GCC Rio Grande

Project ID:

Sample ID: MW-11

ACZ Sample ID: **L87864-01**

Date Sampled: 05/20/24 09:32

Date Received: 05/21/24

Sample Matrix: Groundwater

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM 2320 B-2011									
Bicarbonate as CaCO ₃		1	769			mg/L	2	20	05/31/24 0:00	as
Carbonate as CaCO ₃		1	<2	U		mg/L	2	20	05/31/24 0:00	as
Hydroxide as CaCO ₃		1	<2	U		mg/L	2	20	05/31/24 0:00	as
Total Alkalinity		1	769			mg/L	2	20	05/31/24 0:00	as
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-7.4			%			06/12/24 0:00	calc
Sum of Anions			29			meq/L			06/12/24 0:00	calc
Sum of Cations			25			meq/L			06/12/24 0:00	calc
Chloride	SM 4500-Cl E-2011	5	111		*	mg/L	5	10	06/01/24 8:51	jqr
Fluoride	SM 4500-F C-2011	1	1.14			mg/L	0.15	0.35	06/06/24 17:18	amk/cm
Hardness as CaCO ₃ (dissolved)	Calculation (SM 2340 B-2011)		267			mg/L	0.2	5	06/12/24 0:00	calc
Nitrate as N	Calculation (NO ₃ NO ₂ -NO ₂)		<0.02	U		mg/L	0.02	0.1	06/12/24 0:00	calc
Nitrate/Nitrite as N	EPA 353.2	1	<0.02	U	*	mg/L	0.02	0.1	05/22/24 0:16	pjb
Nitrite as N	EPA 353.2	1	<0.01	U	*	mg/L	0.01	0.05	05/22/24 0:16	pjb
Residue, Filterable (TDS) @180C	SM 2540 C-2011	1	1630			mg/L	20	40	05/24/24 14:35	emk
Sulfate	ASTM D516-07/-11/-16	25	476		*	mg/L	25	125	05/22/24 14:39	jqr
TDS (calculated)	Calculation		1600			mg/L			06/12/24 0:00	calc
TDS (ratio - measured/calculated)	Calculation		1.02						06/12/24 0:00	calc

GCC Rio Grande

Project ID:

Sample ID: MW-12

ACZ Sample ID: **L87864-02**

Date Sampled: 05/20/24 10:34

Date Received: 05/21/24

Sample Matrix: Groundwater

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	EPA 200.7	5	<0.25	U		mg/L	0.25	1.25	06/06/24 16:52	wtc
Arsenic, dissolved	EPA 200.8	2	0.00263			mg/L	0.0004	0.002	06/03/24 18:56	gjl
Beryllium, dissolved	EPA 200.7	5	<0.05	U		mg/L	0.05	0.25	06/07/24 18:22	wtc
Boron, dissolved	EPA 200.7	5	0.961			mg/L	0.15	0.5	06/06/24 16:52	wtc
Cadmium, dissolved	EPA 200.8	2	<0.0001	U		mg/L	0.0001	0.0005	06/03/24 18:56	gjl
Calcium, dissolved	EPA 200.7	5	23.6			mg/L	0.5	2.5	06/06/24 16:52	wtc
Chromium, dissolved	EPA 200.7	5	<0.1	U		mg/L	0.1	0.25	06/06/24 16:52	wtc
Cobalt, dissolved	EPA 200.8	2	0.000603			mg/L	0.0001	0.0005	06/03/24 18:56	gjl
Copper, dissolved	EPA 200.7	5	<0.05	U		mg/L	0.05	0.25	06/07/24 18:22	wtc
Iron, dissolved	EPA 200.7	5	<0.3	U		mg/L	0.3	0.75	06/06/24 16:52	wtc
Lead, dissolved	EPA 200.8	2	<0.0002	U		mg/L	0.0002	0.001	06/03/24 18:56	gjl
Lithium, dissolved	EPA 200.7	5	0.210			mg/L	0.04	0.2	06/07/24 18:22	wtc
Magnesium, dissolved	EPA 200.7	5	9.63			mg/L	1	5	06/06/24 16:52	wtc
Manganese, dissolved	EPA 200.7	5	0.055	B		mg/L	0.05	0.25	06/07/24 18:22	wtc
Mercury, dissolved	EPA 245.1	1	<0.0002	U		mg/L	0.0002	0.001	06/05/24 15:46	aeH
Nickel, dissolved	EPA 200.7	5	<0.04	U		mg/L	0.04	0.2	06/06/24 16:52	wtc
Potassium, dissolved	EPA 200.7	5	3.82	B		mg/L	2.5	5	06/06/24 16:52	wtc
Selenium, dissolved	EPA 200.8	2	<0.0002	U	*	mg/L	0.0002	0.0005	06/05/24 16:49	aps
Sodium, dissolved	EPA 200.7	5	977			mg/L	1	5	06/06/24 16:52	wtc
Vanadium, dissolved	EPA 200.7	5	<0.05	U		mg/L	0.05	0.125	06/06/24 16:52	wtc
Zinc, dissolved	EPA 200.7	5	<0.1	U		mg/L	0.1	0.25	06/07/24 18:22	wtc

GCC Rio Grande

Project ID:

Sample ID: MW-12

ACZ Sample ID: **L87864-02**

Date Sampled: 05/20/24 10:34

Date Received: 05/21/24

Sample Matrix: Groundwater

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM 2320 B-2011									
Bicarbonate as CaCO ₃		1	651			mg/L	2	20	05/31/24 0:00	as
Carbonate as CaCO ₃		1	<2	U		mg/L	2	20	05/31/24 0:00	as
Hydroxide as CaCO ₃		1	<2	U		mg/L	2	20	05/31/24 0:00	as
Total Alkalinity		1	651			mg/L	2	20	05/31/24 0:00	as
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-3.2			%			06/12/24 0:00	calc
Sum of Anions			48			meq/L			06/12/24 0:00	calc
Sum of Cations			45			meq/L			06/12/24 0:00	calc
Chloride	SM 4500-Cl E-2011	20	975		*	mg/L	20	40	06/01/24 9:09	jqr
Fluoride	SM 4500-F C-2011	1	1.93			mg/L	0.15	0.35	06/06/24 17:29	emk/cm
Hardness as CaCO ₃ (dissolved)	Calculation (SM 2340 B-2011)		99			mg/L	1	30	06/12/24 0:00	calc
Nitrate as N	Calculation (NO ₃ NO ₂ -NO ₂)		<0.02	U		mg/L	0.02	0.1	06/12/24 0:00	calc
Nitrate/Nitrite as N	EPA 353.2	1	<0.02	U	*	mg/L	0.02	0.1	05/22/24 0:17	pjb
Nitrite as N	EPA 353.2	1	<0.01	U	*	mg/L	0.01	0.05	05/22/24 0:17	pjb
Residue, Filterable (TDS) @180C	SM 2540 C-2011	1	2690			mg/L	20	40	05/24/24 14:37	emk
Sulfate	ASTM D516-07/-11/-16	25	380		*	mg/L	25	125	05/22/24 14:40	jqr
TDS (calculated)	Calculation		2770			mg/L			06/12/24 0:00	calc
TDS (ratio - measured/calculated)	Calculation		0.97						06/12/24 0:00	calc

GCC Rio Grande

Project ID:

Sample ID: MW-9

ACZ Sample ID: **L87864-03**

Date Sampled: 05/20/24 12:58

Date Received: 05/21/24

Sample Matrix: Groundwater

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	EPA 200.7	5	<0.25	U		mg/L	0.25	1.25	06/06/24 16:55	wtc
Arsenic, dissolved	EPA 200.8	5	<0.001	U		mg/L	0.001	0.005	06/03/24 18:58	gjl
Beryllium, dissolved	EPA 200.7	5	<0.05	U		mg/L	0.05	0.25	06/07/24 18:25	wtc
Boron, dissolved	EPA 200.7	5	1.47			mg/L	0.15	0.5	06/06/24 16:55	wtc
Cadmium, dissolved	EPA 200.8	5	<0.00025	U		mg/L	0.00025	0.00125	06/03/24 18:58	gjl
Calcium, dissolved	EPA 200.7	5	414			mg/L	0.5	2.5	06/06/24 16:55	wtc
Chromium, dissolved	EPA 200.7	5	<0.1	U		mg/L	0.1	0.25	06/06/24 16:55	wtc
Cobalt, dissolved	EPA 200.8	5	0.00210			mg/L	0.00025	0.00125	06/03/24 18:58	gjl
Copper, dissolved	EPA 200.7	5	<0.05	U		mg/L	0.05	0.25	06/07/24 18:25	wtc
Iron, dissolved	EPA 200.7	5	2.10			mg/L	0.3	0.75	06/06/24 16:55	wtc
Lead, dissolved	EPA 200.8	5	<0.0005	U		mg/L	0.0005	0.0025	06/03/24 18:58	gjl
Lithium, dissolved	EPA 200.7	5	0.415			mg/L	0.04	0.2	06/07/24 18:25	wtc
Magnesium, dissolved	EPA 200.7	5	159			mg/L	1	5	06/06/24 16:55	wtc
Manganese, dissolved	EPA 200.7	5	0.408			mg/L	0.05	0.25	06/07/24 18:25	wtc
Mercury, dissolved	EPA 245.1	1	<0.0002	U		mg/L	0.0002	0.001	06/05/24 15:47	aeH
Nickel, dissolved	EPA 200.7	5	<0.04	U		mg/L	0.04	0.2	06/06/24 16:55	wtc
Potassium, dissolved	EPA 200.7	5	8.69			mg/L	2.5	5	06/06/24 16:55	wtc
Selenium, dissolved	EPA 200.8	5	<0.0005	U	*	mg/L	0.0005	0.00125	06/05/24 16:51	aps
Sodium, dissolved	EPA 200.7	5	830			mg/L	1	5	06/06/24 16:55	wtc
Vanadium, dissolved	EPA 200.7	5	<0.05	U		mg/L	0.05	0.125	06/06/24 16:55	wtc
Zinc, dissolved	EPA 200.7	5	<0.1	U		mg/L	0.1	0.25	06/07/24 18:25	wtc

