MOSCOW
Urban Renewal Agency

Meeting Agenda: Thursday, September 4, 2025, 7:30 a.m.

City of Moscow Council Chambers • 206 E 3rd Street • Moscow, ID 83843
(A) = Board Action Item

1. **Consent Agenda (A)** - Any item will be removed from the consent agenda at the request of a member of the Board and that item will be considered separately later.
   - **A.** Minutes from August 7, 2025
   - **B.** July 2025 Payables
   - **C.** July 2025 Financials

   ACTION: Approve the consent agenda or take such other action deemed appropriate.

2. **Public Comment**
   Members of the public may speak to the Board regarding matters NOT on the Agenda nor currently pending before the Moscow Urban Renewal Agency. Please state your name and resident city for the record and limit your remarks to three minutes.

3. **Sixth and Jackson Street Property Groundwater Monitoring Report (A) - Cody Riddle**
   Elevated ammonia and nitrate concentrations at the Agency's property at Sixth and Jackson have been monitored since 2016. The Board approved a pilot project that involved a microbial injection into site groundwater to evaluate the effectiveness of breaking down ammonia and nitrates in the soil. Staff will provide an update of the project and potential next steps, including a request to authorize an expenditure of approximately $9,000 to install two downgradient monitoring wells in the public right-of-way. The purpose of these wells would be to determine ammonia and nitrate levels off-site. If at acceptable levels, the on-site injection and monitoring systems could be removed.
   ACTION: Receive the report and accept the recommendation regarding next steps, including authorization for the requested expenditure; or provide other action as deemed appropriate.

4. **Tabling Opportunity at the Farmers Market (A) - Cody Riddle**
   The Board has expressed an interest in tabling at the Moscow Farmers Market. The last available date this season is October 18, 2025. Staff will lead a discussion to gauge interest in tabling this year, or if it is more appropriate to look for a date during the next season.
   ACTION: Receive the report and accept the recommendation regarding next steps; or provide other direction as deemed appropriate.

5. **General Agency Updates – Cody Riddle**
   - The date of the next regular meeting of the Urban Renewal Agency is September 18, 2025, but Staff will reschedule it to occur on Thursday, September 25 instead.
   - General Agency Business:

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Moscow Urban Renewal Agency

Meeting Minutes: Thursday, August 7, 2025, 7:30 a.m.

City of Moscow Council Chambers • 206 E 3rd Street • Moscow, ID 83843

Commissioners Present	Staff in Attendance
Steve McGeehan, Chair	Cody Riddle, Executive Director
Mark Beauchamp	Jennifer Fleischman, Clerk
Drew Davis	Renee Tack, Treasurer
Sandra Kelly	
Tom Lamar	
Alison Tompkins	
Nancy Tribble	

McGeehan called the meeting to order at 7:30 a.m.

1. Approval of July 17, 2025 Minutes (A)

Tompkins moved for approval of the minutes as written, seconded by Beauchamp. Roll Call Vote; Ayes: Beauchamp, Kelly, McGeehan, Tompkins, Tribble (5). Nays: None. Abstentions: Davis, Lamar (2). Motion carried.

Davis arrived at 7:32 a.m.

2. Public Comment

Members of the public may speak to the Board regarding matters NOT on the Agenda nor currently pending before the Moscow Urban Renewal Agency. Please state your name and resident city for the record and limit your remarks to three minutes.

None offered.

Lamar arrived at 7:33 a.m.

3. Public Hearing: Proposed FY2026 Agency Budget and 5-Year Capital Improvement Plan (A)

Staff has prepared the draft FY2026 budget document and capital improvement plan which includes anticipated revenues and expenditures for the upcoming fiscal year. The drafts were reviewed by the Agency Board on July 17, 2025 and recommended forwarding the items to public hearing. In accordance with State Law, the Agency is required to conduct a public hearing on the annual appropriations budget to allow for public comment and testimony.

Riddle provided a brief review of the proposed Urban Renewal Agency FY2026 Budget and highlighted some of the planned expenditures and revenues. The planned Hwy 95 underpass project includes sidewalk replacements and removal of the older bridge to the west of the intersection.

Public Hearing opened at 7:39 a.m.

Victoria Seever, Moscow, read the comments she submitted via email to the Board (see attached).

Public Hearing closed at 7:42 a.m.

The Board thanked Staff for all their work creating the budget and capital improvement plan every year. The Chair encouraged the Board to continue spreading the word to the community about projects that the Agency has and will be contributing to, including work for the Sixth and Jackson Street property. There was a brainstorming discussion about ideas for creating a video or slideshow to have on the Agency website for marketing story-telling purposes. The Board talked about tabling at the Farmers Market. Staff will contact the Moscow Farmers Market manager to see if there are any remaining openings this season for tabling.

Lamar moved to adopt the FY2026 Budget, Capital Improvement Plan, and corresponding Budget Resolution 2025-02, as recommended by Staff. The motion was seconded by Tompkins. Roll Call Vote; Ayes: Unanimous (7). Nays: None. Abstentions: None. Motion carried.

4. General Agency Updates – Cody Riddle

- *The next regular meeting of the Urban Renewal Agency is scheduled for August 21, 2025.*

Staff will provide updates on the Alta well monitoring project and the proposed street tree planting at the Sixth and Jackson Street property at the next meeting.

- *General Agency Business:*

The temporary parking lot on the Sixth and Jackson Street property has been in heavy use by the public.

The meeting adjourned at 7:52 a.m.

_____ _____

Steve McGeehan, Agency Chair Date

MOSCOW
Urban Renewal Agency

Balance Sheet
July 31, 2025

	Total Funds
ASSETS	
Cash	53,979
Investments - LGIP	4,695,519
Investments-Zions Debt Reserve	44,524
Other Assets	5,260
Land	679,420
Total Assets	$ 5,478,702
LIABILITIES	
Series 2010 Bond - due within one year	39,000
Latah County payback agreement - due within one year	5,000
Series 2010 Bond - due after one year	82,000
Latah County payback agreement - due after one year	69,537
Total Liabilities	195,537
FUND BALANCES	
Net Investment in Capital Assets	558,420
Restricted Fund Balance	44,312
Unrestricted Fund Balance	4,680,433
Total Fund Balance	5,283,165
Total Liabilities and Fund Balance	$ 5,478,702

July-25
Checks by Date

Check Number	Vendor	Description	Check Date	Check Amount
4995	UAVISTA	Avista Utilities	07/02/2025	
	1563734669-07182025	Jun'25 Electric for 6th & Jackson		47.33
Total for Check Number 4995:				47.33
4996	UCITYMOS	City of Moscow	07/02/2025	
	115911-06302025	Jun '25 Utilities 6th & Jackson		342.28
Total for Check Number 4996:				342.28
4997	UCITYMOS	City of Moscow	07/09/2025	
	2500002729	City Admin Fees July'25		4,893.00
Total for Check Number 4997:				4,893.00
4998	UINLACED	Inland Cellular	07/09/2025	
	00014612	Annual Website Hosting 25-26		650.00
Total for Check Number 4998:				650.00
Total bills for July 2025:				**$ 5,932.61**

July-25

Accounts Payable Checks for Approval

Check	Check Date	Fund Name	Vendor	Void	Amount
4995	07/02/2025	Moscow Urban Renewal Agency	Avista Utilities		47.33
4996	07/02/2025	Moscow Urban Renewal Agency	City of Moscow		342.28
4997	07/09/2025	Moscow Urban Renewal Agency	City of Moscow		4,893.00
4998	07/09/2025	Moscow Urban Renewal Agency	Inland Cellular		650.00
			Report Total:	0.00	5,932.61

Steve McGeehan, Chairperson

Accounts payable expenditures as contained herein were made in compliance with the duly adopted budget for the current fiscal year and according to Idaho law.

Cody Riddle, Executive Director

Renee Tack, Treasurer

General Ledger
Expense vs. Budget

July-25

Account	Description	Amended Budget	Period Amt	End Bal	Variance	% Budget Used
	URA General Fund					
890-880-642-00	Administrative Services	$ 58,716.00	$ 4,893.00	$ 48,930.00	$ 9,786.00	83.33%
890-880-642-15	Professional Services-Other	$ 5,000.00	$ -	$ 1,250.00	$ 3,750.00	25.00%
890-880-642-20	Professional Services-Auditing	$ 6,047.00	$ -	$ 6,050.00	$ (3.00)	100.05%
890-880-642-89	Professional Services	$ 541.00	$ 650.00	$ 669.95	$ (128.95)	123.84%
890-880-644-10	Advertising & Publishing	$ 515.00	$ -	$ 86.12	$ 428.88	16.72%
890-880-668-10	Liability Insurance-General	$ 2,650.00	$ -	$ 2,612.00	$ 38.00	98.57%
	Contractual	$ 73,469.00	$ 5,543.00	$ 59,598.07	$ 13,870.93	81.12%
890-880-631-10	Postage Expense	$ 100.00	$ -	$ -	$ 100.00	0.00%
890-880-631-20	Printing and Binding	$ 400.00	$ -	$ -	$ 400.00	0.00%
890-880-647-10	Travel & Meetings-General	$ 500.00	$ -	$ -	$ 500.00	0.00%
890-880-649-10	Professional Development	$ 500.00	$ -	$ -	$ 500.00	0.00%
890-880-669-10	Misc. Expense-General	$ 500.00	$ -	$ -	$ 500.00	0.00%
	Commodities	$ 2,000.00	$ -	$ -	$ 2,000.00	0.00%
	URA General Fund - Total	$ 75,469.00	$ 5,543.00	$ 59,598.07	$ 15,870.93	78.97%
	URA Legacy District					
890-895-642-10	Professional Services-Legacy	$ 5,305.00	$ -	$ -	$ 5,305.00	0.00%
890-895-642-12	Land Sale Expense-Legacy	$ 2,122.00	$ -	$ -	$ 2,122.00	0.00%
890-895-644-10	Ad. & Marketing Expense-Legacy	$ 1,061.00	$ -	$ -	$ 1,061.00	0.00%
	Contractual	$ 8,488.00	$ -	$ -	$ 8,488.00	0.00%
890-895-647-10	Travel & Meetings-Legacy	$ 530.00	$ -	$ -	$ 530.00	0.00%
890-895-652-10	Heat, Lights & Utilities	$ 4,774.00	$ 389.61	$ 3,475.36	$ 1,298.64	72.80%
890-895-658-51	Development Participation	$ 798,000.00	$ -	$ -	$ 798,000.00	0.00%
890-895-669-10	Misc. Expense-Legacy	$ 530.00	$ -	$ -	$ 530.00	0.00%
890-895-675-00	Fiscal Agent Trustee fees	$ 1,500.00	$ -	$ -	$ 1,500.00	0.00%
890-895-676-15	Latah County Reimb. Agreement	$ 5,000.00	$ -	$ 5,000.00	$ -	100.00%

General Ledger
Expense vs. Budget

July-25

Account	Description	Amended Budget	Period Amt	End Bal	Variance	% Budget Used
890-895-676-17	Owner Participation Agreements	$ 59,500.00	$ -	$ 21,889.92	$ 37,610.08	36.79%
	Commodities	$ 869,834.00	$ 389.61	$ 30,365.28	$ 839,468.72	3.49%
890-895-890-00	Transfer To: General Fund	$ 75,468.00	$ -	$ -	$ 75,468.00	0.00%
	Transfers To	$ 75,468.00	$ -	$ -	$ 75,468.00	0.00%
890-895-900-11	Contingency - Legacy	$ 15,000.00	$ -	$ -	$ 15,000.00	0.00%
	Contingency	$ 15,000.00	$ -	$ -	$ 15,000.00	0.00%
	URA Legacy District - Total	$ 968,790.00	$ 389.61	$ 30,365.28	$ 938,424.72	3.13%
890-892-790-01	Bond Principal - Legacy	$ 39,000.00	$ -	$ -	$ 39,000.00	0.00%
890-892-791-01	Bond Interest - Legacy	$ 5,312.00	$ -	$ 325.60	$ 4,986.40	6.13%
	Debt Service - Total	$ 44,312.00	$ -	$ 325.60	$ 43,986.40	0.73%
890-892-990-01	Ending Fund Bal - Assigned	$ 1,559,514.00	$ -	$ -	$ 1,559,514.00	0.00%
890-892-990-05	Ending Fund Bal - Restricted	$ 49,752.00	$ -	$ -	$ 49,752.00	0.00%
890-899-990-00	Ending Fund Bal - Unassigned	$ 427,205.00	$ -	$ -	$ 427,205.00	0.00%
	Ending Fund Balance - Total	$ 2,036,471.00	$ -	$ -	$ 2,036,471.00	0.00%
TOTAL	Moscow Urban Renewal Agency	$ 3,125,042.00	$ 5,932.61	$ 90,288.95	$ 3,034,753.05	2.89%

General Ledger

Revenue Analysis

July 2025

Account Number	Description	Budgeted Revenue	Period Revenue	YTD Revenue	Variance	Uncollected Bal	% Avail/Uncollect	% Received
	Moscow Urban Renewal Agency							
890-000-410-01	Property Taxes - Legacy	$ 980,000.00	$ 378,117.03	$ 996,323.21	$ (16,323.21)	$ (16,323.21)	-1.67%	101.67%
890-000-471-00	Investment Earnings	$ 100,001.00	$ 15,526.35	$ 136,929.61	$ (36,928.61)	$ (36,928.61)	-36.93%	136.93%
890-000-498-96	Transfer In: Legacy	$ 75,468.00	$ -	$ -	$ 75,468.00	$ 75,468.00	100.00%	0.00%
	Moscow Urban Renewal Agency	**$ 1,155,469.00**	**$ 393,643.38**	**$ 1,133,252.82**	**$ 22,216.18**	**$ 22,216.18**	**1.92%**	**98.08%**
Revenue Total		**$ 1,155,469.00**	**$ 393,643.38**	**$ 1,133,252.82**	**$ 22,216.18**	**$ 22,216.18**	**1.92%**	**98.08%**

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T E C H N I C A L M E M O R A N D U M

To: Steve Gill, IDEQ, Coeur d'Alene

CC: Cody Riddle, Moscow Urban Renewal Agency

From: Robin Nimmer, Moscow
Mikahala Waters, Moscow
Brett McLees, Boise

Date: May 30, 2025

Job Code: 23114.090

Subject: **Microbial Injection Pilot Test to Treat Ammonia/Nitrate in Groundwater at 6th & Jackson Streets Site, Moscow, Idaho**

Section 1 Purpose and Background

1.1 Purpose

This memorandum summarizes the Microbial Injection Pilot Test (Pilot Test) conducted at the 6th and Jackson Streets Site, located at 217 & 317 West 6th Street in Moscow, Idaho, and also documents well maintenance work conducted in 2024. The Idaho Department of Environmental Quality (IDEQ) contracted Alta Science & Engineering, Inc. (Alta) under contract K305 Task Order 69-B to perform the Pilot Test and related groundwater sampling at the Site. Figure 1 shows the Site layout.