GCC Rio Grande

Project ID:

Sample ID: MW-9

ACZ Sample ID: **L87864-03**

Date Sampled: 05/20/24 12:58

Date Received: 05/21/24

Sample Matrix: Groundwater

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM 2320 B-2011									
Bicarbonate as CaCO ₃		1	438			mg/L	2	20	05/31/24 0:00	as
Carbonate as CaCO ₃		1	<2	U		mg/L	2	20	05/31/24 0:00	as
Hydroxide as CaCO ₃		1	<2	U		mg/L	2	20	05/31/24 0:00	as
Total Alkalinity		1	438			mg/L	2	20	05/31/24 0:00	as
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-4.1			%			06/12/24 0:00	calc
Sum of Anions			77			meq/L			06/12/24 0:00	calc
Sum of Cations			71			meq/L			06/12/24 0:00	calc
Chloride	SM 4500-Cl E-2011	1	43.0		*	mg/L	1	2	06/01/24 9:22	jqr
Fluoride	SM 4500-F C-2011	1	0.53			mg/L	0.15	0.35	06/06/24 17:34	amk/cm
Hardness as CaCO ₃ (dissolved)	Calculation (SM 2340 B-2011)		1690			mg/L	1	30	06/12/24 0:00	calc
Nitrate as N	Calculation (NO ₃ NO ₂ -NO ₂)		<0.02	U		mg/L	0.02	0.1	06/12/24 0:00	calc
Nitrate/Nitrite as N	EPA 353.2	1	<0.02	U	*	mg/L	0.02	0.1	05/22/24 0:19	pjb
Nitrite as N	EPA 353.2	1	<0.01	U	*	mg/L	0.01	0.05	05/22/24 0:19	pjb
Residue, Filterable (TDS) @180C	SM 2540 C-2011	2	4780	H	*	mg/L	40	80	06/02/24 12:40	cm
Sulfate	ASTM D516-07/-11/-16	100	3210		*	mg/L	100	500	05/22/24 14:47	jqr
TDS (calculated)	Calculation		4930			mg/L			06/12/24 0:00	calc
TDS (ratio - measured/calculated)	Calculation		0.97						06/12/24 0:00	calc

GCC Rio Grande

Project ID:

Sample ID: MW-10

ACZ Sample ID: **L87864-04**

Date Sampled: 05/20/24 13:41

Date Received: 05/21/24

Sample Matrix: Groundwater

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	EPA 200.7	5	<0.25	U		mg/L	0.25	1.25	06/06/24 16:58	wtc
Arsenic, dissolved	EPA 200.8	2	0.00070	B		mg/L	0.0004	0.002	06/03/24 19:00	gjl
Beryllium, dissolved	EPA 200.7	5	<0.05	U		mg/L	0.05	0.25	06/07/24 18:28	wtc
Boron, dissolved	EPA 200.7	5	1.33			mg/L	0.15	0.5	06/06/24 16:58	wtc
Cadmium, dissolved	EPA 200.8	2	<0.0001	U		mg/L	0.0001	0.0005	06/03/24 19:00	gjl
Calcium, dissolved	EPA 200.7	5	33.4			mg/L	0.5	2.5	06/06/24 16:58	wtc
Chromium, dissolved	EPA 200.7	5	<0.1	U		mg/L	0.1	0.25	06/06/24 16:58	wtc
Cobalt, dissolved	EPA 200.8	2	0.000163	B		mg/L	0.0001	0.0005	06/03/24 19:00	gjl
Copper, dissolved	EPA 200.7	5	<0.05	U		mg/L	0.05	0.25	06/07/24 18:28	wtc
Iron, dissolved	EPA 200.7	5	<0.3	U		mg/L	0.3	0.75	06/06/24 16:58	wtc
Lead, dissolved	EPA 200.8	2	<0.0002	U		mg/L	0.0002	0.001	06/03/24 19:00	gjl
Lithium, dissolved	EPA 200.7	5	0.233			mg/L	0.04	0.2	06/07/24 18:28	wtc
Magnesium, dissolved	EPA 200.7	5	11.0			mg/L	1	5	06/06/24 16:58	wtc
Manganese, dissolved	EPA 200.7	5	<0.05	U		mg/L	0.05	0.25	06/07/24 18:28	wtc
Mercury, dissolved	EPA 245.1	1	<0.0002	U		mg/L	0.0002	0.001	06/05/24 15:48	aeH
Nickel, dissolved	EPA 200.7	5	<0.04	U		mg/L	0.04	0.2	06/06/24 16:58	wtc
Potassium, dissolved	EPA 200.7	5	4.44	B		mg/L	2.5	5	06/06/24 16:58	wtc
Selenium, dissolved	EPA 200.8	2	<0.0002	U	*	mg/L	0.0002	0.0005	06/05/24 16:53	aps
Sodium, dissolved	EPA 200.7	5	982			mg/L	1	5	06/06/24 16:58	wtc
Vanadium, dissolved	EPA 200.7	5	<0.05	U		mg/L	0.05	0.125	06/06/24 16:58	wtc
Zinc, dissolved	EPA 200.7	5	<0.1	U		mg/L	0.1	0.25	06/07/24 18:28	wtc

GCC Rio Grande

Project ID:

Sample ID: MW-10

ACZ Sample ID: **L87864-04**

Date Sampled: 05/20/24 13:41

Date Received: 05/21/24

Sample Matrix: Groundwater

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM 2320 B-2011									
Bicarbonate as CaCO ₃		1	721			mg/L	2	20	05/31/24 0:00	as
Carbonate as CaCO ₃		1	<2	U		mg/L	2	20	05/31/24 0:00	as
Hydroxide as CaCO ₃		1	<2	U		mg/L	2	20	05/31/24 0:00	as
Total Alkalinity		1	721			mg/L	2	20	05/31/24 0:00	as
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-6.1			%			06/12/24 0:00	calc
Sum of Anions			52			meq/L			06/12/24 0:00	calc
Sum of Cations			46			meq/L			06/12/24 0:00	calc
Chloride	SM 4500-Cl E-2011	20	397		*	mg/L	20	40	06/01/24 9:13	jqr
Fluoride	SM 4500-F C-2011	1	1.43			mg/L	0.15	0.35	06/06/24 17:42	smk/cm
Hardness as CaCO ₃ (dissolved)	Calculation (SM 2340 B-2011)		129			mg/L	1	30	06/12/24 0:00	calc
Nitrate as N	Calculation (NO ₃ NO ₂ -NO ₂)		<0.02	U		mg/L	0.02	0.1	06/12/24 0:00	calc
Nitrate/Nitrite as N	EPA 353.2	1	<0.02	U	*	mg/L	0.02	0.1	05/22/24 0:20	pjb
Nitrite as N	EPA 353.2	1	<0.01	U	*	mg/L	0.01	0.05	05/22/24 0:20	pjb
Residue, Filterable (TDS) @180C	SM 2540 C-2011	1	2980			mg/L	20	40	05/24/24 14:41	emk
Sulfate	ASTM D516-07/-11/-16	100	1260		*	mg/L	100	500	05/22/24 14:48	jqr
TDS (calculated)	Calculation		3130			mg/L			06/12/24 0:00	calc
TDS (ratio - measured/calculated)	Calculation		0.95						06/12/24 0:00	calc

Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit unless omitted or equal to the PQL (see comment #5). Allows for instrument and annual fluctuations.
<i>PCN/SCN</i>	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
<i>PQL</i>	Practical Quantitation Limit. Synonymous with the EPA term "minimum level".
<i>QC</i>	True Value of the Control Sample or the amount added to the Spike
<i>Rec</i>	Recovered amount of the true value or spike added, in % (except for LCSS, mg/Kg)
<i>RPD</i>	Relative Percent Difference, calculation used for Duplicate QC Types
<i>Upper</i>	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
<i>Sample</i>	Value of the Sample of interest

QC Sample Types

<i>AS</i>	Analytical Spike (Post Digestion)	<i>LCSWD</i>	Laboratory Control Sample - Water Duplicate
<i>ASD</i>	Analytical Spike (Post Digestion) Duplicate	<i>LFB</i>	Laboratory Fortified Blank
<i>CCB</i>	Continuing Calibration Blank	<i>LFM</i>	Laboratory Fortified Matrix
<i>CCV</i>	Continuing Calibration Verification standard	<i>LFMD</i>	Laboratory Fortified Matrix Duplicate
<i>DUP</i>	Sample Duplicate	<i>LRB</i>	Laboratory Reagent Blank
<i>ICB</i>	Initial Calibration Blank	<i>MS</i>	Matrix Spike
<i>ICV</i>	Initial Calibration Verification standard	<i>MSD</i>	Matrix Spike Duplicate
<i>ICSAB</i>	Inter-element Correction Standard - A plus B solutions	<i>PBS</i>	Prep Blank - Soil
<i>LCSS</i>	Laboratory Control Sample - Soil	<i>PBW</i>	Prep Blank - Water
<i>LCSSD</i>	Laboratory Control Sample - Soil Duplicate	<i>PQV</i>	Practical Quantitation Verification standard
<i>LCSW</i>	Laboratory Control Sample - Water	<i>SDL</i>	Serial Dilution

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method or calibration procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Spikes/Fortified Matrix	Determines sample matrix interferences, if any.
Standard	Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
L	Target analyte response was below the laboratory defined negative threshold.
U	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(4)	EPA SW-846. Test Methods for Evaluating Solid Waste.
(5)	Standard Methods for the Examination of Water and Wastewater.

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.
(4)	An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.
(5)	If the MDL equals the PQL or the MDL column is omitted, the PQL is the reporting limit.

For a complete list of ACZ's Extended Qualifiers, please click:

<https://acz.com/wp-content/uploads/2019/04/Ext-Qual-List.pdf>

GCC

ACZ Project ID: **L87864**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Alkalinity as CaCO3

SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG590177													
WG590177PBW1	PBW	05/31/24 16:53				16	mg/L		-20	20			
WG590177LCSW3	LCSW	05/31/24 17:06	WC240522-1	820.0001		751.9	mg/L	92	90	110			
L87866-01DUP	DUP	05/31/24 19:04			123	111.4	mg/L				10	20	
WG590177LCSW6	LCSW	05/31/24 19:17	WC240522-1	820.0001		770.3	mg/L	94	90	110			
WG590177PBW2	PBW	05/31/24 19:25				21	mg/L		-20	20			B4
WG590177LCSW9	LCSW	05/31/24 21:40	WC240522-1	820.0001		784.4	mg/L	96	90	110			
WG590177PBW3	PBW	05/31/24 21:47				21.8	mg/L		-20	20			B4 B7 BF
WG590177LCSW12	LCSW	05/31/24 23:42	WC240522-1	820.0001		787.2	mg/L	96	90	110			
WG590177PBW4	PBW	05/31/24 23:49				22.1	mg/L		-20	20			B4

Aluminum, dissolved

EPA 200.7

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG590584													
WG590584ICV	ICV	06/06/24 16:25	II240515-3	2		1.905	mg/L	95	95	105			
WG590584ICB	ICB	06/06/24 16:31				U	mg/L		-0.15	0.15			
WG590584PQV	PQV	06/06/24 16:34	II240521-5	.25025		.242	mg/L	97	70	130			
WG590584SIC	SIC	06/06/24 16:37	II240521-3	200.45025		197.7	mg/L	99	1	200			
WG590584LFB	LFB	06/06/24 16:43	II240604-3	1.001		.986	mg/L	99	85	115			
L87865-03AS	AS	06/06/24 17:11	II240604-3	1.001	.081	1.082	mg/L	100	85	115			
WG590584CCV1	CCV	06/06/24 17:14	II240529-2	1		.953	mg/L	95	90	110			
WG590584CCB1	CCB	06/06/24 17:17				U	mg/L		-0.15	0.15			
L87865-03ASD	ASD	06/06/24 17:20	II240604-3	1.001	.081	1.069	mg/L	99	85	115	1	20	
WG590584CCV2	CCV	06/06/24 17:50	II240529-2	1		.942	mg/L	94	90	110			
WG590584CCB2	CCB	06/06/24 17:53				U	mg/L		-0.15	0.15			
WG590584CCV3	CCV	06/06/24 18:11	II240529-2	1		.954	mg/L	95	90	110			
WG590584CCB3	CCB	06/06/24 18:14				U	mg/L		-0.15	0.15			

Arsenic, dissolved

EPA 200.8

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG590245													
WG590245ICV	ICV	06/03/24 18:23	MS240404-4	.05		.05098	mg/L	102	90	110			
WG590245ICB	ICB	06/03/24 18:25				U	mg/L		-0.00044	0.00044			
WG590245LFB	LFB	06/03/24 18:28	MS240514-1	.0501		.05295	mg/L	106	85	115			
L87839-03AS	AS	06/03/24 18:37	MS240514-1	.0501	.00066	.05256	mg/L	104	70	130			
L87839-03ASD	ASD	06/03/24 18:39	MS240514-1	.0501	.00066	.0532	mg/L	105	70	130	1	20	
WG590245CCV1	CCV	06/03/24 18:51	MS240421-5	.1002		.10481	mg/L	105	90	110			
WG590245CCB1	CCB	06/03/24 18:53				U	mg/L		-0.0006	0.0006			
WG590245CCV2	CCV	06/03/24 19:19	MS240421-5	.1002		.10586	mg/L	106	90	110			
WG590245CCB2	CCB	06/03/24 19:22				U	mg/L		-0.0006	0.0006			
WG590245CCV3	CCV	06/03/24 19:36	MS240421-5	.1002		.10337	mg/L	103	90	110			
WG590245CCB3	CCB	06/03/24 19:38				U	mg/L		-0.0006	0.0006			

GCC

ACZ Project ID: **L87864**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Beryllium, dissolved

EPA 200.7

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG590644													
WG590644ICV	ICV	06/07/24 17:19	II240515-3	2		1.911	mg/L	96	95	105			
WG590644ICB	ICB	06/07/24 17:24				U	mg/L		-0.03	0.03			
WG590644PQV	PQV	06/07/24 17:27	II240521-5	.0501		.048	mg/L	96	70	130			
WG590644SIC	SIC	06/07/24 17:30	II240521-3	.1002		.095	mg/L	95	80	120			
WG590644LFB	LFB	06/07/24 17:37	II240604-3	.501		.507	mg/L	101	85	115			
L87711-01AS	AS	06/07/24 17:46	II240604-3	.501	U	.493	mg/L	98	85	115			
L87711-01ASD	ASD	06/07/24 17:49	II240604-3	.501	U	.495	mg/L	99	85	115	0	20	
WG590644CCV1	CCV	06/07/24 18:07	II240529-2	1		.966	mg/L	97	90	110			
WG590644CCB1	CCB	06/07/24 18:10				U	mg/L		-0.03	0.03			
WG590644CCV2	CCV	06/07/24 18:44	II240529-2	1		.957	mg/L	96	90	110			
WG590644CCB2	CCB	06/07/24 18:47				U	mg/L		-0.03	0.03			
L87884-04AS	AS	06/07/24 18:56	II240604-3	.501	U	.489	mg/L	98	85	115			
L87884-04ASD	ASD	06/07/24 18:59	II240604-3	.501	U	.486	mg/L	97	85	115	1	20	
WG590644CCV3	CCV	06/07/24 19:05	II240529-2	1		.961	mg/L	96	90	110			
WG590644CCB3	CCB	06/07/24 19:08				U	mg/L		-0.03	0.03			

Boron, dissolved

EPA 200.7

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG590584													
WG590584ICV	ICV	06/06/24 16:25	II240515-3	2		2.003	mg/L	100	95	105			
WG590584ICB	ICB	06/06/24 16:31				U	mg/L		-0.09	0.09			
WG590584PQV	PQV	06/06/24 16:34	II240521-5	.1001		.108	mg/L	108	70	130			
WG590584SIC	SIC	06/06/24 16:37	II240521-3	.1001		.105	mg/L	105	80	120			
WG590584LFB	LFB	06/06/24 16:43	II240604-3	.5005		.503	mg/L	100	85	115			
L87865-03AS	AS	06/06/24 17:11	II240604-3	.5005	U	.511	mg/L	102	85	115			
WG590584CCV1	CCV	06/06/24 17:14	II240529-2	1		1.003	mg/L	100	90	110			
WG590584CCB1	CCB	06/06/24 17:17				U	mg/L		-0.09	0.09			
L87865-03ASD	ASD	06/06/24 17:20	II240604-3	.5005	U	.506	mg/L	101	85	115	1	20	
WG590584CCV2	CCV	06/06/24 17:50	II240529-2	1		.984	mg/L	98	90	110			
WG590584CCB2	CCB	06/06/24 17:53				U	mg/L		-0.09	0.09			
WG590584CCV3	CCV	06/06/24 18:11	II240529-2	1		.996	mg/L	100	90	110			
WG590584CCB3	CCB	06/06/24 18:14				U	mg/L		-0.09	0.09			