The Pilot Test involved a microbial injection into site groundwater to evaluate the proof of concept method as a potential additional remedy at the Site, as recommended in the Remedial Alternatives Analysis (RAA) (Alta 2024b).

1.2 Background

The 0.84-acre Site is located southwest of the intersection between West 6th Street and Jackson Street in Moscow, Idaho, between Moscow's historic downtown district and the University of Idaho campus. The Moscow Urban Renewal Agency (URA) currently owns the Site.

Historically, industrial agricultural businesses and storage of agricultural chemicals supported by the former railroad corridor occupied the Site. Most recently, a retail produce business operated on the northeast corner of the Site from about 2000 through 2010. All Site buildings have been removed and the Site is currently vacant and mostly unpaved, except for a small, paved area along the southwestern boundary.

In 2015, the City of Moscow (City), contracted with Alta Science & Engineering, Inc. (Alta) to implement the remedial action strategy presented in the *Final Analysis of Brownfields Cleanup Alternatives [ABCA] and Remediation Work Plan for 217 & 317 W. 6th Street Moscow, Idaho*

(TerraGraphics 2015a; hereinafter referred to as the ABCA/Work Plan) to address elevated nitrate and ammonia concentrations in shallow groundwater and soils.

The ABCA/Work Plan identified remediation standards that ensure current or probable future risks to human health or the environment are eliminated or reduced, based on present and reasonably anticipated future uses of the Site (IDAPA 58.01.18(02)b). This work was completed as part of the Greater Moscow Area Coalition (the Coalition) Assessment Grant BF-00J24101 project and in compliance with the Voluntary Cleanup Program (VCP) agreement between the Idaho Department of Environmental Quality (IDEQ) and the Moscow URA.

In late 2015 and early 2016, Alta implemented remedial actions, including soil excavation, groundwater extraction system installation, and sodium lactate amendment applied to soil and groundwater (TerraGraphics 2016). The groundwater extraction system, which has been operating since February 2016, consists of three wells (EW-1, EW-2, and EW-3), each equipped with a dedicated 12-volt submersible pump that recovers groundwater from the well and discharges it into the City sanitary sewer system. Figure 1 shows the location of the extraction wells. Alta designed the extraction system to remove nitrate- and ammonia-impacted groundwater and prevent it from migrating off the Site. However, due to elevated residual concentrations of ammonia and nitrate, activity and use limitations as part of an environmental covenant (EC) were applied to the Site deed in March 2017.

Annual compliance monitoring per the EC began in 2018 to evaluate if ammonia and nitrate in groundwater met the Site Remediation Goals of 10 milligrams per liter (mg/L) for nitrate and 3.83 mg/L for ammonia. Prior to 2018, groundwater samples were collected several times a year from two onsite groundwater monitoring wells (MW-3 and MW-6) until December 2017 when MW-6 was damaged due to Site grading activity and was not recovered. However, during Spring 2022, the Alta field crew re-discovered MW-6 and determined it to be repairable. In December 2022, Alta's field crew rehabilitated the well to a condition in which representative groundwater samples could be collected in accordance with the Site-specific Quality Assurance Project Plan (QAPP) (TerraGraphics 2015b). The January 2023 Sample Event was the first time Alta's field crew sampled MW-6 since 2017. Figure 1 shows the location of the monitoring wells.

In July 2023, the URA approved a redevelopment plan for the Site[1]. The proposed building footprint would have covered most of the extraction well system and injection wells, indicating they would need to be removed and potentially relocated. Given this Site plan, the elevated ammonia and nitrate concentrations remaining in MW-3, and the uncertainty in MW-3's accurate representation of the Site's shallow aquifer, Alta installed an additional monitoring well (MW-3A) near MW-3 on October 20, 2023 and conducted three sampling events (October 26, 2003, December 12, 2023, and January 3, 2024) with all three wells (MW-3, MW-3A, and MW-6). Alta (2024a) describes the results of these sampling events:

- ammonia and nitrate concentrations fluctuate seasonally
- ammonia and nitrate concentrations exceeded the remediation goals in certain events at certain wells
- MW-3 is representative of the shallow aquifer based on the similarity of data between MW-3 (smaller diameter well) and MW-3A (larger diameter well)

Groundwater data suggest the ammonia source remains within onsite soils contributing to ammonia and nitrate concentrations in onsite groundwater. In collaboration with IDEQ, Alta

[1] Note: In March of 2024, the URA decided to end its agreement with the developers.

prepared a RAA Memorandum (Alta 2024b) to identify supplemental remediation alternatives, which led to this Pilot Test.

Section 2 Pilot Study Field Work

2.1 The Injection

Alta worked in collaboration with Aquafix Inc. to customize the microbial injection solution based on Site-specific parameters. The in-situ biological nitrification process is used to treat ammonia in various environmental settings, including wastewater treatment plants, agricultural systems, and contaminated soils. It involves the sequential activity of specialized bacteria to convert ammonia (NH_4^+) to nitrate (NO_3^-).

One commonly used form of liquid biological nitrification is VitaStim Dynamic Duo made by Aquafix, Inc., used exclusively in municipal wastewater streams and plants to reduce ammonia and nitrate levels. VitaStim Dynamic Duo is a two-part product that is comprised of both ammonia assimilators and nitrifiers. The ammonia assimilators contain heterotrophic nitrifying bacteria that utilize both carbon and a high fraction of nitrogen. The nitrifiers contain high concentrations of ammonia and nitrite oxidizing bacteria as well as micronutrients to stimulate growth and reproduction of nitrifying bacteria. This two-step process contains bacteria to first oxidize ammonia to nitrite, and second, to oxidize nitrite to nitrate. The product works best with pH 7-8, DO of 2-3 mg/L, and adequate alkalinity.

The VitaStim Dynamic Duo included live microbial populations of

- VitaStim Nitrifiers
  - Autotrophic ammonia- and nitrite-oxidizing bacteria, such as Nitrospora, Nitrosomonas, Nitrospira, and Nitrobacter as well as micronutrients to help the bacteria grow and reproduce
- VitaStim Ammonia Assimilators
  - Heterotrophic nitrifying bacteria that utilize both carbon and a high fraction of nitrogen

The Pilot Test injections took place on October 14th and 15th, 2024. The groundwater extraction system was shut down during the test from October 11, 2024 to January 15, 2025. Alta used an enclosed injection trailer equipped with injection fittings, pressure gauges, flow meters and controllers, two 275-gallon IBC totes, and a stainless-steel double diaphragm pump to transfer the microbial solution directly into onsite wells IW-1, IW-2, and IW-3.

Each injection batch consisted of 4 ounces of VitaStim Dynamic Duo (two mixtures; 8 ounces total) mixed with approximately 250 gallons of potable water in the IBC tote. The field crew mixed two batches of amendment per well and injected each well with about 500 gallons. Table 1 shows the injection dates, times, volumes, rates, and observations for each well. Note the field crew moved from injecting 38 gallons into IW-1 on October 14, 2024 to injecting into IW-2 to see if this well would accept the injectant better, which it did. The remaining injection volume for IW-1 was injected the following day. The field crew observed daylighting approximately 10-15 feet away when injecting into IW-1. When this occurred, the field crew paused the injection to allow for natural infiltration and then resumed.

The field crew followed the Addendum to the Quality Assurance Project Plan (QAPP) for a Pilot Study for 6th & Jackson Street, Moscow (Alta 2024c), with deviations described in Section 2.3.

Attachment A contains photographs of the field work.

2.2 Groundwater Sampling

Alta collected groundwater samples for ammonia and nitrate analysis pre- and post-injection to evaluate the effectiveness of the Pilot Study. Four sampling events took place October 14 - 28, 2024. The four events include Day 0 (before injection), and Day 4, Day 10, and Day 14 post injection. Field crews collected samples from 1 monitoring well (MW-3A) and 3 injection wells (IW-1, IW-2, and IW-3) during each event.

Based upon the results from the first four sampling events appearing inconclusive and after a discussion with IDEQ, two additional sampling events were added. The fifth sampling event occurred on Days 52 and 53 post-injection on December 5 - 6, 2024. The sixth sampling event occurred 93 days post-injection on January 15, 2025. Monitoring well MW-6 was added to the sample well network for the fifth and sixth sampling events.

Prior to sample collection, the field crew collected water quality field parameter data during the groundwater purging process immediately prior to sample collection. Field parameters include temperature, pH, specific conductance, dissolved oxygen, oxidation/reduction potential, and turbidity. These parameters provide information on the water chemistry and stabilization criteria to indicate that the well sufficiently purged and that the extracted (sampled) groundwater is representative of the groundwater from the aquifer. Alta placed all groundwater samples in a refrigerated cooler containing ice immediately after collection and transported the samples to Anatek Laboratories, Inc. in Moscow, Idaho for analysis.

Attachment B contains groundwater sampling field sheets.

2.3 Quality Assurance Project Plan Addendum Deviations

In general, sampling procedures followed the QAPP Addendum (Alta 2024c) other than the following deviations:

1. A groundwater extraction system tracer test was not performed because it was deemed unnecessary to begin the Pilot Test and could be done later if desired. This was approved by IDEQ.
2. Injection of the Dynamic Duo product occurred in injection wells (IW-1, IW-2, and IW-3) instead of the three extraction wells as a result of extraction well plumbing system observations made by the field crew. The extraction wells contain an underground “t” pipe that connects them together and to the city’s water reclamation facility (WRF). The concern was having the injected product enter that piping system which could send the product to the WRF. This deviation was discussed with IDEQ and approved prior to the injections.
3. Monitoring occurred in select injection wells and monitoring well MW-3A in the original 4-day event, instead of the monitoring wells (MW-3, MW-3A, and MW-6). This shift occurred because the goal of the Pilot Test was to test proof of concept and the injections occurred in the injection wells which are farther away from the monitoring wells compared to the extraction wells. To compensate for the injection location change, we opted to test within the wells that had the injections because they would have the greatest likelihood of concentration change, and one downgradient well as the monitoring location. This was discussed with IDEQ and approved prior to the injections.
4. Although not a deviation to the QAPP Addendum, rather a deviation from the October 4, 2024 conversation with IDEQ, IW-1 was only sampled prior to injection, but not after. Sampling of IW-2 and IW-3 was deemed sufficient to test proof of concept and to keep the number of samples similar to the QAPP Addendum.

5. IW-3 was unable to be sampled on day 4 (Friday). This was due to sample collection at the other wells taking longer than anticipated, which limited the amount of time to deliver the samples to the laboratory within holding time and prior to lab closure for the weekend.
6. Nitrite was added to the December 2024 event based on a discussion with IDEQ to determine if intermediary chemical changes were occurring.

Section 3 Data Quality Review

Attachment C provides the Data Validation Memorandum. Based on Alta's data quality review, the laboratory and field data were determined to be of acceptable quality. Alta did not reject data or consider data as unusable for this project; therefore, the calculated completeness for this sampling event is 100%.

Section 4 Groundwater Monitoring Results

Table 2 provides field parameters and depth to water results. Figure 2 is a groundwater contour map using data from October 14, 2024 prior to the injections. Figure 3 is a groundwater contour map using data from January 15, 2025. The groundwater flow direction is toward the west/northwest, consistent with historic data.

Table 3 provides groundwater results for ammonia and nitrate for the Pilot Test as well as historical data. Nitrite data are also included for the December 2024 monitoring event. Note historic data (i.e., ~2016 to pre-Pilot Test) are impacted by the effects of the groundwater extraction system whereas during the Pilot Test the pumps were off. The extraction well pumps were turned off October 11, 2024 and resumed after sampling on January 15, 2025.

The following subsections describe the water quality, precipitation, and depth to water data to evaluate the effectiveness of the Pilot Test. The hypothesis of the Pilot Test is that by injecting the VitaStim Dynamic Duo, ammonia would oxidize to nitrite and nitrite would oxidize to nitrate. Thus, we would expect ammonia to decrease and nitrate to increase. Dissolved oxygen levels may also be expected to decrease. Figure 4 shows nitrate, ammonia, and precipitation data. Figure 5 shows nitrate, nitrite (December 2024), ammonia, and depth to water data.