Cadmium, dissolved

EPA 200.8

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG590245													
WG590245ICV	ICV	06/03/24 18:23	MS240404-4	.05		.050951	mg/L	102	90	110			
WG590245ICB	ICB	06/03/24 18:25				.000053	mg/L		-0.00011	0.00011			
WG590245LFB	LFB	06/03/24 18:28	MS240514-1	.05005		.051155	mg/L	102	85	115			
L87839-03AS	AS	06/03/24 18:37	MS240514-1	.05005	.000051	.051967	mg/L	104	70	130			
L87839-03ASD	ASD	06/03/24 18:39	MS240514-1	.05005	.000051	.054285	mg/L	108	70	130	4	20	
WG590245CCV1	CCV	06/03/24 18:51	MS240421-5	.1001		.101956	mg/L	102	90	110			
WG590245CCB1	CCB	06/03/24 18:53				U	mg/L		-0.00015	0.00015			
WG590245CCV2	CCV	06/03/24 19:19	MS240421-5	.1001		.101362	mg/L	101	90	110			
WG590245CCB2	CCB	06/03/24 19:22				U	mg/L		-0.00015	0.00015			
WG590245CCV3	CCV	06/03/24 19:36	MS240421-5	.1001		.101772	mg/L	102	90	110			
WG590245CCB3	CCB	06/03/24 19:38				U	mg/L		-0.00015	0.00015			

GCC

ACZ Project ID: **L87864**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Calcium, dissolved

EPA 200.7

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG590584													
WG590584ICV	ICV	06/06/24 16:25	II240515-3	100		95.56	mg/L	96	95	105			
WG590584ICB	ICB	06/06/24 16:31				U	mg/L		-0.3	0.3			
WG590584PQV	PQV	06/06/24 16:34	II240521-5	.5025		.49	mg/L	98	70	130			
WG590584SIC	SIC	06/06/24 16:37	II240521-3	201.5025		193	mg/L	96	1	200			
WG590584LFB	LFB	06/06/24 16:43	II240604-3	67.93628		66.54	mg/L	98	85	115			
L87865-03AS	AS	06/06/24 17:11	II240604-3	67.93628	22.9	88.09	mg/L	96	85	115			
WG590584CCV1	CCV	06/06/24 17:14	II240529-2	50		47.94	mg/L	96	90	110			
WG590584CCB1	CCB	06/06/24 17:17				U	mg/L		-0.3	0.3			
L87865-03ASD	ASD	06/06/24 17:20	II240604-3	67.93628	22.9	86.95	mg/L	94	85	115	1	20	
WG590584CCV2	CCV	06/06/24 17:50	II240529-2	50		47.84	mg/L	96	90	110			
WG590584CCB2	CCB	06/06/24 17:53				U	mg/L		-0.3	0.3			
WG590584CCV3	CCV	06/06/24 18:11	II240529-2	50		47.75	mg/L	96	90	110			
WG590584CCB3	CCB	06/06/24 18:14				U	mg/L		-0.3	0.3			

Chloride

SM 4500-Cl E-2011

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG590186													
WG590186ICV	ICV	06/01/24 8:22	WI231211-1	39.96		38.5	mg/L	96	90	110			
WG590186ICB	ICB	06/01/24 8:22				U	mg/L						
WG590186CCV1	CCV	06/01/24 8:38	WI240111-9	25.025		24.94	mg/L	100	90	110			
WG590186CCB1	CCB	06/01/24 8:38				U	mg/L						
WG590186PQV	PQV	06/01/24 8:39	WI240502-1	2.002		1.89	mg/L	94	50	150			
WG590186LFB	LFB	06/01/24 8:39	WI231211-4	20.02		20.63	mg/L	103	90	110			
WG590186CCV2	CCV	06/01/24 8:42	WI240111-9	25.025		25.24	mg/L	101	90	110			
WG590186CCB2	CCB	06/01/24 8:42				U	mg/L						
WG590186CCV3	CCV	06/01/24 8:49	WI240111-9	25.025		25.22	mg/L	101	90	110			
WG590186CCB3	CCB	06/01/24 8:50				U	mg/L						
L87864-01AS	AS	06/01/24 8:56	5XCL GAL	20	111	127.58	mg/L	83	90	110			M3
WG590186CCV4	CCV	06/01/24 8:58	WI240111-9	25.025		25.55	mg/L	102	90	110			
WG590186CCB4	CCB	06/01/24 8:58				U	mg/L						
WG590186CCV5	CCV	06/01/24 9:03	WI240111-9	25.025		25.1	mg/L	100	90	110			
WG590186CCB5	CCB	06/01/24 9:04				U	mg/L						
WG590186CCV6	CCV	06/01/24 9:08	WI240111-9	25.025		25.31	mg/L	101	90	110			
WG590186CCB6	CCB	06/01/24 9:08				U	mg/L						
L87864-02DUP	DUP	06/01/24 9:13			975	966.5	mg/L				1	20	
WG590186CCV7	CCV	06/01/24 9:14	WI240111-9	25.025		25.16	mg/L	101	90	110			
WG590186CCB7	CCB	06/01/24 9:14				U	mg/L						
WG590186CCV8	CCV	06/01/24 9:22	WI240111-9	25.025		25.15	mg/L	100	90	110			
WG590186CCB8	CCB	06/01/24 9:23				U	mg/L						
WG590186CCV9	CCV	06/01/24 9:23	WI240111-9	25.025		25.42	mg/L	102	90	110			
WG590186CCB9	CCB	06/01/24 9:24				U	mg/L						

GCC

ACZ Project ID: **L87864**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Chromium, dissolved

EPA 200.7

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG590584													
WG590584ICV	ICV	06/06/24 16:25	II240515-3	2		1.907	mg/L	95	95	105			
WG590584ICB	ICB	06/06/24 16:31				U	mg/L		-0.06	0.06			
WG590584PQV	PQV	06/06/24 16:34	II240521-5	.05005		.054	mg/L	108	70	130			
WG590584SIC	SIC	06/06/24 16:37	II240521-3	.1001		.1	mg/L	100	80	120			
WG590584LFB	LFB	06/06/24 16:43	II240604-3	.5005		.492	mg/L	98	85	115			
L87865-03AS	AS	06/06/24 17:11	II240604-3	.5005	U	.492	mg/L	98	85	115			
WG590584CCV1	CCV	06/06/24 17:14	II240529-2	1		.949	mg/L	95	90	110			
WG590584CCB1	CCB	06/06/24 17:17				U	mg/L		-0.06	0.06			
L87865-03ASD	ASD	06/06/24 17:20	II240604-3	.5005	U	.486	mg/L	97	85	115	1	20	
WG590584CCV2	CCV	06/06/24 17:50	II240529-2	1		.944	mg/L	94	90	110			
WG590584CCB2	CCB	06/06/24 17:53				U	mg/L		-0.06	0.06			
WG590584CCV3	CCV	06/06/24 18:11	II240529-2	1		.946	mg/L	95	90	110			
WG590584CCB3	CCB	06/06/24 18:14				U	mg/L		-0.06	0.06			

Cobalt, dissolved

EPA 200.8

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG590245													
WG590245ICV	ICV	06/03/24 18:23	MS240404-4	.05		.051815	mg/L	104	90	110			
WG590245ICB	ICB	06/03/24 18:25				.000052	mg/L		-0.00011	0.00011			
WG590245LFB	LFB	06/03/24 18:28	MS240514-1	.05005		.052405	mg/L	105	85	115			
L87839-03AS	AS	06/03/24 18:37	MS240514-1	.05005	.00101	.052318	mg/L	103	70	130			
L87839-03ASD	ASD	06/03/24 18:39	MS240514-1	.05005	.00101	.053041	mg/L	104	70	130	1	20	
WG590245CCV1	CCV	06/03/24 18:51	MS240421-5	.1001		.103525	mg/L	103	90	110			
WG590245CCB1	CCB	06/03/24 18:53				U	mg/L		-0.00015	0.00015			
WG590245CCV2	CCV	06/03/24 19:19	MS240421-5	.1001		.103183	mg/L	103	90	110			
WG590245CCB2	CCB	06/03/24 19:22				U	mg/L		-0.00015	0.00015			
WG590245CCV3	CCV	06/03/24 19:36	MS240421-5	.1001		.105477	mg/L	105	90	110			
WG590245CCB3	CCB	06/03/24 19:38				U	mg/L		-0.00015	0.00015			