4.1 Days 0 to 14

Figure 4a is a graph of nitrate, ammonia, and precipitation in October 2024. In the injection wells, ammonia concentrations fell significantly following the injections, likely due to dilution from the injection solution rather than a conversion to nitrite/nitrate, because on Day 4 the field crew noted the consistency of the Dynamic Duo solution in the groundwater during sampling. This also suggests the solution was moving slowly in the groundwater. Ammonia concentrations then began rising after Day 10. Nitrate concentrations in the injection well also fell, likely due to dilution by the injectant, then rose slightly; nitrate was not detected in IW-2 pre- and post-injection. In downgradient monitoring well MW-3A, ammonia and nitrate concentrations decreased.

To evaluate external impacts to the Pilot Test concentration results, we consider precipitation / groundwater recharge. Precipitation occurred on Days 3, 6, 7, 8, and 12, which resulted in an increase in groundwater levels (Table 2). As the precipitation infiltrates, it may cause dilution and/or flushing as the water infiltrates to groundwater, depending on the location of the recharge source and the soil concentrations. The thick low hydraulic conductivity layer at the Site

precludes precipitation from infiltrating quickly to groundwater; therefore, there must be a recharge source upgradient given the decrease in groundwater temperature over time and the rising water levels (Table 2). Constant groundwater temperatures are an indicator of a recharge source that is farther away.

In addition, precipitation has higher dissolved oxygen content, yet the groundwater dissolved oxygen concentrations decreased through October (Table 2). This could be an indication that the bacteria are using the available oxygen to convert ammonia to nitrate due to the injection, although this is difficult to assess based on the ammonia/nitrate data.

Figure 5 is a bar chart of concentrations and depth to water data by well. This is another way to view the data over time.

4.2 Days 14 - 93

Figure 4b graphs nitrate, ammonia, and precipitation from October 2024 (Day 0) through January 2025 (Day 93), and Figure 5 is a bar chart of concentrations and depth to water. These figures show similar data presented in different ways. October data did not suggest injections facilitated the conversion of ammonia to nitrate. Therefore, monitoring was extended to December and January to evaluate amendment residence time in the groundwater system.

In the injection wells, ammonia concentrations were similar or slightly decreased between Day 14 and 52 and then decreased to Day 93. Nitrate was not detected above the instrument detection limit in any event in IW-2, but in IW-3 concentrations decreased between Day 14 and 52 and then increased significantly on Day 93. Well IW-3 shows the inverse relationship with decreasing ammonia and increasing nitrate between Day 52 and 93, indicative of nitrification.

In downgradient monitoring well MW-3A, ammonia concentrations decreased slightly between Day 14 and 93 while nitrate concentrations increased. Another downgradient well, MW-6, was first sampled on Day 52. In this well ammonia was just above the detection limit on Day 52 and was not detected on Day 93. Nitrate decreased between the two events.

Based on the December/January data showing potential signs of nitrification, water quality data from December 2023 and January 2024 are compared with data from December 2024 and January 2025 to evaluate seasonal concentration differences versus changes caused by the injection. Figure 6 shows a year-to-year comparison of nitrate, ammonia, and depth to water for wells MW-3A and MW-6. Nitrate increased December-January in MW-3A and decreased December-January in MW-6 in both year-to-year comparisons. Ammonia concentrations decreased slightly in MW-3A in both year-to-year comparisons; concentrations in MW-6 were similar in the 2023/2024 data but increased slightly. December to January 2024/2025 in MW-6. MW-6 ammonia concentrations were much lower than in MW-3A. These comparisons suggest it is difficult to differentiate the seasonal concentration fluctuations with influences from the injection.

Section 5 Extraction System Wells

The extraction well pumps (EW-1, EW-2, and EW-3) are connected to the City sewer system for disposal (Figure 1). The extraction system has operated continuously, beginning in February 2016 until it was shut down in December 2018 when groundwater in MW-3 met remediation goals for both ammonia and nitrate. Following a rebound in ammonia and nitrate concentrations in 2019, the extraction system was turned back on since January 2020 except between December 23, 2023 and January 3, 2024 and between October 11, 2024 and January 16, 2025

for different tests. Since January 2020, the extraction wells pumped a total of 20,740,850 gallons of groundwater (3,384,112 gallons in 2020, 4,540,888 gallons in 2021, 5,884,760 gallons in 2022, 3,715,960 gallons 2023, and 2,348,250 gallons 2024 through May 22, 2025) from the Site to the City sewer for disposal. On March 29, 2024, the field crew noted the meter for EW-3 had stopped working, and therefore the amount pumped is more.

Based on field crew observations during sampling events in the winter of 2023/2024, the circuits for EW-2 and EW-3 had tripped. Subsequent checks on these circuits indicate this had been a reoccurring issue. Alta therefore replaced the pumps in these two wells in May 2024. They also replaced the flow meter in EW-3 on the same day because it had stopped working.

The field crew visited the site on May 23, 2025 to record the extraction well gallons pumped. They made two observations:

1. The circuit for EW-1 had tripped. They noticed it had previously tripped when they turned the system off on October 11, 2024 prior to the start of the Pilot Test. Recommendations for pump replacement are described in Section 7.
2. The vault lid for EW-3 was sunken in and the inside pipe connecting the top of the well casing to the pipe that extends to the City sewer was broken. The pump was not working. Recommendations for repairing the vault and pipe are described in Section 7.

Section 6 Summary and Conclusions

The purpose of the microbial injection Pilot Test was to determine proof of concept if injection of de-nitrifying microbial populations would facilitate microbial conversion of ammonia to nitrate. Preliminary Pilot Test data are inconclusive.

On October 14 and 15, 2024, Alta's field crew mixed approximately 250 gallons of potable water with 4 ounces of VitaStim Dynamic Duo (two mixtures; 8 ounces total) in an IBC tote in an onsite injection trailer. The field crew mixed two batches of amendment per well in all three injection wells, thus each received about 500 gallons of solution. Wells IW-2 and IW-3 received the injections with rates of 8.8 – 14.7 gallons per minute. Well IW-1, in backfill material, saw daylighting 10-15 feet away from the well and at lower injection rates compared to the other wells. The injection rates suggest good subsurface coverage.

The field crew collected samples from injection wells and monitoring wells prior to the injection (Day 0) as well as on Days 4, 10, 14, 52/53, and 93 for analysis of ammonia and nitrate; nitrite was also analyzed on Day 52/53.

Based on the Pilot Test results, it is difficult to determine if a rise in nitrate concentrations in MW-3 and IW-3 was the result of the injections or just a typical seasonal rise. Factors which may have limited the effectiveness of the injections:

- Injectant – Insufficient quantity of microbes or low nutrient concentrations (either initially or over time)
- Site conditions – Lack of ideal conditions including temperatures that were at the low end of viability (heading into winter), DO less than 2 mg/L, and pH less than 7

A lack of sufficient residence time does not appear to be an issue because the injection wells themselves were sampled which should have seen responses within the first 14 days of the test.

Section 7 Recommendations

Based upon the results of the Pilot, Alta recommends IDEQ and the Moscow URA consider:

- Performing summer sampling to evaluate the existing microbial population and concentrations of ammonia and nitrate post injection.
- Based upon sampling results, performing additional injections during the summer months to bolster microbial populations and nutrients. Adding additional amendment (ex. oxygen releasing compound) to enhance the environment.
- Deploying nitrate data loggers to fill data gaps and evaluate seasonality.

Based on maintenance needs for some of the extraction wells, Alta recommends IDEQ and the Moscow URA consider:

- Replacing the pump in EW-1.
- Fixing the vault in EW-3, replacing the pipe connector from the well head to the pipe connector, and having an electrician evaluate the pump wiring.

Section 8 References and Resources Used

Alta Science and Engineering, Inc. (Alta), 2024a. Results for Groundwater Sampling in 2023 and 2024 at the West 6th and Jackson Street Site in Moscow, Idaho – Technical Memorandum. Prepared for Idaho Department of Environmental Quality. March 29, 2024.

Alta, 2024b. Remediation Alternatives Analysis for the 6th & Jackson Street Property – Technical Memorandum. Prepared for Idaho Department of Environmental Quality. June 12, 2024.

Alta, 2024c. Addendum to the Quality Assurance Project Plan for a Pilot Study for 6th & Jackson Street, Moscow, Idaho. Prepared for Idaho Department of Environmental Quality. October 7, 2024.

Aquafix, 2024. Dynamic Duo. Dynamic Duo - Remove Ammonia in Wastewater

Idaho Administrative Procedures Act (IDAPA) 58.01.08 – Idaho Rules for Public Drinking Water Systems.

IDAPA 58.01.18 – Idaho Land Remediation Rules.

TerraGraphics Environmental Engineering, Inc. (TerraGraphics), 2015a. Final Analysis for Brownfields Cleanup Alternatives and Remediation Work Plan for 217 & 317 W. 6th Street Moscow, Idaho. Prepared for the City of Moscow and Moscow Urban Renewal Agency. September 24.

TerraGraphics, 2015b. Final Quality Assurance Project Plan (QAPP) for 217 & 317 West 6th Street Moscow, Idaho, Environmental Remediation. Prepared for Moscow Urban Renewal Agency. October 16, Revision #3.

TerraGraphics, 2016. Construction and Remediation Report for 217 & 317 W. 6th Street Moscow, Idaho, Revision 0. Prepared for the City of Moscow and Moscow Urban Renewal Agency. August 10.

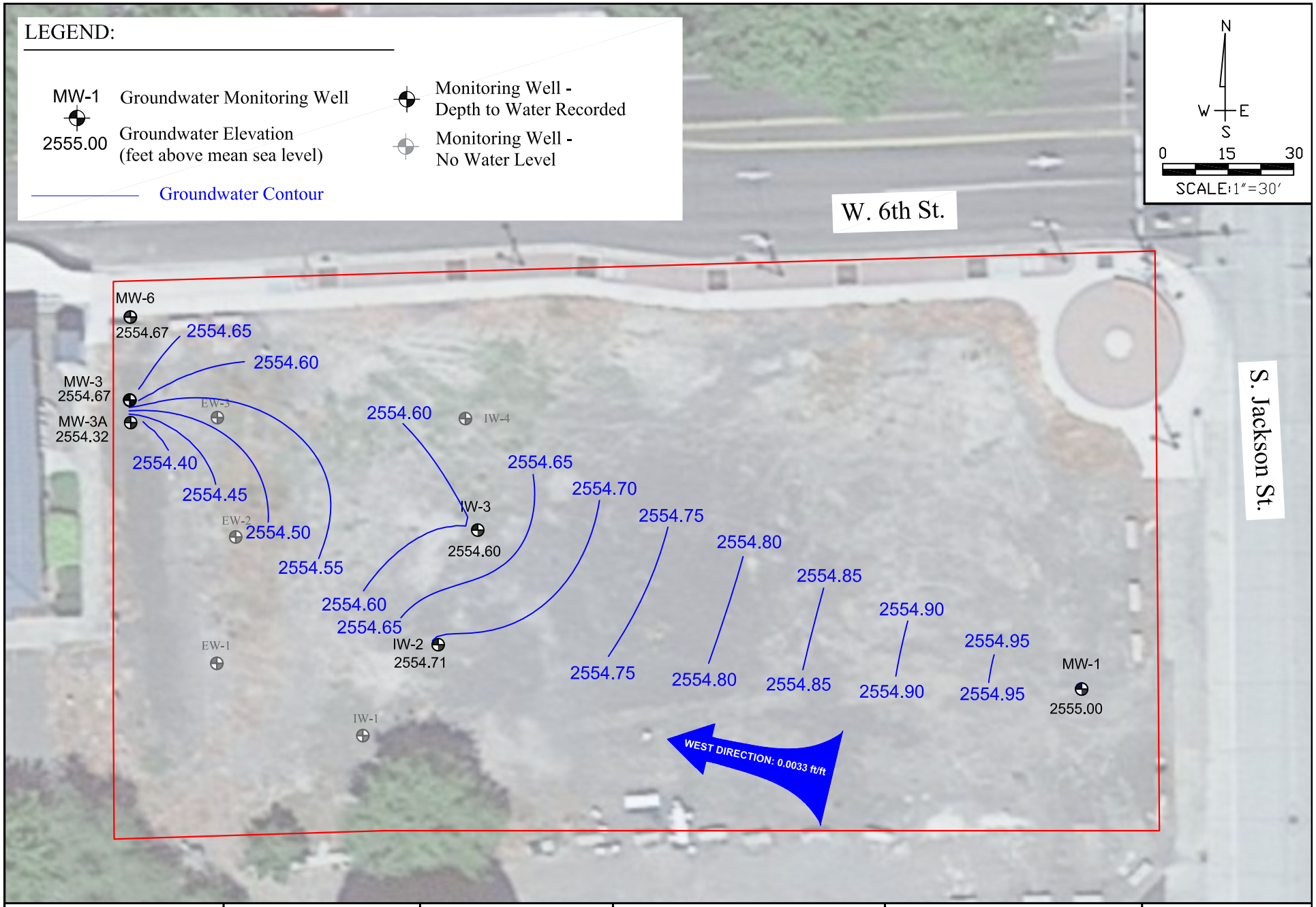
Section 9 Attachments

Attachment A: Photographs

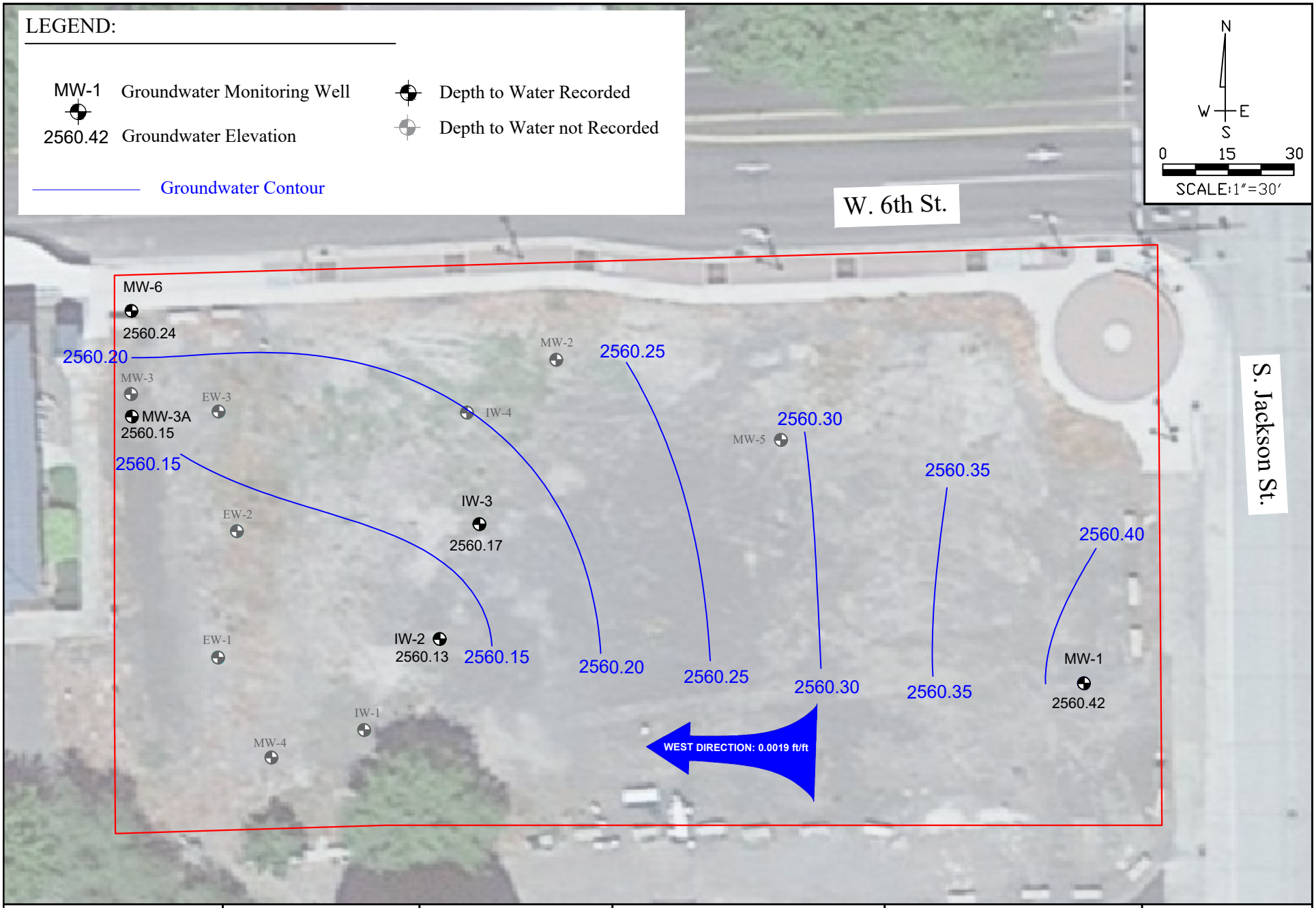
Attachment B: Groundwater Field Sheets

Attachment C: QA/QC Memorandum for each Sample Event

Alta Science & Engineering, Inc.	PRINT DATE: October 11, 2023 PROJECT NUMBER: 23114	PROJECTION: UTM NAD 83, Zone 11N PROJECT MANAGER: R. Nimmer CARTOGRAPHER: M. Studer	PROJECT NAME: 6th and Jackson Nitrification Pilot Test	FIGURE 1 Site Layout with Well Locations	This map was produced using information obtained from several different sources that have not been independently verified. These sources have also not provided information on the precision and accuracy of the data. Information on this map is not a substitute for survey data.



Alta Science & Engineering, Inc.	PRINT DATE: April 28, 2025 PROJECT NUMBER: 23114	PROJECTION: UTM NAD 83, Zone 11N PROJECT MANAGER: R. Nimmer CARTOGRAPHER: A. Ward	PROJECT NAME: 6th and Jackson Nitrification Pilot Test	FIGURE 2 Groundwater Elevation Contour Map - 10/14/24	This map was produced using information obtained from several different sources that have not been independently verified. These sources have also not provided information on the precision and accuracy of the data. Information on this map is not a substitute for survey data.



Alta Science & Engineering, Inc.	PRINT DATE: April 7, 2025 PROJECT NUMBER: 23114	PROJECTION: UTM NAD 83, Zone 11N PROJECT MANAGER: R. Nimmer CARTOGRAPHER: A. Ward	PROJECT NAME: 6th and Jackson Nitrification Pilot Test	FIGURE 3 Groundwater Elevation Contour Map - 1/15/2025	This map was produced using information obtained from several different sources that have not been independently verified. These sources have also not provided information on the precision and accuracy of the data. Information on this map is not a substitute for survey data.

Figure 4. Pilot Test Analyte Results and Precipitation

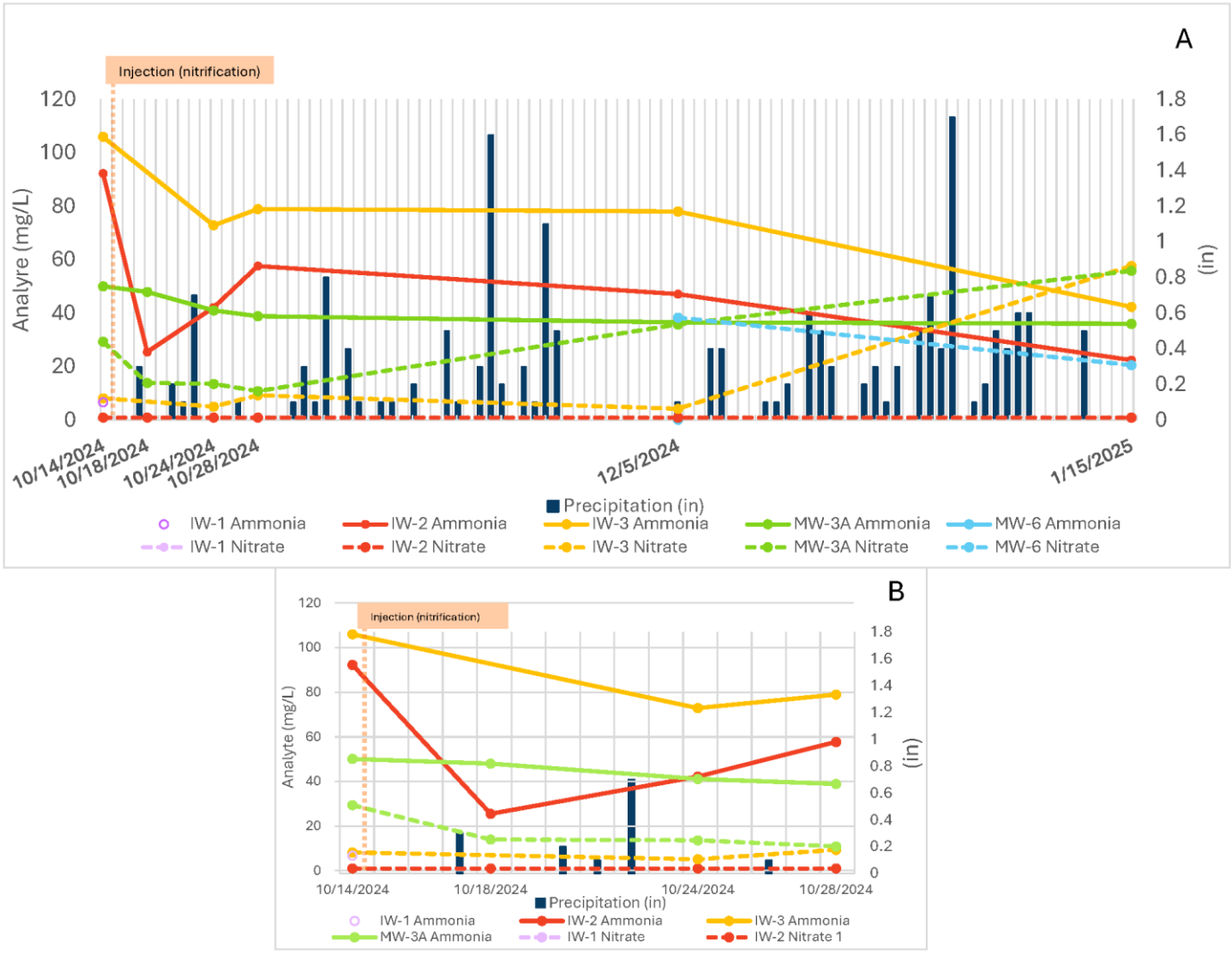


Figure 5. Pilot Test Analyte Results and Depth to Water

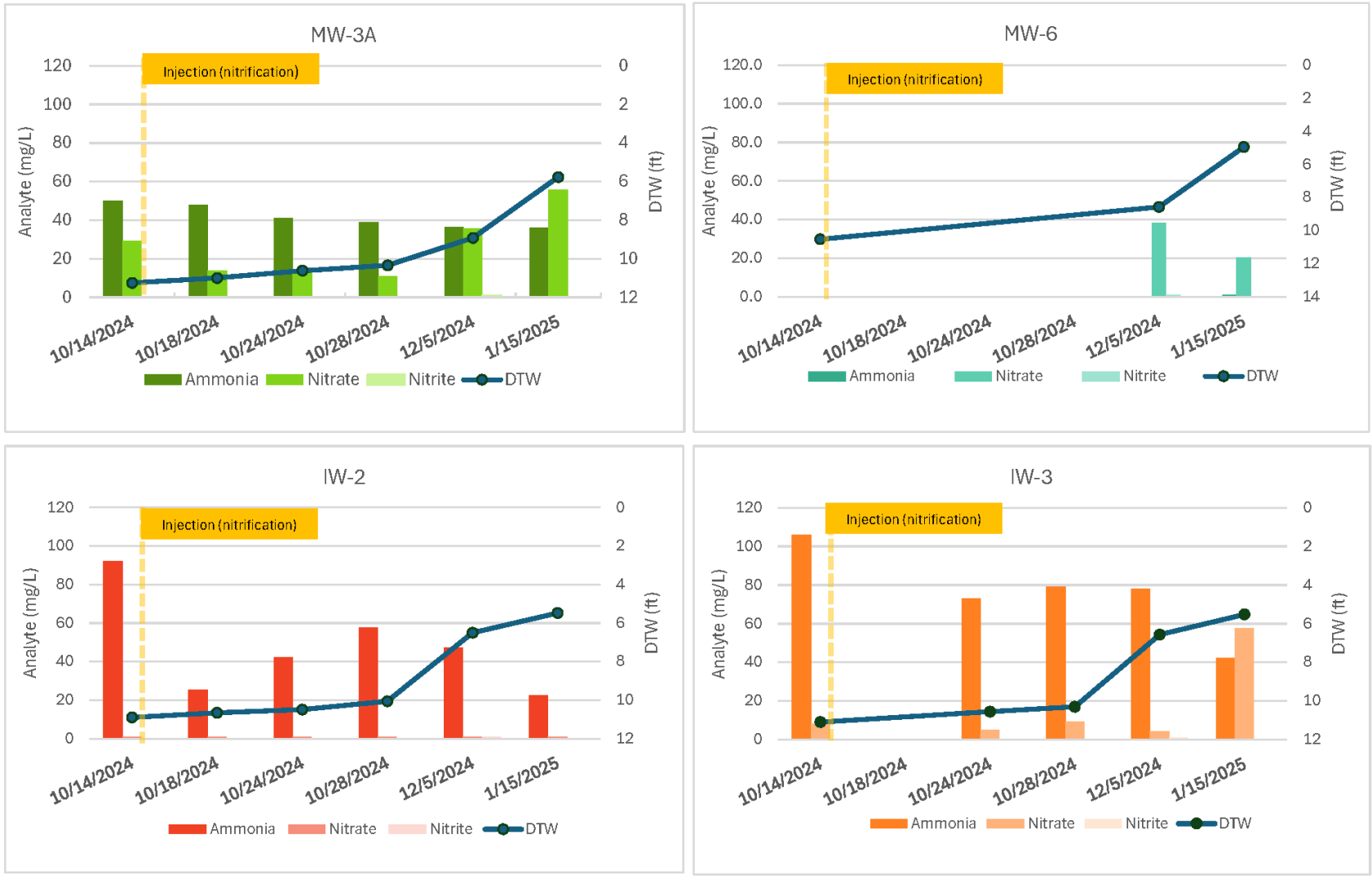


Figure 6. Nitrate and Ammonia Concentrations and Depth to Water for 2023/2024 and 2024/2025