Copper, dissolved

EPA 200.7

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG590644													
WG590644ICV	ICV	06/07/24 17:19	II240515-3	2		1.897	mg/L	95	95	105			
WG590644ICB	ICB	06/07/24 17:24				U	mg/L		-0.03	0.03			
WG590644PQV	PQV	06/07/24 17:27	II240521-5	.05005		.049	mg/L	98	70	130			
WG590644SIC	SIC	06/07/24 17:30	II240521-3	.1001		.092	mg/L	92	80	120			
WG590644LFB	LFB	06/07/24 17:37	II240604-3	.5005		.501	mg/L	100	85	115			
L87711-01AS	AS	06/07/24 17:46	II240604-3	.5005	U	.493	mg/L	99	85	115			
L87711-01ASD	ASD	06/07/24 17:49	II240604-3	.5005	U	.492	mg/L	98	85	115	0	20	
WG590644CCV1	CCV	06/07/24 18:07	II240529-2	1		.951	mg/L	95	90	110			
WG590644CCB1	CCB	06/07/24 18:10				U	mg/L		-0.03	0.03			
WG590644CCV2	CCV	06/07/24 18:44	II240529-2	1		.941	mg/L	94	90	110			
WG590644CCB2	CCB	06/07/24 18:47				U	mg/L		-0.03	0.03			
L87884-04AS	AS	06/07/24 18:56	II240604-3	.5005	U	.493	mg/L	99	85	115			
L87884-04ASD	ASD	06/07/24 18:59	II240604-3	.5005	U	.488	mg/L	98	85	115	1	20	
WG590644CCV3	CCV	06/07/24 19:05	II240529-2	1		.937	mg/L	94	90	110			
WG590644CCB3	CCB	06/07/24 19:08				U	mg/L		-0.03	0.03			

GCC

ACZ Project ID: **L87864**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Fluoride

SM 4500-F C-2011

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG590589													
WG590589ICV	ICV	06/06/24 17:04	WC240530-2	2.002		2.13	mg/L	106	90	110			
WG590589ICB	ICB	06/06/24 17:08				.15	mg/L		-0.3	0.3			
WG590589PQV	PQV	06/06/24 17:11	WC240424-1	.35		.45	mg/L	129	50	150			
WG590589LFB	LFB	06/06/24 17:15	WC240411-1	5		4.93	mg/L	99	90	110			
L87864-01AS	AS	06/06/24 17:22	WC240411-1	5	1.14	5.77	mg/L	93	90	110			
L87864-01ASD	ASD	06/06/24 17:25	WC240411-1	5	1.14	5.85	mg/L	94	90	110	1	20	
WG590589CCV1	CCV	06/06/24 17:58	WC240530-2	2.002		2.128	mg/L	106	90	110			
WG590589CCB1	CCB	06/06/24 18:04				U	mg/L		-0.3	0.3			
WG590589CCV2	CCV	06/06/24 19:05	WC240530-2	2.002		2.069	mg/L	103	90	110			
WG590589CCB2	CCB	06/06/24 19:10				U	mg/L		-0.3	0.3			
WG590589CCV3	CCV	06/06/24 19:39	WC240530-2	2.002		2.098	mg/L	105	90	110			
WG590589CCB3	CCB	06/06/24 19:45				U	mg/L		-0.3	0.3			

Iron, dissolved

EPA 200.7

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG590584													
WG590584ICV	ICV	06/06/24 16:25	II240515-3	2		1.909	mg/L	95	95	105			
WG590584ICB	ICB	06/06/24 16:31				U	mg/L		-0.18	0.18			
WG590584PQV	PQV	06/06/24 16:34	II240521-5	.15045		.149	mg/L	99	70	130			
WG590584SIC	SIC	06/06/24 16:37	II240521-3	200.75045		191.2	mg/L	95	1	200			
WG590584LFB	LFB	06/06/24 16:43	II240604-3	1.003		1.003	mg/L	100	85	115			
L87865-03AS	AS	06/06/24 17:11	II240604-3	1.003	U	1.034	mg/L	103	85	115			
WG590584CCV1	CCV	06/06/24 17:14	II240529-2	1		.961	mg/L	96	90	110			
WG590584CCB1	CCB	06/06/24 17:17				U	mg/L		-0.18	0.18			
L87865-03ASD	ASD	06/06/24 17:20	II240604-3	1.003	U	1.023	mg/L	102	85	115	1	20	
WG590584CCV2	CCV	06/06/24 17:50	II240529-2	1		.953	mg/L	95	90	110			
WG590584CCB2	CCB	06/06/24 17:53				U	mg/L		-0.18	0.18			
WG590584CCV3	CCV	06/06/24 18:11	II240529-2	1		.958	mg/L	96	90	110			
WG590584CCB3	CCB	06/06/24 18:14				U	mg/L		-0.18	0.18			

Lead, dissolved

EPA 200.8

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG590245													
WG590245ICV	ICV	06/03/24 18:23	MS240404-4	.05		.0519	mg/L	104	90	110			
WG590245ICB	ICB	06/03/24 18:25				.00011	mg/L		-0.00022	0.00022			
WG590245LFB	LFB	06/03/24 18:28	MS240514-1	.05005		.05133	mg/L	103	85	115			
L87839-03AS	AS	06/03/24 18:37	MS240514-1	.05005	.00012	.05134	mg/L	102	70	130			
L87839-03ASD	ASD	06/03/24 18:39	MS240514-1	.05005	.00012	.05299	mg/L	106	70	130	3	20	
WG590245CCV1	CCV	06/03/24 18:51	MS240421-5	.25025		.26154	mg/L	105	90	110			
WG590245CCB1	CCB	06/03/24 18:53				U	mg/L		-0.0003	0.0003			
WG590245CCV2	CCV	06/03/24 19:19	MS240421-5	.25025		.2583	mg/L	103	90	110			
WG590245CCB2	CCB	06/03/24 19:22				U	mg/L		-0.0003	0.0003			
WG590245CCV3	CCV	06/03/24 19:36	MS240421-5	.25025		.25928	mg/L	104	90	110			
WG590245CCB3	CCB	06/03/24 19:38				.00011	mg/L		-0.0003	0.0003			

GCC

ACZ Project ID: **L87864**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Lithium, dissolved

EPA 200.7

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG590644													
WG590644ICV	ICV	06/07/24 17:19	II240515-3	2		1.9312	mg/L	97	95	105			
WG590644ICB	ICB	06/07/24 17:24				U	mg/L		-0.024	0.024			
WG590644PQV	PQV	06/07/24 17:27	II240521-5	.04		.0355	mg/L	89	70	130			
WG590644SIC	SIC	06/07/24 17:30	II240521-3	.1		.0991	mg/L	99	80	120			
WG590644LFB	LFB	06/07/24 17:37	II240604-3	1		.963	mg/L	96	85	115			
L87711-01AS	AS	06/07/24 17:46	II240604-3	1	.0414	.9817	mg/L	94	85	115			
L87711-01ASD	ASD	06/07/24 17:49	II240604-3	1	.0414	.9901	mg/L	95	85	115	1	20	
WG590644CCV1	CCV	06/07/24 18:07	II240529-2	1		.9577	mg/L	96	90	110			
WG590644CCB1	CCB	06/07/24 18:10				U	mg/L		-0.024	0.024			
WG590644CCV2	CCV	06/07/24 18:44	II240529-2	1		.9513	mg/L	95	90	110			
WG590644CCB2	CCB	06/07/24 18:47				U	mg/L		-0.024	0.024			
L87884-04AS	AS	06/07/24 18:56	II240604-3	1	U	.9528	mg/L	95	85	115			
L87884-04ASD	ASD	06/07/24 18:59	II240604-3	1	U	.9454	mg/L	95	85	115	1	20	
WG590644CCV3	CCV	06/07/24 19:05	II240529-2	1		.9483	mg/L	95	90	110			
WG590644CCB3	CCB	06/07/24 19:08				U	mg/L		-0.024	0.024			

Magnesium, dissolved

EPA 200.7

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG590584													
WG590584ICV	ICV	06/06/24 16:25	II240515-3	100		95.56	mg/L	96	95	105			
WG590584ICB	ICB	06/06/24 16:31				U	mg/L		-0.6	0.6			
WG590584PQV	PQV	06/06/24 16:34	II240521-5	1.006		1.03	mg/L	102	70	130			
WG590584SIC	SIC	06/06/24 16:37	II240521-3	202.206		201.7	mg/L	100	1	200			
WG590584LFB	LFB	06/06/24 16:43	II240604-3	49.99866		49.84	mg/L	100	85	115			
L87865-03AS	AS	06/06/24 17:11	II240604-3	49.99866	1.69	51.17	mg/L	99	85	115			
WG590584CCV1	CCV	06/06/24 17:14	II240529-2	50		48.4	mg/L	97	90	110			
WG590584CCB1	CCB	06/06/24 17:17				U	mg/L		-0.6	0.6			
L87865-03ASD	ASD	06/06/24 17:20	II240604-3	49.99866	1.69	50.47	mg/L	98	85	115	1	20	
WG590584CCV2	CCV	06/06/24 17:50	II240529-2	50		48.04	mg/L	96	90	110			
WG590584CCB2	CCB	06/06/24 17:53				U	mg/L		-0.6	0.6			
WG590584CCV3	CCV	06/06/24 18:11	II240529-2	50		47.59	mg/L	95	90	110			
WG590584CCB3	CCB	06/06/24 18:14				U	mg/L		-0.6	0.6			

GCC

ACZ Project ID: **L87864**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Manganese, dissolved

EPA 200.7

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG590644													
WG590644ICV	ICV	06/07/24 17:19	II240515-3	2		1.907	mg/L	95	95	105			
WG590644ICB	ICB	06/07/24 17:24				U	mg/L		-0.03	0.03			
WG590644PQV	PQV	06/07/24 17:27	II240521-5	.0502		.047	mg/L	94	70	130			
WG590644SIC	SIC	06/07/24 17:30	II240521-3	50.1502		47.07	mg/L	94	1	200			
WG590644LFB	LFB	06/07/24 17:37	II240604-3	.501		.502	mg/L	100	85	115			
L87711-01AS	AS	06/07/24 17:46	II240604-3	.501	U	.494	mg/L	99	85	115			
L87711-01ASD	ASD	06/07/24 17:49	II240604-3	.501	U	.495	mg/L	99	85	115	0	20	
WG590644CCV1	CCV	06/07/24 18:07	II240529-2	1		.971	mg/L	97	90	110			
WG590644CCB1	CCB	06/07/24 18:10				U	mg/L		-0.03	0.03			
WG590644CCV2	CCV	06/07/24 18:44	II240529-2	1		.974	mg/L	97	90	110			
WG590644CCB2	CCB	06/07/24 18:47				U	mg/L		-0.03	0.03			
L87884-04AS	AS	06/07/24 18:56	II240604-3	.501	U	.499	mg/L	100	85	115			
L87884-04ASD	ASD	06/07/24 18:59	II240604-3	.501	U	.498	mg/L	99	85	115	0	20	
WG590644CCV3	CCV	06/07/24 19:05	II240529-2	1		.981	mg/L	98	90	110			
WG590644CCB3	CCB	06/07/24 19:08				U	mg/L		-0.03	0.03			

Mercury, dissolved

EPA 245.1

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG590351													
WG590351ICV	ICV	06/05/24 14:53	HG240528-3	.005		.00512	mg/L	102	95	105			
WG590351ICB	ICB	06/05/24 14:54				U	mg/L		-0.0002	0.0002			
WG590352													
WG590352CCV1	CCV	06/05/24 15:28	HG240528-3	.005		.00494	mg/L	99	90	110			
WG590352CCB1	CCB	06/05/24 15:29				U	mg/L		-0.0002	0.0002			
WG590352PQV	PQV	06/05/24 15:30	HG240528-5	.001001		.00098	mg/L	98	70	130			
WG590352LRB	LRB	06/05/24 15:31				U	mg/L		-0.00044	0.00044			
WG590352LFB	LFB	06/05/24 15:32	HG240528-6	.002002		.00192	mg/L	96	85	115			
WG590352CCV2	CCV	06/05/24 15:39	HG240528-3	.005		.00494	mg/L	99	90	110			
WG590352CCB2	CCB	06/05/24 15:40				U	mg/L		-0.0002	0.0002			
L87849-03LFM	LFM	06/05/24 15:43	HG240528-6	.002002	U	.00195	mg/L	97	85	115			
L87849-03LFMD	LFMD	06/05/24 15:44	HG240528-6	.002002	U	.00198	mg/L	99	85	115	2	20	
WG590352CCV3	CCV	06/05/24 15:50	HG240528-3	.005		.00514	mg/L	103	90	110			
WG590352CCB3	CCB	06/05/24 15:51				U	mg/L		-0.0002	0.0002			
L87891-05LFM	LFM	06/05/24 15:55	HG240528-6	.002002	U	.0019	mg/L	95	85	115			
L87891-05LFMD	LFMD	06/05/24 15:56	HG240528-6	.002002	U	.00188	mg/L	94	85	115	1	20	
WG590352CCV4	CCV	06/05/24 15:59	HG240528-3	.005		.00507	mg/L	101	90	110			
WG590352CCB4	CCB	06/05/24 16:00				U	mg/L		-0.0002	0.0002			

GCC

ACZ Project ID: **L87864**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Nickel, dissolved

EPA 200.7

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG590584													
WG590584ICV	ICV	06/06/24 16:25	II240515-3	2.004		1.8942	mg/L	95	95	105			
WG590584ICB	ICB	06/06/24 16:31				U	mg/L		-0.024	0.024			
WG590584PQV	PQV	06/06/24 16:34	II240521-5	.04008		.0363	mg/L	91	70	130			
WG590584SIC	SIC	06/06/24 16:37	II240521-3	.1002		.0935	mg/L	93	80	120			
WG590584LFB	LFB	06/06/24 16:43	II240604-3	.501		.4855	mg/L	97	85	115			
L87865-03AS	AS	06/06/24 17:11	II240604-3	.501	U	.4821	mg/L	96	85	115			
WG590584CCV1	CCV	06/06/24 17:14	II240529-2	1.002		.926	mg/L	92	90	110			
WG590584CCB1	CCB	06/06/24 17:17				U	mg/L		-0.024	0.024			
L87865-03ASD	ASD	06/06/24 17:20	II240604-3	.501	U	.4789	mg/L	96	85	115	1	20	
WG590584CCV2	CCV	06/06/24 17:50	II240529-2	1.002		.9213	mg/L	92	90	110			
WG590584CCB2	CCB	06/06/24 17:53				U	mg/L		-0.024	0.024			
WG590584CCV3	CCV	06/06/24 18:11	II240529-2	1.002		.915	mg/L	91	90	110			
WG590584CCB3	CCB	06/06/24 18:14				U	mg/L		-0.024	0.024			

Nitrate/Nitrite as N

EPA 353.2

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG589545													
WG589545ICV	ICV	05/21/24 23:39	WI240403-6	2.415		2.468	mg/L	102	90	110			
WG589545ICB	ICB	05/21/24 23:40				U	mg/L		-0.02	0.02			
WG589545LFB	LFB	05/21/24 23:44	WI240228-17	2		2.047	mg/L	102	90	110			
WG589545CCV1	CCV	05/21/24 23:54	WI240515-5	2		2.035	mg/L	102	90	110			
WG589545CCB1	CCB	05/21/24 23:57				U	mg/L		-0.02	0.02			
L87861-05AS	AS	05/22/24 0:06	WI240228-17	2	U	1.968	mg/L	98	90	110			
L87861-06DUP	DUP	05/22/24 0:08			.056	.056	mg/L				0	20	RA
WG589545CCV2	CCV	05/22/24 0:11	WI240515-5	2		2.03	mg/L	102	90	110			
WG589545CCB2	CCB	05/22/24 0:14				U	mg/L		-0.02	0.02			
WG589545CCV3	CCV	05/22/24 0:26	WI240515-5	2		2.038	mg/L	102	90	110			
WG589545CCB3	CCB	05/22/24 0:29				U	mg/L		-0.02	0.02			

Nitrite as N

EPA 353.2

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG589545													
WG589545ICV	ICV	05/21/24 23:39	WI240403-6	.608		.612	mg/L	101	90	110			
WG589545ICB	ICB	05/21/24 23:40				U	mg/L		-0.01	0.01			
WG589545LFB	LFB	05/21/24 23:44	WI240228-17	1		1.003	mg/L	100	90	110			
WG589545CCV1	CCV	05/21/24 23:54	WI240515-5	1		1.032	mg/L	103	90	110			
WG589545CCB1	CCB	05/21/24 23:57				U	mg/L		-0.01	0.01			
L87861-05AS	AS	05/22/24 0:06	WI240228-17	1	U	.961	mg/L	96	90	110			
L87861-06DUP	DUP	05/22/24 0:08			U	U	mg/L				0	20	RA
WG589545CCV2	CCV	05/22/24 0:11	WI240515-5	1		1.03	mg/L	103	90	110			
WG589545CCB2	CCB	05/22/24 0:14				U	mg/L		-0.01	0.01			
WG589545CCV3	CCV	05/22/24 0:26	WI240515-5	1		1.027	mg/L	103	90	110			
WG589545CCB3	CCB	05/22/24 0:29				U	mg/L		-0.01	0.01			