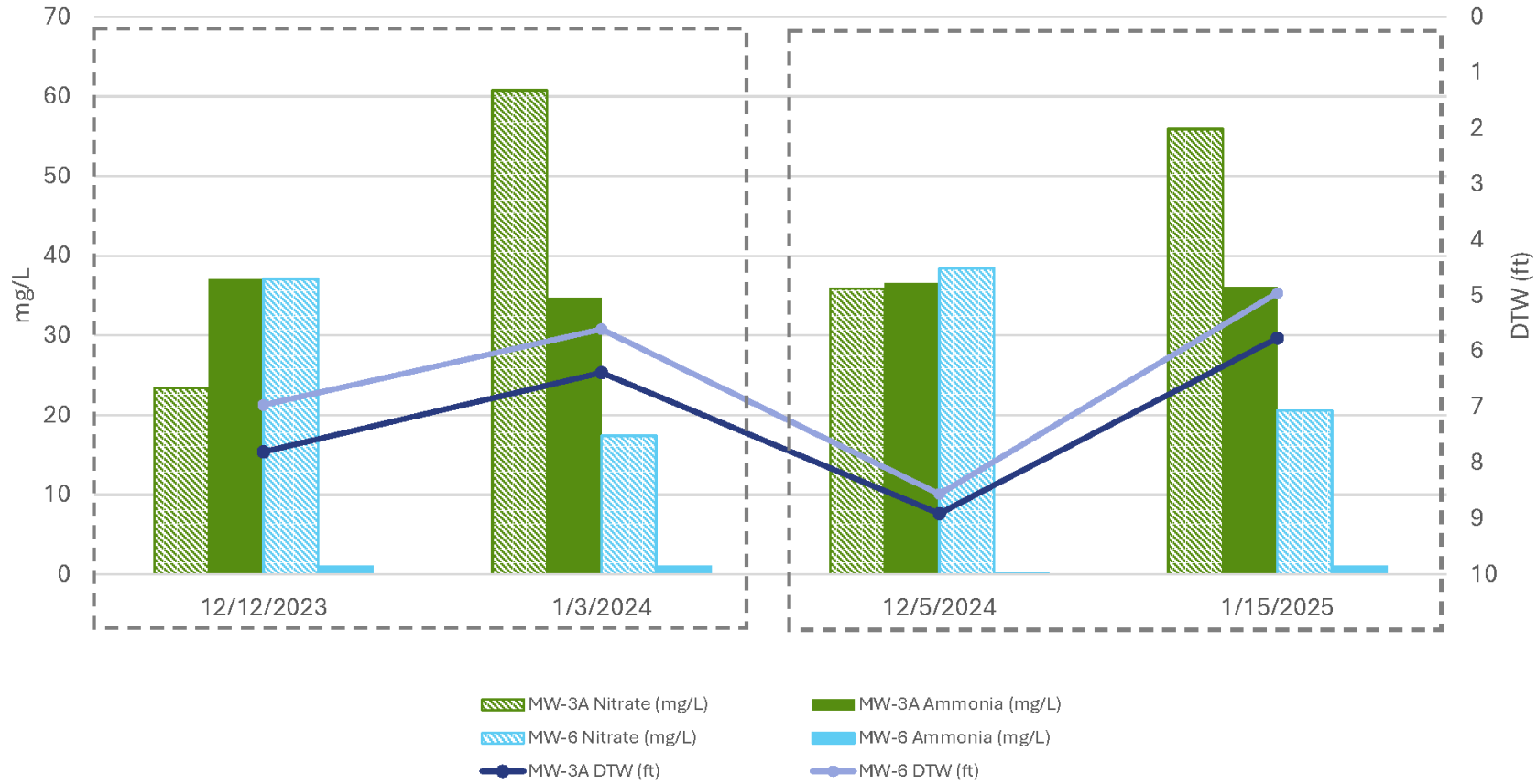


Table 1. Injection Information

Date	Start Time	End Time	Volume Injected (gallons)	Injection Rate (gal/min)	General Injection Pressures (psi)	Injection Observations	Well
10/14/2024	16:00	16:20	38	1.9	<100	Daylighting about 10-15 ft	IW-1
	16:20 16:45	16:45 17:05	Batch 1: 220 Batch 2: 250	8.8 12.5	~20 ~20	None	IW-2
10/15/2024	07:40 07:58	07:58 08:15	Batch 1: 250 Batch 2: 250	13.9 14.7	~20 ~20	None	IW-3
	09:45 10:48	10:30 11:10	Batch 1: 250 Batch 2: 250	5.6 11.3	<100 <100	Daylighting about 10-15 ft	IW-1

gal/min = gallons per minute
psi = pounds per square inch
ft = feet

Table 2. 6th and Jackson Pilot Test Groundwater Field Parameters and Depth to Water

Sample ID	Test Day	Sample Date	pH	Cond (uS/cm)	Temp (°C)	DO (mg/L)	ORP (mV)	DTW (ft)
IW-1	Day 0	10/14/2024	6.37	1468	17.3	1.08	-170.60	10.7
	Day 4	10/18/2024	NA	NA	NA	NA	NA	10.45
	Day 10	10/24/2024	NA	NA	NA	NA	NA	10.34
IW-2	Day 0	10/14/2024	7.00	2216	17.6	1.06	-146.50	10.9
	Day 4	10/18/2024	6.76	880	16.4	1.38	-94.50	10.66
	Day 10	10/24/2024	6.90	1147	15.1	0.85	-132.30	10.49
	Day 14	10/28/2024	6.83	1472	15.0	0.59	-132.10	10.06
	Day 53	12/6/2024	6.85	1486	13.1	0.58	-149.70	6.5
	Day 93	1/15/2024	6.63	1118	11.2	0.64	-111.10	5.48
IW-3	Day 0	10/14/2024	6.87	2077	17.7	1.24	20.20	11.09
	Day 4	10/18/2024	NA	NA	NA	NA	NA	NA
	Day 10	10/24/2024	6.88	1293	15.4	0.66	51.30	10.55
	Day 14	10/28/2024	6.73	1419	15.2	0.64	16.10	10.3
	Day 53	12/6/2024	6.71	1646	12.4	0.91	27.60	6.57
	Day 93	1/15/2024	6.09	1552	11.1	0.82	95.00	5.52
MW-3A	Day 0	10/14/2024	6.23	1295	17.3	1.15	140.50	11.25
	Day 4	10/18/2024	6.14	1120	15.8	0.72	161.90	10.99
	Day 10	10/24/2024	6.13	1113	15.4	0.59	220.10	10.62
	Day 14	10/28/2024	6.08	1201	15.2	0.62	192.40	10.34
	Day 52	12/5/2024	6.15	1124	13.6	0.61	148.40	8.91
	Day 93	1/15/2024	6.17	1267	11.8	1.04	161.10	5.76
MW-6	Day 0	10/14/2024	NA	NA	NA	NA	NA	10.52
	Day 4	10/18/2024	NA	NA	NA	NA	NA	NA
	Day 10	10/24/2024	NA	NA	NA	NA	NA	NA
	Day 14	10/28/2024	NA	NA	NA	NA	NA	NA
	Day 53	12/6/2024	6.23	909	14.0	1.31	148.20	8.56
	Day 93	1/15/2024	6.58	820	11.9	4.13	87.80	4.95

Notes:
NA = not available or not sampled
Cond = Conductivity in microsiemens per centimeter
Temp = Temperature in degrees Celsius
DO = Dissolved oxygen in milligrams per liter
ORP = Oxidation reduction potential in millivolts
DTW = Depth to water in feet

Table 3. 6th and Jackson Groundwater Monitoring Results (2 pages)

Sample ID	Test Day	Sample Date	Ammonia	Nitrate	Nitrite
Remediation Goals			3.83[b]	10[a]	1[a]
MW-3	--	12/10/2014	**14.2**	**28.4**	NA
	--	1/11/2016	**28.1**	**45.6**	NA
	--	2/26/2016	**66.6**	**81.8**	NA
	--	3/28/2016	**65.4**	**72.9**	NA
	--	4/19/2016	**85.2**	**78.7**	NA
	--	6/16/2016	**90.4**	**75.6**	NA
	--	9/7/2016	**91.9**	**68.2**	NA
	--	10/13/2016	**70.8**	**60.3**	NA
	--	12/21/2016	2.31	5.99	NA
	--	1/27/2017	**4.5**	**20.9**	NA
	--	3/9/2017	**12.3**	**36.2**	NA
	--	4/6/2017	**34.3**	**110**	NA
	--	12/14/2017	**15.6**	**25.6**	NA
	--	12/31/2018	0.111	7.35	NA
	--	3/28/2019	**9.85**	**65.8**	NA
	--	12/19/2019	**29.5**	**15.9**	NA
	--	1/14/2021	1.14	**47.2**	NA
	--	1/25/2022	1.04	**25.5**	NA
MW-3A	Day 0	10/14/2024	**50.1**	**29.4**	NA
	Day 4	10/18/2024	**48.0**	**14.0**	NA
	Day 10	10/24/2024	**41.1**	**13.6**	NA
	Day 14	10/28/2024	**38.9**	**10.9**	NA
	Day 52	12/5/2024	**36.6**	**35.9 J**	1.00 UJ
	Day 93	1/15/2025	**36.1**	**55.9**	NA
MW-6	--	12/10/2014	**66.9**	**51.6**	NA
	--	1/12/2016	**0.0393 J**	8.9	NA
	--	2/26/2016	0.0500 U	8.43	NA
	--	3/28/2016	0.0501 U	6.57	NA
	--	4/19/2016	**5.59**	**14.6**	NA
	--	6/16/2016	**29.7**	**43.6**	NA
	--	9/7/2016	**57.9**	**27.9**	NA

Sample ID	Test Day	Sample Date	Ammonia	Nitrate	Nitrite
Remediation Goals			3.83[b]	10[a]	1[a]
	--	10/13/2016	**40.2**	**49.9**	NA
	--	12/21/2016	**28.4**	**28.2**	NA
	--	1/27/2017	0.115	6.23	NA
	--	3/9/2017	0.011	4.34	NA
	--	4/6/2017	0.05 U	**14.6**	NA
	Day 0	10/14/2024	NA	NA	NA
	Day 4	10/18/2024	NA	NA	NA
	Day 10	10/24/2024	NA	NA	NA
	Day 14	10/28/2024	NA	NA	NA
	Day 53	12/6/2024	0.200	**38.4**	1.00 U
	Day 93	1/15/2025	0.200	**20.6**	NA
IW-1	Day 0	10/14/2024	**6.71**	1.00 U	NA
	Day 4	10/18/2024	NA	NA	NA
	Day 10	10/24/2024	NA	NA	NA
	Day 14	10/28/2024	NA	NA	NA
IW-2	Day 0	10/14/2024	**92.3**	1.00 U	NA
	Day 4	10/18/2024	**25.5**	1.00 UJ	NA
	Day 10	10/24/2024	**42.2**	1.00 UJ	NA
	Day 14	10/28/2024	**57.7**	1.00 UJ	NA
	Day 53	12/6/2024	**47.2**	1.00 U	1.00 U
	Day 93	1/15/2025	**22.5**	1.00 U	NA
IW-3	Day 0	10/14/2024	**106**	8.21	NA
	Day 4	10/18/2024	NA	NA	NA
	Day 10	10/24/2024	**72.9**	5.12	NA
	Day 14	10/28/2024	**79.0**	9.36	NA
	Day 53	12/6/2024	**78.1**	4.3	1.00 U
	Day 93	1/15/2025	**42.4**	**57.7**	NA

Notes:

a. Maximum Contaminant Level (MCL) - IDAPA 58.01.08. Idaho Rules for Public Drinking Water Systems.

b. Remedial Action Target Levels (RATLs)-1 for the child residential receptor developed using site-specific data and calculated with the IDEQ REM (2004) (TerraGraphics 2015b).

Test Day is the day post injection. Day 0 sampling occurred prior to the injections that occurred later the same day.

Concentrations are in milligrams per liter (mg/L)

Sample ID	Test Day	Sample Date	Ammonia	Nitrate	Nitrite
Remediation Goals			3.83[b]	10[a]	1[a]

There are gaps in time for historical data; these are not shown.

NA = not analyzed or not sampled

U = less than the reporting limit

J = value is an estimate

UJ = Non-detect estimate

Bold = Analyte detected above the remediation goal

Attachment A

Photographs

Photo 1

Extraction Well

Photo 2

Solution and tank

Photo 3

Tank mixing and pump

Photo 4

Injection set up

Alta Science & Engineering, Inc.	PRINT DATE: May 7, 2025	PROJECT MANAGER: Robin Nimmer	PROJECT NAME: 6th and Jackson St. Well Installation and Groundwater Assessment	ATTACHMENT A, PHOTO LOG 6th and Jackson St. Project Nitrification Pilot Test
	PROJECT NUMBER: 23114.090	CREATED BY: Robin Nimmer		

Attachment B

Groundwater Sampling Sheets and Field Notes

Alta
Science & Engineering, Inc.

GROUNDWATER SAMPLING RECORD

NOTE: Information must be filled in for all gray highlighted cells. All other cells are optional info.