GCC

ACZ Project ID: **L87864**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Potassium, dissolved

EPA 200.7

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG590584													
WG590584ICV	ICV	06/06/24 16:25	II240515-3	20		19.35	mg/L	97	95	105			
WG590584ICB	ICB	06/06/24 16:31				U	mg/L		-1.5	1.5			
WG590584PQV	PQV	06/06/24 16:34	II240521-5	1.002		1.01	mg/L	101	70	130			
WG590584SIC	SIC	06/06/24 16:37	II240521-3	1.002		1	mg/L	100	80	120			
WG590584LFB	LFB	06/06/24 16:43	II240604-3	99.96008		98.65	mg/L	99	85	115			
L87865-03AS	AS	06/06/24 17:11	II240604-3	99.96008	U	98	mg/L	98	85	115			
WG590584CCV1	CCV	06/06/24 17:14	II240529-2	10		9.71	mg/L	97	90	110			
WG590584CCB1	CCB	06/06/24 17:17				U	mg/L		-1.5	1.5			
L87865-03ASD	ASD	06/06/24 17:20	II240604-3	99.96008	U	96.66	mg/L	97	85	115	1	20	
WG590584CCV2	CCV	06/06/24 17:50	II240529-2	10		9.41	mg/L	94	90	110			
WG590584CCB2	CCB	06/06/24 17:53				U	mg/L		-1.5	1.5			
WG590584CCV3	CCV	06/06/24 18:11	II240529-2	10		9.58	mg/L	96	90	110			
WG590584CCB3	CCB	06/06/24 18:14				U	mg/L		-1.5	1.5			

Residue, Filterable (TDS) @180C

SM 2540 C-2011

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG589776													
WG589776PBW	PBW	05/24/24 14:30				U	mg/L		-20	20			
WG589776LCSW	LCSW	05/24/24 14:31	PCN626708	1000		982	mg/L	98	80	120			
L87869-03DUP	DUP	05/24/24 14:53			6500	6388	mg/L				2	10	
WG590230													
WG590230PBW	PBW	06/02/24 12:20				U	mg/L		-20	20			
WG590230LCSW	LCSW	06/02/24 12:22	PCN626711	1000		982	mg/L	98	80	120			
L87890-01DUP	DUP	06/02/24 12:51			494	496	mg/L				0	10	

GCC

ACZ Project ID: **L87864**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Selenium, dissolved

EPA 200.8

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG590245													
WG590245ICV	ICV	06/03/24 18:23	MS240404-4	.05		.05326	mg/L	107	90	110			
WG590245ICB	ICB	06/03/24 18:25				.00011	mg/L		-0.00022	0.00022			
WG590245LFB	LFB	06/03/24 18:28	MS240514-1	.05005		.05474	mg/L	109	85	115			
L87839-03AS	AS	06/03/24 18:37	MS240514-1	.05005	.00013	.05596	mg/L	112	70	130			
L87839-03ASD	ASD	06/03/24 18:39	MS240514-1	.05005	.00013	.05671	mg/L	113	70	130	1	20	
WG590245CCV1	CCV	06/03/24 18:51	MS240421-5	.1001		.10974	mg/L	110	90	110			
WG590245CCB1	CCB	06/03/24 18:53				.00249	mg/L		-0.0003	0.0003			BB BE
WG590245CCV2	CCV	06/03/24 19:19	MS240421-5	.1001		.10812	mg/L	108	90	110			
WG590245CCB2	CCB	06/03/24 19:22				.00024	mg/L		-0.0003	0.0003			
WG590245CCV3	CCV	06/03/24 19:36	MS240421-5	.1001		.10739	mg/L	107	90	110			
WG590245CCB3	CCB	06/03/24 19:38				.0002	mg/L		-0.0003	0.0003			
WG590489													
WG590489ICV	ICV	06/05/24 16:42	MS240404-4	.05		.05177	mg/L	104	90	110			
WG590489ICB	ICB	06/05/24 16:44				.0001	mg/L		-0.00022	0.00022			
WG590489LFB	LFB	06/05/24 16:46	MS240514-1	.05005		.05236	mg/L	105	85	115			
WG590489CCV1	CCV	06/05/24 17:04	MS240421-5	.1001		.10236	mg/L	102	90	110			
WG590489CCB1	CCB	06/05/24 17:06				U	mg/L		-0.0003	0.0003			
L87888-01AS	AS	06/05/24 17:08	MS240514-1	.05005	.00279	.05727	mg/L	109	70	130			
L87888-01ASD	ASD	06/05/24 17:09	MS240514-1	.05005	.00279	.05629	mg/L	107	70	130	2	20	E6
WG590489CCV2	CCV	06/05/24 17:26	MS240421-5	.1001		.10097	mg/L	101	90	110			
WG590489CCB2	CCB	06/05/24 17:28				.0001	mg/L		-0.0003	0.0003			
WG590489CCV3	CCV	06/05/24 17:39	MS240421-5	.1001		.10077	mg/L	101	90	110			
WG590489CCB3	CCB	06/05/24 17:40				U	mg/L		-0.0003	0.0003			

Sodium, dissolved

EPA 200.7

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG590584													
WG590584ICV	ICV	06/06/24 16:25	II240515-3	100		95.93	mg/L	96	95	105			
WG590584ICB	ICB	06/06/24 16:31				U	mg/L		-0.6	0.6			
WG590584PQV	PQV	06/06/24 16:34	II240521-5	1.005		1.05	mg/L	104	70	130			
WG590584SIC	SIC	06/06/24 16:37	II240521-3	1.005		1.05	mg/L	104	80	120			
WG590584LFB	LFB	06/06/24 16:43	II240604-3	99.97238		96.52	mg/L	97	85	115			
L87865-03AS	AS	06/06/24 17:11	II240604-3	99.97238	2.04	98.17	mg/L	96	85	115			
WG590584CCV1	CCV	06/06/24 17:14	II240529-2	50		47.82	mg/L	96	90	110			
WG590584CCB1	CCB	06/06/24 17:17				U	mg/L		-0.6	0.6			
L87865-03ASD	ASD	06/06/24 17:20	II240604-3	99.97238	2.04	96.83	mg/L	95	85	115	1	20	
WG590584CCV2	CCV	06/06/24 17:50	II240529-2	50		46.97	mg/L	94	90	110			
WG590584CCB2	CCB	06/06/24 17:53				U	mg/L		-0.6	0.6			
WG590584CCV3	CCV	06/06/24 18:11	II240529-2	50		47.76	mg/L	96	90	110			
WG590584CCB3	CCB	06/06/24 18:14				U	mg/L		-0.6	0.6			

GCC

ACZ Project ID: **L87864**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Sulfate

ASTM D516-07/-11/-16

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG589608													
WG589608ICV	ICV	05/22/24 10:45	WI240522-2	20		21.9	mg/L	110	85	115			
WG589608ICB	ICB	05/22/24 10:46				U	mg/L		-2.5	2.5			
WG589608CCV1	CCV	05/22/24 14:16	WI240517-1	25		28.5	mg/L	114	85	115			
WG589608CCB1	CCB	05/22/24 14:16				U	mg/L		-2.5	2.5			
WG589608LFB	LFB	05/22/24 14:16	WI240304-2	10		10.7	mg/L	107	85	115			
WG589608CCV2	CCV	05/22/24 14:20	WI240517-1	25		26.6	mg/L	106	85	115			
WG589608CCB2	CCB	05/22/24 14:20				U	mg/L		-2.5	2.5			
WG589608CCV3	CCV	05/22/24 14:23	WI240517-1	25		27	mg/L	108	85	115			
WG589608CCB3	CCB	05/22/24 14:23				U	mg/L		-2.5	2.5			
WG589608CCV4	CCV	05/22/24 14:28	WI240517-1	25		26.8	mg/L	107	85	115			
WG589608CCB4	CCB	05/22/24 14:28				U	mg/L		-2.5	2.5			
WG589608CCV5	CCV	05/22/24 14:33	WI240517-1	25		26.8	mg/L	107	85	115			
WG589608CCB5	CCB	05/22/24 14:33				U	mg/L		-2.5	2.5			
WG589608CCV6	CCV	05/22/24 14:38	WI240517-1	25		26.6	mg/L	106	85	115			
WG589608CCB6	CCB	05/22/24 14:38				U	mg/L		-2.5	2.5			
L87889-02AS	AS	05/22/24 14:42	SO4TURB25X	10	413	415.6	mg/L	26	85	115			M3
WG589608CCV7	CCV	05/22/24 14:43	WI240517-1	25		26.7	mg/L	107	85	115			
WG589608CCB7	CCB	05/22/24 14:43				U	mg/L		-2.5	2.5			
WG589608CCV8	CCV	05/22/24 14:44	WI240517-1	25		27.7	mg/L	111	85	115			
WG589608CCB8	CCB	05/22/24 14:45				U	mg/L		-2.5	2.5			
WG589608CCV9	CCV	05/22/24 14:45	WI240517-1	25		26.7	mg/L	107	85	115			
WG589608CCB9	CCB	05/22/24 14:46				U	mg/L		-2.5	2.5			
WG589608CCV10	CCV	05/22/24 14:47	WI240517-1	25		27.7	mg/L	111	85	115			
WG589608CCB10	CCB	05/22/24 14:47				U	mg/L		-2.5	2.5			
WG589608CCV11	CCV	05/22/24 14:48	WI240517-1	25		27.2	mg/L	109	85	115			
WG589608CCB11	CCB	05/22/24 14:48				U	mg/L		-2.5	2.5			
WG589608CCV12	CCV	05/22/24 14:50	WI240517-1	25		28.1	mg/L	112	85	115			
WG589608CCB12	CCB	05/22/24 14:50				U	mg/L		-2.5	2.5			
L87889-02ASD	ASD	05/22/24 14:56	SO4TURB25X	10	413	445.4	mg/L	324	85	115	7	20	M3
WG589608CCV13	CCV	05/22/24 14:56	WI240517-1	25		27.8	mg/L	111	85	115			
WG589608CCB13	CCB	05/22/24 14:56				U	mg/L		-2.5	2.5			