Project: IDEQ - 6th and Jackson St.	Well Number: MW-3A
Project Number: 23114.~~092~~080 10/14/24	Sample Number: MW-3A-101424
Location: 6TH JACKSON	Weather: SUNNY, 75°
Date: 10/14/24	Sampler(s): MW
Depth to Bottom (ft): 14.60	Purge Time: 35 min
Depth to Water (ft): 11.25	Purge Method: LOW FLOW
DTB-DTW (ft): 3.35 MW	Purge Flow Rate (ml/min): 180
Drawdown once stabilized (feet): ~~0.04~~ 0.0	Total Purge Volume: n/a

	¾" diameter	1" diameter	1 ½" diameter	2" diameter	4" diameter	8" diameter
Conversion Factors (height x factor= vol in Gal)	0.023	0.041	0.092	0.163	0.652	2.611
Conversion Factors (height x factor= vol in L)	0.087	0.155	0.348	0.617	2.468	9.884

GROUNDWATER DATA

Purged Volume (Specify L or Gal)	Time	pH	Cond (µS/cm)	Temp (°C)	DO mg/L	Turbidity (NTU)	ORP (mV)
DTW 11.29 TIME 0	12:55	—	—	—	—	—	—
10 min	13:05	6.24	1422	17.3	1.25	20.85	172.1
15 min	13:10	6.23	1326	17.4	1.20	28.44	164.5
20 min	13:15	6.23	1312	17.5	1.18	31.39	158.4
25 min	13:20	6.23	1302	17.3	1.16	37.10	150.7
11.29 30 min	13:25	6.23	1299	17.3	1.15	41.96	146.2
35 min	13:30	6.23	1295	17.3	1.13	44.73	140.5

Sampling Date: 10/14/24 | Sampling Method: LOW FLOW | Time Sampled: 13:30

Stabilization Criteria (MUST MEET CRITERIA BETWEEN FINAL 3 CONSECUTIVE MEASUREMENTS COLLECTED 5 MINUTES APART)

Temperature ± 10%	**pH = ± 0.1**	**DO = ± 10% or 0.2 mg/L**
Turbidity = ± 10% (notrequired)	**SEC = ± 3%**	**ORP = ± 10.0 mV**

Drawdown Criteria = <0.3 feet

Alta Science & Engineering, Inc.

GROUNDWATER SAMPLING RECORD IW-1

NOTE: Information must be filled in for all gray highlighted cells. All other cells are optional info.

Project: IDEQ - 6th and Jackson St.	Well Number: ~~MW-3~~ IW-1-101424
Project Number: 23114.~~092~~ 080 MW 10/14/24	Sample Number: ~~MW-3-101424~~ MW 10/14/24
Location: 6TH&JACKSON	Weather: SUNNY, 75°
Date: 10/14/24	Sampler(s): MW
10/14/24 MW	
Depth to Bottom (ft): ~~14.22~~ 14.75	Purge Time: 20 min
Depth to Water (ft): ~~10.90~~ 10.70	Purge Method: LOW FLOW
DTB-DTW (ft): 4.05 MW 10/14/24	Purge Flow Rate (ml/min): n/a
Drawdown once stabilized (feet): n/a	Total Purge Volume: n/a

Conversion Factors (height x factor= vol in Gal)	¾" diameter 0.023	1" diameter 0.041	1 ½" diameter 0.092	2" diameter 0.163	4" diameter 0.652	8" diameter 2.611
Conversion Factors (height x factor= vol in L)	¾" diameter 0.087	1" diameter 0.155	1 ½" diameter 0.348	2" diameter 0.617	4" diameter 2.468	8" diameter 9.884

GROUNDWATER DATA

Purged Volume (Specify L or Gal)	Time	pH	Cond (µS/cm)	Temp (°C)	DO mg/L	Turbidity (NTU)	ORP (mV)	DTW
0	13:45	—	—	—	—	—	—	10.76
10 min	13:55	6.38	1447	16.5	1.12	4.55	-176.9	11.40
15 min	14:00	6.37	1446	17.2	1.12	7.00	-172.5	11.85
20 min	14:05	6.37	1468	17.3	1.08	10.03	-170.6	

Sampling Date: 10/14/24 | Sampling Method: LOW FLOW | Time Sampled: 14:05

Stabilization Criteria (MUST MEET CRITERIA BETWEEN FINAL 3 CONSECUTIVE MEASUREMENTS COLLECTED 5 MINUTES APART)

Temperature ± 10%	**pH = ± 0.1**	**DO = ± 10% or 0.2 mg/L**
Turbidity = ± 10% (notrequired)	**SEC = ± 3%**	**ORP = ± 10.0 mV**

Drawdown Criteria = <0.3 feet

Alta Science & Engineering, Inc.

GROUNDWATER SAMPLING RECORD

NOTE: Information must be filled in for all gray highlighted cells. All other cells are optional info.

Project: IDEQ - 6th and Jackson St.	Well Number: ~~MW-6~~ MW 10/14/24 IW-2
Project Number: 23114.~~092~~ 080 MW 10/14/24	Sample Number: ~~MW-6 101424~~ IW-2-101424
Location: 6TH & JACKSON	Weather: WINDY, PARTLY CLOUDY
Date: 10/14/24	Sampler(s): MW
Depth to Bottom (ft): MW 10/14/24 ~~13.79~~ 14.55	Purge Time: 20 min
Depth to Water (ft): ~~10.52~~ ~~11.00~~ 10.90	Purge Method: LOW FLOW
DTB-DTW (ft): MW 10/14/24 3.65	Purge Flow Rate (ml/min): n/a
Drawdown once stabilized (feet): n/a	Total Purge Volume: n/a

Conversion Factors (height x factor= vol in Gal)	¾" diameter 0.023	1" diameter 0.041	1 ½" diameter 0.092	2" diameter 0.163	4" diameter 0.652	8" diameter 2.611
Conversion Factors (height x factor= vol in L)	¾" diameter 0.087	1" diameter 0.155	1 ½" diameter 0.348	2" diameter 0.617	4" diameter 2.468	8" diameter 9.884

GROUNDWATER DATA

Purged Volume (Specify L or Gal)	Time	pH	Cond (µS/cm)	Temp (°C)	DO mg/L	Turbidity (NTU)	ORP (mV)
DTW 0	14:25	—	—	—	—	—	—
5 min	14:30	7.07	2284	18.4	1.14	2.19	-150.5
MW 10 min	14:35	7.04	2242	18.1	1.08	2.96	-148.8
11.12 15 ~~20~~ min	14:40	7.02	2225	17.8	1.07	3.43	-147.7
11.14 20 min	14:45	7.00	2216	17.6	1.06	3.25	-146.5

Sampling Date: 10/14/24 | Sampling Method: LOW FLOW | Time Sampled: 14:45

Stabilization Criteria (MUST MEET CRITERIA BETWEEN FINAL 3 CONSECUTIVE MEASUREMENTS COLLECTED 5 MINUTES APART)

Temperature ± 10%	**pH = ± 0.1**	**DO = ± 10% or 0.2 mg/L**
Turbidity = ± 10% (notrequired)	**SEC = ± 3%**	**ORP = ± 10.0 mV**

Drawdown Criteria = <0.3 feet

Alta Science & Engineering, Inc.

GROUNDWATER SAMPLING RECORD

NOTE: Information must be filled in for all gray highlighted cells. All other cells are optional info.

Project: IDEQ - 6th and Jackson St.	Well Number: ~~MW-3A~~ IW-3 MW
Project Number: 23114.~~092~~ 080 MW/10/24/24	Sample Number: ~~MW-3A-101424~~ IW-3-101424
Location: 6TH & JACKSON	Weather: SUN, WINDY
Date: 10/14/24	Sampler(s): MW
Depth to Bottom (ft): MW ~~14.60~~ 14.05	Purge Time: 20 min
Depth to Water (ft): ~~11.25~~ 11.09	Purge Method: LOW FLOW
DTB-DTW (ft): 2.96 MW	Purge Flow Rate (ml/min): n/a
Drawdown once stabilized (feet): n/a	Total Purge Volume: n/a

Conversion Factors (height x factor= vol in Gal)	¾" diameter 0.023	1" diameter 0.041	1 ½" diameter 0.092	2" diameter 0.163	4" diameter 0.652	8" diameter 2.611
Conversion Factors (height x factor= vol in L)	¾" diameter 0.087	1" diameter 0.155	1 ½" diameter 0.348	2" diameter 0.617	4" diameter 2.468	8" diameter 9.884

GROUNDWATER DATA

Purged Volume (Specify L or Gal)	Time	pH	Cond (___/cm)	Temp (°C)	DO mg/L	Turbidity (NTU)	ORP (mV)
DTW 0	15:10	—	—	—	—	—	—
10min	15:20	6.86	2076	17.8	1.26	−0.30	21.2
15min	15:25	6.88	2078	17.7	1.23	MW 0.06	20.0
11.39 20min	15:30	6.87	2077	17.7	1.24	−0.10	20.2

Sampling Date: 10/14/24 | Sampling Method: LOW FLOW | Time Sampled: 15:30

Stabilization Criteria **(MUST MEET CRITERIA BETWEEN FINAL 3 CONSECUTIVE MEASUREMENTS COLLECTED 5 MINUTES APART)**

Temperature ± 10%	**pH = ± 0.1**	**DO = ± 10% or 0.2 mg/L**
Turbidity = ± 10% (notrequired)	**SEC = ± 3%**	**ORP = ± 10.0 mV**

Drawdown Criteria = <0.3 feet

DUP

MS/D

Alta Science & Engineering, Inc.

GROUNDWATER SAMPLING RECORD

NOTE: Information must be filled in for all gray highlighted cells. All other cells are optional info.

Project: IDEQ - 6th and Jackson St.	Well Number: MW-3A
Project Number: 23114.~~092~~ 0.080	Sample Number: MW-3A-101824
Location:	Weather: PARTLY CLOUDY, WINDY ~50°
Date: 10/18/24	Sampler(s): MW / RB
Depth to Bottom (ft): ——— n/a	Purge Time: ~~5~~ MW 15 min
Depth to Water (ft): 10.99	Purge Method: LOW FLOW
DTB-DTW (ft): n/a	Purge Flow Rate (ml/min): 211
Drawdown once stabilized (feet): n/a	Total Purge Volume: n/a

	¾" diameter	1" diameter	1 ½" diameter	2" diameter	4" diameter	8" diameter
Conversion Factors (height x factor= vol in Gal)	0.023	0.041	0.092	0.163	0.652	2.611
Conversion Factors (height x factor= vol in L)	0.087	0.155	0.348	0.617	2.468	9.884

GROUNDWATER DATA

Purged ~~Volume~~ (Specify L or Gal)	Time	pH	Cond (µS/cm)	Temp (°C)	DO mg/L	Turbidity (NTU)	ORP (mV)
TIME 0	12:15	6.18	1215	15.7	0.93	—	170.3
5 min	12:20	6.15	1151	15.8	0.80	—	166.8
10 min	12:25	6.14	1135	15.8	0.72	—	164.4
15 min	12:30	6.14	1120	15.8	0.72	—	161.9

Sampling Date: 10.18.24	Sampling Method: LOW FLOW	Time Sampled: 12:35

Stabilization Criteria **(MUST MEET CRITERIA BETWEEN FINAL 3 CONSECUTIVE MEASUREMENTS COLLECTED 5 MINUTES APART)**

Temperature ± 10%	**pH = ± 0.1**	**DO = ± 10% or 0.2 mg/L**
Turbidity = ± 10% (notrequired)	**SEC = ± 3%**	**ORP = ± 10.0 mV**

Drawdown Criteria = <0.3 feet

Alta Science & Engineering, Inc.

GROUNDWATER SAMPLING RECORD

NOTE: Information must be filled in for all gray highlighted cells. All other cells are optional info.

Project: IDEQ - 6th and Jackson St.	Well Number: IW - 1
Project Number: 23114.092	Sample Number: IW-1-101824
Location: 6TH & JACKSON	Weather: CLOUDY, WINDY, 46°
Date: 10/18/24	Sampler(s): MW/RN
Depth to Bottom (ft): n/a	Purge Time: n/a
Depth to Water (ft): 10.45	Purge Method: LOW FLOW
DTB-DTW (ft): n/a	Purge Flow Rate (ml/min): 163
Drawdown once stabilized (feet): n/a	Total Purge Volume: n/a

Conversion Factors (height x factor= vol in Gal)	¾" diameter 0.023	1" diameter 0.041	1 ½" diameter 0.092	2" diameter 0.163	4" diameter 0.652	8" diameter 2.611
Conversion Factors (height x factor= vol in L)	¾" diameter 0.087	1" diameter 0.155	1 ½" diameter 0.348	2" diameter 0.617	4" diameter 2.468	8" diameter 9.884

GROUNDWATER DATA

~~Purged Volume~~ (~~Specify L or Gal~~)	Time	pH	Cond (µS/cm)	Temp (°C)	DO mg/L	Turbidity (NTU)	ORP (mV)
FT 10.75 TIME 0	13:20	6.71	524	15.1	1.11	——	-12.6
5 min	13:25	6.61	522	15.0	~~2.1~~ 1.98	——	-8.9

Sampling Date: 10/18/24 | Sampling Method: LOW FLOW | Time Sampled: NO SAMPLE

no sample "lost" water (via tubing)

Stabilization Criteria (MUST MEET CRITERIA BETWEEN FINAL 3 CONSECUTIVE MEASUREMENTS COLLECTED 5 MINUTES APART)

Temperature ± 10%	**pH = ± 0.1**	**DO = ± 10% or 0.2 mg/L**
Turbidity = ± 10% (notrequired)	**SEC = ± 3%**	**ORP = ± 10.0 mV**

Drawdown Criteria = <0.3 feet

Alta Science & Engineering, Inc.

GROUNDWATER SAMPLING RECORD

NOTE: Information must be filled in for all gray highlighted cells. All other cells are optional info.

Project: IDEQ - 6th and Jackson St.	Well Number: IW-2
Project Number: 23114.092	Sample Number: IW-2-101824
Location: 6th & Jackson	Weather: CLOUDY, WINDY, 46°
Date: 10·18·2024	Sampler(s): MW, RN
Depth to Bottom (ft): n/a	Purge Time: 50 min
Depth to Water (ft): 10.66	Purge Method: LOW FLOW
DTB-DTW (ft): n/a	Purge Flow Rate (ml/min): 180 mL/min
Drawdown once stabilized (feet): n/a	Total Purge Volume: n/a

Conversion Factors (height x factor= vol in Gal)	¾" diameter 0.023	1" diameter 0.041	1 ½" diameter 0.092	2" diameter 0.163	4" diameter 0.652	8" diameter 2.611
Conversion Factors (height x factor= vol in L)	¾" diameter 0.087	1" diameter 0.155	1 ½" diameter 0.348	2" diameter 0.617	4" diameter 2.468	8" diameter 9.884

GROUNDWATER DATA

Purged ~~Volume~~ (~~Specify~~ L or Gal)	Time	pH	Cond (µS/cm)	Temp (°C)	DO mg/L	Turbidity (NTU)	ORP (mV)
DTW: 10.45 TIME:	14:10	6.71	760	16.1	2.58	—	-95.5
5 min	14:15	6.73	767	16.3	2.36	—	-99.3
10 min	14:20	6.75	776	16.3	2.04	—	-100.6
15 min	14:28	6.77	791	16.5	1.88	—	-100.1
20 min	14:30	6.75	799	16.5	1.74	—	-98.2
25 min	14:35	6.75	817	16.6	1.42	—	-97.9
30 min	14:40	6.75	829	16.4	1.49	—	-96.9
35 min	14:45	6.75	844	16.4	1.53	—	-98.5
40 min	14:50	6.75	856	16.5	1.28	—	-94.7
45 min	14:55	6.76	871	16.3	1.31	—	-94.0
50min ~~MW 45:00~~		6.76	880	16.4	1.38	—	-94.5

Sampling Date: 10/18/24 | Sampling Method: LOW FLOW | Time Sampled: 15:00

Stabilization Criteria (MUST MEET CRITERIA BETWEEN FINAL 3 CONSECUTIVE MEASUREMENTS COLLECTED 5 MINUTES APART)

Temperature ± 10%	**pH = ± 0.1**	**DO = ± 10% or 0.2 mg/L**
Turbidity = ± 10% (notrequired)	**SEC = ± 3%**	**ORP = ± 10.0 mV**

Drawdown Criteria = <0.3 feet

Alta Science & Engineering, Inc.

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GROUNDWATER SAMPLING RECORD

NOTE: Information must be filled in for all gray highlighted cells. All other cells are optional info.

Project: IDEQ - 6th and Jackson St.	Well Number: MW-3A ~~MW~~ MW
Project Number: 23114.~~092~~ 080	Sample Number: MW-3A
Location: 6TH & JACKSON	Weather: WINDY, CHILLY 43°
Date: 10/24/24	Sampler(s): MW, SH
Depth to Bottom (ft): 14.63 FT	Purge Time: 20 min
Depth to Water (ft): 10.62 FT	Purge Method: LOW FLOW
DTB-DTW (ft): 4.01 FT	Purge Flow Rate (ml/min): 171.43 mL/min
Drawdown once stabilized (feet): 0 FT	Total Purge Volume:

Conversion Factors (height x factor= vol in Gal)	¾" diameter 0.023	1" diameter 0.041	1 ½" diameter 0.092	2" diameter 0.163	4" diameter 0.652	8" diameter 2.611
Conversion Factors (height x factor= vol in L)	¾" diameter 0.087	1" diameter 0.155	1 ½" diameter 0.348	2" diameter 0.617	4" diameter 2.468	8" diameter 9.884

GROUNDWATER DATA

DTW:	~~Purged Volume~~ TIME ADJUSTED (Specify L or Gal)	Time	pH mw	Cond (µS/cm)	Temp (°C)	DO mg/L	Turbidity (NTU)	ORP (mV)
10.64	0	11:15	6.08	1073 mw	mw 15.1	mw 0.89	17.24 mw	243.6 mw
10.64	10	11:25	6.14	1073	15.3	0.64	20.47	228.5
	15	11:30	6.14	1084	15.3	0.60	20.10	223.9
10.64	20	11:35	6.13	1113	15.4	0.59	20.45	220.1

Sampling Date: 10/24/24 | Sampling Method: LOW FLOW | Time Sampled: 11:35

Stabilization Criteria **(MUST MEET CRITERIA BETWEEN FINAL 3 CONSECUTIVE MEASUREMENTS COLLECTED 5 MINUTES APART)**

Temperature ± 10%	**pH = ± 0.1**	**DO = ± 10% or 0.2 mg/L**
Turbidity = ± 10% (notrequired)	**SEC = ± 3%**	**ORP = ± 10.0 mV**

Drawdown Criteria = <0.3 feet

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GROUNDWATER SAMPLING RECORD

NOTE: Information must be filled in for all gray highlighted cells. All other cells are optional info.

Project: IDEQ - 6th and Jackson St.	Well Number: IW-2
Project Number: 23114.~~092~~ 080	Sample Number: IW-2-102424
Location: 6TH & JACKSON	Weather: PARTLY CLOUDY 43°
Date: 10/24/24	Sampler(s): MW, SH
Depth to Bottom (ft): 14.25 FT	Purge Time: 25
Depth to Water (ft): 10.99 FT	Purge Method: LOW FLOW
DTB-DTW (ft): 3.26 FT	Purge Flow Rate (ml/min): 157.99
Drawdown once stabilized (feet): 0.05 FT	Total Purge Volume:

Conversion Factors (height x factor= vol in Gal)	¾" diameter 0.023	1" diameter 0.041	1 ½" diameter 0.092	2" diameter 0.163	4" diameter 0.652	8" diameter 2.611
Conversion Factors (height x factor= vol in L)	¾" diameter 0.087	1" diameter 0.155	1 ½" diameter 0.348	2" diameter 0.617	4" diameter 2.468	8" diameter 9.884

GROUNDWATER DATA

DTW	~~Purged Volume~~ Time Elapsed (~~Specify L or Gal~~)	Time	pH	Cond (µS/cm)	Temp (°C)	DO mg/L	Turbidity (NTU)	ORP (mV)
10.45	0	12:15	7.15	1318	15.3	1.32	24.29	-140.2
10.47	10	12:25	7.03	1259	15.2	0.97	29.40	-145.5
	15	12:30	6.97	1182	15.3	0.93	28.26	-141.1
10.50	20	12:35	6.94	1163	15.3	0.89	13.82	-138.0
	25	12:40	6.90	1147	15.1	0.85	22.89	-132.3

Sampling Date: 10/24/24 | Sampling Method: LOW FLOW | Time Sampled: 12:40

Stabilization Criteria (MUST MEET CRITERIA BETWEEN FINAL 3 CONSECUTIVE MEASUREMENTS COLLECTED 5 MINUTES APART)

Temperature ± 10%	**pH = ± 0.1**	**DO = ± 10% or 0.2 mg/L**
Turbidity = ± 10% (notrequired)	**SEC = ± 3%**	**ORP = ± 10.0 mV**

Drawdown Criteria = <0.3 feet

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GROUNDWATER SAMPLING RECORD

NOTE: Information must be filled in for all gray highlighted cells. All other cells are optional info.

Project: IDEQ - 6th and Jackson St.	Well Number: IW-2 3 MW mid
Project Number: 23114.092	Sample Number: IW-~~23~~ 102424
Location: 6TH & JACKSON	Weather: PARTLY CLOUDY, WINDY, 43°
Date: 10/24/24	Sampler(s): MW / SH
Depth to Bottom (ft): 14.13 FT	Purge Time: 30 mins
Depth to Water (ft): 10.55 FT	Purge Method: LOW FLOW
DTB-DTW (ft): 3.58 FT	Purge Flow Rate (ml/min): ~~+57.99~~ MW
Drawdown once stabilized (feet): 0.06 FT	Total Purge Volume:

Conversion Factors (height x factor= vol in Gal)	¾" diameter 0.023	1" diameter 0.041	1 ½" diameter 0.092	2" diameter 0.163	4" diameter 0.652	8" diameter 2.611
Conversion Factors (height x factor= vol in L)	¾" diameter 0.087	1" diameter 0.155	1 ½" diameter 0.348	2" diameter 0.617	4" diameter 2.468	8" diameter 9.884

GROUNDWATER DATA

DTW	~~Purged Volume~~ TIME ALLOTTED (~~Specify L or~~ Gal)	Time	pH	Cond (µS/cm)	Temp (°C)	DO mg/L	Turbidity (NTU)	ORP (mV)
10.61	0	13:30	6.89	1344	15.3	0.80	81.03	13.1
	10	13:40	6.89	1308	15.3	0.71	25.10	27.2
10.66	15	13:45	6.89	1291	15.2	0.68	17.61	36.1
	20	13:50	6.88	1286	15.3	0.67	14.27	43.3
10.67	25	13:55	6.88	1286	15.5	0.66	11.82	48.2
	30	MW ~~13~~ 14:00	6.88	1293	15.4	0.66	11.58	51.3

Sampling Date: 10/24/24 | Sampling Method: LOW FLOW | Time Sampled: 14:00

Stabilization Criteria (MUST MEET CRITERIA BETWEEN FINAL 3 CONSECUTIVE MEASUREMENTS COLLECTED 5 MINUTES APART)

Temperature ± 10%	**pH = ± 0.1**	**DO = ± 10% or 0.2 mg/L**
Turbidity = ± 10% (notrequired)	**SEC = ± 3%**	**ORP = ± 10.0 mV**

Drawdown Criteria = <0.3 feet

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GROUNDWATER SAMPLING RECORD

NOTE: Information must be filled in for all gray highlighted cells. All other cells are optional info.

Project: IDEQ - 6th and Jackson St.	Well Number: IW-1
Project Number: 23114.092	Sample Number: IW-1-102424
Location: 6TH & JACKSON	Weather: SUNNY, 48°
Date: 10/24/24	Sampler(s): MW / SH
Depth to Bottom (ft): 14.50 FT	Purge Time: 50
Depth to Water (ft): 10.34 FT	Purge Method: LOW FLOW
DTB-DTW (ft): 4.16 FT	Purge Flow Rate (ml/min): 117 mL/min
Drawdown once stabilized (~~feet~~): ———	Total Purge Volume: 0.86

	¾" diameter	1" diameter	1 ½" diameter	2" diameter	4" diameter	8" diameter
Conversion Factors (height x factor= vol in Gal)	0.023	0.041	0.092	0.163	0.652	2.611
Conversion Factors (height x factor= vol in L)	0.087	0.155	0.348	0.617	2.468	9.884

GROUNDWATER DATA

DTW	~~Purged Volume~~ Time Adjusted (Specify L or Gal)	Time	pH	Cond (µS/cm)	Temp (°C)	DO mg/L	Turbidity (NTU)	ORP (mV)
10.34	0	14:30	6.52	663	14.8	1.26	18.42	-27.5
10.66	10	14:35	6.50	636	14.9	0.77	17.80	-2.4
10.80	+@20	14:~~45~~ 45mw	6.49	624 mw	14.8	0.78	15.86	15.9
10.89	25	14:50	6.49	~~627~~ 622	14.8	0.84	12.94	34.2
11.00	30	14:55	6.48	642	14.9	0.91	13.72	33.3
11.08	35	15:00	6.47	685	14.8	0.95	11.75	38.2
11.14	40	15:05	6.46	709	15.1	0.94	11.26	33.6
11.19	45	15:10	6.46	743	15.0	0.91	10.42	24.2
11.20	50	15:15	6.46	770	14.9	0.87	9.70	12.8

Sampling Date: 10/24/24 | Sampling Method: LOW FLOW | Time Sampled: NOT SAMPLED

Stabilization Criteria (MUST MEET CRITERIA BETWEEN FINAL 3 CONSECUTIVE MEASUREMENTS COLLECTED 5 MINUTES APART)

Temperature ± 10%	**pH = ± 0.1**	**DO = ± 10% or 0.2 mg/L**
Turbidity = ± 10% (notrequired)	**SEC = ± 3%**	**ORP = ± 10.0 mV**

→ ADJUSTED FLOW RATE AFTER 10 MINUTES TO REDUCE DRAWDOWN

Drawdown Criteria = <0.3 feet

Alta Science & Engineering, Inc.

DUP

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GROUNDWATER SAMPLING RECORD

NOTE: Information must be filled in for all gray highlighted cells. All other cells are optional info.