Vanadium, dissolved

EPA 200.7

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG590584													
WG590584ICV	ICV	06/06/24 16:25	II240515-3	2		1.951	mg/L	98	95	105			
WG590584ICB	ICB	06/06/24 16:31				U	mg/L		-0.015	0.015			
WG590584PQV	PQV	06/06/24 16:34	II240521-5	.025025		.024	mg/L	96	70	130			
WG590584SIC	SIC	06/06/24 16:37	II240521-3	.1001		.097	mg/L	97	80	120			
WG590584LFB	LFB	06/06/24 16:43	II240604-3	.5005		.4972	mg/L	99	85	115			
L87865-03AS	AS	06/06/24 17:11	II240604-3	.5005	U	.4938	mg/L	99	85	115			
WG590584CCV1	CCV	06/06/24 17:14	II240529-2	1		.977	mg/L	98	90	110			
WG590584CCB1	CCB	06/06/24 17:17				U	mg/L		-0.03	0.03			
L87865-03ASD	ASD	06/06/24 17:20	II240604-3	.5005	U	.487	mg/L	97	85	115	1	20	
WG590584CCV2	CCV	06/06/24 17:50	II240529-2	1		.967	mg/L	97	90	110			
WG590584CCB2	CCB	06/06/24 17:53				U	mg/L		-0.03	0.03			
WG590584CCV3	CCV	06/06/24 18:11	II240529-2	1		.977	mg/L	98	90	110			
WG590584CCB3	CCB	06/06/24 18:14				U	mg/L		-0.03	0.03			

GCC

ACZ Project ID: **L87864**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Zinc, dissolved

EPA 200.7

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG590644													
WG590644ICV	ICV	06/07/24 17:19	II240515-3	2		1.921	mg/L	96	95	105			
WG590644ICB	ICB	06/07/24 17:24				U	mg/L		-0.06	0.06			
WG590644PQV	PQV	06/07/24 17:27	II240521-5	.0502		.052	mg/L	104	70	130			
WG590644SIC	SIC	06/07/24 17:30	II240521-3	.10025		.098	mg/L	98	80	120			
WG590644LFB	LFB	06/07/24 17:37	II240604-3	.50045		.513	mg/L	103	85	115			
L87711-01AS	AS	06/07/24 17:46	II240604-3	.50045	U	.514	mg/L	103	85	115			
L87711-01ASD	ASD	06/07/24 17:49	II240604-3	.50045	U	.512	mg/L	102	85	115	0	20	
WG590644CCV1	CCV	06/07/24 18:07	II240529-2	1		.965	mg/L	97	90	110			
WG590644CCB1	CCB	06/07/24 18:10				U	mg/L		-0.06	0.06			
WG590644CCV2	CCV	06/07/24 18:44	II240529-2	1		.964	mg/L	96	90	110			
WG590644CCB2	CCB	06/07/24 18:47				U	mg/L		-0.06	0.06			
L87884-04AS	AS	06/07/24 18:56	II240604-3	.50045	U	.515	mg/L	103	85	115			
L87884-04ASD	ASD	06/07/24 18:59	II240604-3	.50045	U	.511	mg/L	102	85	115	1	20	
WG590644CCV3	CCV	06/07/24 19:05	II240529-2	1		.971	mg/L	97	90	110			
WG590644CCB3	CCB	06/07/24 19:08				U	mg/L		-0.06	0.06			

GCC Rio Grande

ACZ Project ID: **L87864**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L87864-01	WG590186	Chloride	SM 4500-Cl E-2011	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG589545	Nitrate/Nitrite as N	EPA 353.2	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Nitrite as N	EPA 353.2	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG590245	Selenium, dissolved	EPA 200.8	BB	Target analyte detected in calibration blank at or above acceptance limit. Sample value was > 10X the concentration in the calibration blank.
	WG589608	Sulfate	ASTM D516-07/-11/-16	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L87864-02	WG590186	Chloride	SM 4500-Cl E-2011	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG589545	Nitrate/Nitrite as N	EPA 353.2	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Nitrite as N	EPA 353.2	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG590489	Selenium, dissolved	EPA 200.8	EA	Concentration estimated. Analytical result was less than the negative MDL due to matrix interferences.
	WG589608	Sulfate	ASTM D516-07/-11/-16	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L87864-03	WG590186	Chloride	SM 4500-Cl E-2011	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG589545	Nitrate/Nitrite as N	EPA 353.2	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Nitrite as N	EPA 353.2	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG590230	Residue, Filterable (TDS) @180C	SM 2540 C-2011	H2	Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
	WG590489	Selenium, dissolved	EPA 200.8	DF	Sample required dilution due to high sediment.
	WG589608	Sulfate	ASTM D516-07/-11/-16	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.

GCC Rio Grande

ACZ Project ID: **L87864**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L87864-04	WG590186	Chloride	SM 4500-Cl E-2011	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG589545	Nitrate/Nitrite as N	EPA 353.2	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Nitrite as N	EPA 353.2	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG590489	Selenium, dissolved	EPA 200.8	EA	Concentration estimated. Analytical result was less than the negative MDL due to matrix interferences.
	WG589608	Sulfate	ASTM D516-07/-11/-16	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.

GCC Rio Grande

ACZ Project ID: **L87864**

No certification qualifiers associated with this analysis

GCC Rio Grande

ACZ Project ID: L87864

Date Received: 05/21/2024 11:29

Received By:

Date Printed: 5/22/2024

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	☐	☐	☒
2) Is the Chain of Custody form or other directive shipping papers present?	☒	☐	☐
3) Does this project require special handling procedures such as CLP protocol?	☐	☒	☐
4) Are any samples NRC licensable material?	☐	☐	☒
5) If samples are received past hold time, proceed with requested short hold time analyses?	☒	☐	☐
6) Is the Chain of Custody form complete and accurate?	☒	☐	☐
7) Were any changes made to the Chain of Custody form prior to ACZ receiving the samples?	☐	☒	☐

Samples/Containers

	YES	NO	NA
8) Are all containers intact and with no leaks?	☒	☐	☐
9) Are all labels on containers and are they intact and legible?	☒	☐	☐
10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time?	☒	☐	☐
11) For preserved bottle types, was the pH checked and within limits? ¹	☒	☐	☐
12) Is there sufficient sample volume to perform all requested work?	☒	☐	☐
13) Is the custody seal intact on all containers?	☐	☐	☒
14) Are samples that require zero headspace acceptable?	☐	☐	☒
15) Are all sample containers appropriate for analytical requirements?	☒	☐	☐
16) Is there an Hg-1631 trip blank present?	☐	☐	☒
17) Is there a VOA trip blank present?	☐	☐	☒
18) Were all samples received within hold time?	☒	☐	☐

NA indicates Not Applicable

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Temp Criteria (°C)	Rad (µR/Hr)	Custody Seal Intact?
-----	-----	-----	-----	-----
NA41919	0.2	<=6.0	15	Yes

Was ice present in the shipment container(s)?

Yes - Wet ice was present in the shipment container(s).

Client must contact an ACZ Project Manager if analysis should not proceed for samples received outside of their thermal preservation acceptance criteria.

GCC Rio Grande

ACZ Project ID: L87864

Date Received: 05/21/2024 11:29

Received By:

Date Printed: 5/22/2024

¹ The preservation of the following bottle types is not checked at sample receipt: Orange (oil and grease), Purple (total cyanide), Pink (dissolved cyanide), Brown (arsenic speciation), Sterile (fecal coliform), EDTA (sulfite), HCl preserved vial (organics), Na₂S₂O₃ preserved vial (organics), and HG-1631 (total/dissolved mercury by method 1631).