Project: IDEQ - 6th and Jackson St.	Well Number: MW-3A
Project Number: 23114.092	Sample Number: MW-3A-102824
Location: 6TH & JACKSON	Weather: PARTLY, CLOUDY, WINDY ~45°
Date: 10/28/24	Sampler(s): MW
Depth to Bottom (ft): 14.64	Purge Time: 20 minutes
Depth to Water (ft): 10.34	Purge Method: LOW FLOW
DTB-DTW (ft): 4.30	Purge Flow Rate (ml/min): 171 mL/min
Drawdown once stabilized (feet): n/a	Total Purge Volume: n/a

Conversion Factors (height x factor= vol in Gal)	¾" diameter 0.023	1" diameter 0.041	1 ½" diameter 0.092	2" diameter 0.163	4" diameter 0.652	8" diameter 2.611
Conversion Factors (height x factor= vol in L)	¾" diameter 0.087	1" diameter 0.155	1 ½" diameter 0.348	2" diameter 0.617	4" diameter 2.468	8" diameter 9.884

GROUNDWATER DATA

~~Purged Volume~~ (~~Specify L or Gal~~) TIME ALLOTTED	Time	pH	Cond (µS/cm)	Temp (°C)	DO mg/L	Turbidity (NTU)	ORP (mV)
DTW:							
10.36' 0	10:30	6.02	1178	15.0	0.93	7.04	201.0
10.36' 10	10:40	6.06	1181	15.1	0.67	6.87	196.3
10.37' 15	10:45	6.07	1208	15.2	0.62	6.41	194.7
10.37' 20	10:50	6.08	1201	15.2	0.62	7.14	192.4

Sampling Date: 10/28/24	Sampling Method: LOW FLOW	Time Sampled: 10:50

Stabilization Criteria (MUST MEET CRITERIA BETWEEN FINAL 3 CONSECUTIVE MEASUREMENTS COLLECTED 5 MINUTES APART)

Temperature ± 10%	**pH = ± 0.1**	**DO = ± 10% or 0.2 mg/L**
Turbidity = ± 10% (notrequired)	**SEC = ± 3%**	**ORP = ± 10.0 mV**

Drawdown Criteria = <0.3 feet

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GROUNDWATER SAMPLING RECORD

NOTE: Information must be filled in for all gray highlighted cells. All other cells are optional info.

Project: IDEQ - 6th and Jackson St.	Well Number: IW-2 in mw
Project Number: 23114.092	Sample Number: IW-2-102824
Location: 6TH & JACKSON	Weather: PARTLY CLOUDY, WINDY, ~45°
Date: 10/28/24	Sampler(s): MW
Depth to Bottom (ft): 14.35	Purge Time: 25 mins
Depth to Water (ft): 10.06	Purge Method: LOW FLOW
DTB-DTW (ft): 4.29	Purge Flow Rate (ml/min): 139 mL/min
Drawdown once stabilized (feet): n/a	Total Purge Volume: n/a

Conversion Factors (height x factor= vol in Gal)	¾" diameter 0.023	1" diameter 0.041	1 ½" diameter 0.092	2" diameter 0.163	4" diameter 0.652	8" diameter 2.611
Conversion Factors (height x factor= vol in L)	¾" diameter 0.087	1" diameter 0.155	1 ½" diameter 0.348	2" diameter 0.617	4" diameter 2.468	8" diameter 9.884

GROUNDWATER DATA

~~Purged Volume~~ TIME ALLOTTED (Specify L or Gal)	Time	pH	Cond (µS/cm)	Temp (°C)	DO mg/L	Turbidity (NTU)	ORP (mV)	DTW:
0	11:40	7.01	1517	14.8	1.12	52.62	-143.3	10.18'
10	11:50	6.93	1493	15.0	0.64	18.88	-145.9	10.20'
15	11:55	6.85	1480	15.0	0.62	10.04	-136.3	10.21'
20	12:00	6.84	1478	14.9	0.60	7.65	-134.6	10.21'
25	12:05	6.83	1472	15.0	0.59	6.51	-132.1	10.23'

Sampling Date: 10/28/24 | Sampling Method: LOW FLOW | Time Sampled: 12:05

Stabilization Criteria (MUST MEET CRITERIA BETWEEN FINAL 3 CONSECUTIVE MEASUREMENTS COLLECTED 5 MINUTES APART)

Temperature ± 10%	**pH = ± 0.1**	**DO = ± 10% or 0.2 mg/L**
Turbidity = ± 10% (notrequired)	**SEC = ± 3%**	**ORP = ± 10.0 mV**

Drawdown Criteria = <0.3 feet

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GROUNDWATER SAMPLING RECORD

NOTE: Information must be filled in for all gray highlighted cells. All other cells are optional info.

Project: IDEQ - 6th and Jackson St.	Well Number: IW-3
Project Number: 23114.092	Sample Number: IW-3-102824
Location: 6TH & JACKSON	Weather: RAINY, CLOUDY, WINDY ~45°
Date: 10/28/24	Sampler(s): MW
Depth to Bottom (ft): 14.37	Purge Time: 20 min
Depth to Water (ft): 10.30	Purge Method: LOW FLOW
DTB-DTW (ft): 4.07	Purge Flow Rate (ml/min): 158 mL/min
Drawdown once stabilized (feet): N/A	Total Purge Volume: N/A

Conversion Factors (height x factor= vol in Gal)	¾" diameter 0.023	1" diameter 0.041	1 ½" diameter 0.092	2" diameter 0.163	4" diameter 0.652	8" diameter 2.611
Conversion Factors (height x factor= vol in L)	¾" diameter 0.087	1" diameter 0.155	1 ½" diameter 0.348	2" diameter 0.617	4" diameter 2.468	8" diameter 9.884

GROUNDWATER DATA

DTW:	~~Purged Volume (Specify L or Gal)~~ Time Passed	Time	pH	Cond (µS/cm)	Temp (°C)	DO mg/L	Turbidity (NTU)	ORP (mV)
10.38	0	12:50	6.73	1427	14.7	1.17	47.52	10.7
10.40	10	13:00	6.73	1427	15.0	0.78	20.80	7.5
10.41	15	13:05	6.73	1424	15.0	0.70	13.10	10.8
10.42	20	13:10	6.73	1419	15.2	0.64	9.45	16.1

Sampling Date: 10/28/24 | Sampling Method: LOW FLOW | Time Sampled: 13:10

Stabilization Criteria (MUST MEET CRITERIA BETWEEN FINAL 3 CONSECUTIVE MEASUREMENTS COLLECTED 5 MINUTES APART)

Temperature ± 10%	**pH = ± 0.1**	**DO = ± 10% or 0.2 mg/L**
Turbidity = ± 10% (notrequired)	**SEC = ± 3%**	**ORP = ± 10.0 mV**

Drawdown Criteria = <0.3 feet

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DUP

MS/D

GROUNDWATER SAMPLING RECORD

NOTE: Information must be filled in for all gray highlighted cells. All other cells are optional info.

Project: IDEQ - 6th and Jackson St.	Well Number: MW-3A
Project Number: 23114.080	Sample Number: ~~MW~~ MW-3A-120524
Location: 6th and Jackson	Weather: FOGGY ~30°
Date: 12/05/24	Sampler(s): MW
Depth to Bottom (ft): 14.66 FT	Purge Time: 20
Depth to Water (ft): 6.79 FT	Purge Method: LOW FLOW
DTB-DTW (ft): 7.87 FT	Purge Flow Rate (ml/min): 176 ML/MIN
Drawdown once stabilized (feet): 0.01 FT	Total Purge Volume:

Conversion Factors (height x factor= vol in Gal)	¾" diameter 0.023	1" diameter 0.041	1 ½" diameter 0.092	2" diameter 0.163	4" diameter 0.652	8" diameter 2.611
Conversion Factors (height x factor= vol in L)	¾" diameter 0.087	1" diameter 0.155	1 ½" diameter 0.348	2" diameter 0.617	4" diameter 2.468	8" diameter 9.884

GROUNDWATER DATA

Purged Volume (Specify L or Gal)	Time	pH	Cond (µS/cm)	Temp (°C)	DO mg/L	Turbidity (NTU)	ORP (mV)
(FT) DTW							
6.80 0	14:00	—	—	—	—	—	—
6.80 10	14:10	6.15	1125	13.5	0.68	5.86	146.3
6.81 15	14:15	6.15	1127	13.4	0.64	5.53	147.9
6.81 20	14:20	6.15	1124	13.6	0.61	5.68	148.4

Sampling Date: 12/05/24 | Sampling Method: LOW FLOW | Time Sampled: 14:20

Stabilization Criteria (MUST MEET CRITERIA BETWEEN FINAL 3 CONSECUTIVE MEASUREMENTS COLLECTED 5 MINUTES APART)

Temperature ± 10%	**pH = ± 0.1**	**DO = ± 10% or 0.2 mg/L**
Turbidity = ± 10% (notrequired)	**SEC = ± 3%**	**ORP = ± 10.0 mV**

Drawdown Criteria = <0.3 feet

Alta
Science & Engineering, Inc.

GROUNDWATER SAMPLING RECORD

NOTE: Information must be filled in for all gray highlighted cells. All other cells are optional info.

Project: IDEQ - 6th and Jackson St.	Well Number: ~~MW~~ IW-2
Project Number: 23114.080	Sample Number: IW-2-120624
Location: 6th and Jackson	Weather: FOG, WIND ~30"
Date: 12/06/24	Sampler(s): ML
Depth to Bottom (ft): 14.31	Purge Time: 35
Depth to Water (ft): 6.51	Purge Method: Low Flow
DTB-DTW (ft): 7.81	Purge Flow Rate (ml/min): 176 mg/L
Drawdown once stabilized (feet): 0.01 FT	Total Purge Volume:

Conversion Factors (height x factor= vol in Gal)	¾" diameter 0.023	1" diameter 0.041	1 ½" diameter 0.092	2" diameter 0.163	4" diameter 0.652	8" diameter 2.611
Conversion Factors (height x factor= vol in L)	¾" diameter 0.087	1" diameter 0.155	1 ½" diameter 0.348	2" diameter 0.617	4" diameter 2.468	8" diameter 9.884

GROUNDWATER DATA

(FT) DTW	Purged Volume (Specify L or Gal)	Time	pH	Cond (µS/cm)	Temp (°C)	DO mg/L	Turbidity (NTU)	ORP (mV)
6.60	0	13:20	6.94	1787	12.7	0.88	30.56	-155.9
6.60	10	13:30	6.92	1661	12.9	0.67	11.04	-155.1
6.60	15	13:35	6.90	1598	12.9	0.64	7.56	-154.1
6.60	20	13:40	6.88	1567	13.0	0.62	6.67	-153.2
6.60	25	13:45	6.86	1525	13.0	0.60	6.08	-151.5
6.61	30	13:50	6.85	1500	12.9	0.59	6.67	-150.7
	35	13:55	6.85	1486	13.1	0.58	7.40	-149.7

Sampling Date: 12/06/24 | Sampling Method: Low Flow | Time Sampled: 13:55

Stabilization Criteria (MUST MEET CRITERIA BETWEEN FINAL 3 CONSECUTIVE MEASUREMENTS COLLECTED 5 MINUTES APART)

Temperature ± 10%	**pH = ± 0.1**	**DO = ± 10% or 0.2 mg/L**
Turbidity = ± 10% (notrequired)	**SEC = ± 3%**	**ORP = ± 10.0 mV**

Drawdown Criteria = <0.3 feet

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GROUNDWATER SAMPLING RECORD

NOTE: Information must be filled in for all gray highlighted cells. All other cells are optional info.

Project: IDEQ - 6th and Jackson St.	Well Number: MW-6
Project Number: 23114.080	Sample Number: MW6-120624
Location: 6th and Jackson	Weather: FOG, WIND ~30'
Date: 12/06/24	Sampler(s): MW
Depth to Bottom (ft): 13.8	Purge Time: 45 min
Depth to Water (ft): 8.65	Purge Method: LOW FLOW
DTB-DTW (ft): 5.15	Purge Flow Rate (ml/min): 176 mL/min
Drawdown once stabilized (feet): 0.01	Total Purge Volume:

Conversion Factors (height x factor= vol in Gal)	¾" diameter 0.023	1" diameter 0.041	1 ½" diameter 0.092	2" diameter 0.163	4" diameter 0.652	8" diameter 2.611
Conversion Factors (height x factor= vol in L)	¾" diameter 0.087	1" diameter 0.155	1 ½" diameter 0.348	2" diameter 0.617	4" diameter 2.468	8" diameter 9.884

GROUNDWATER DATA

(FT) DTW MW	Purged Volume (Specify L or Gal)	Time	pH	Cond (µS/cm)	Temp (°C)	DO mg/L	Turbidity (NTU)	ORP (mV)
8.72	0	11:40	6.18	862	12.6	3.58	73.35	169.1
8.72	5	11:45	6.30	872	13.5	2.79	26.51	160.8
8.72	10	11:50	6.29	881	13.9	2.35	17.76	158.9
8.72	15	11:55	6.28	889	13.8	2.01	14.21	157.5
8.73	20	12:00	6.27	894	13.9	1.83	12.97	156.2
8.73	25	12:05	6.27	898	14.0	1.70	11.98	154.9
8.73	30	12:10	6.26	901	13.9	1.62	9.93	153.2
8.73	35	12:15	6.25	903	13.9	1.48	10.62	151.6
8.73	40	12:20	6.24	906	13.8	1.39	12.65	149.8
8.73	45	12:25	6.23	909	14.0	1.31	13.86	148.2

Sampling Date: 12/06/24 | Sampling Method: LOW FLOW | Time Sampled: 12:25

Stabilization Criteria (MUST MEET CRITERIA BETWEEN FINAL 3 CONSECUTIVE MEASUREMENTS COLLECTED 5 MINUTES APART)

Temperature ± 10%	**pH = ± 0.1**	**DO = ± 10% or 0.2 mg/L**
Turbidity = ± 10% (notrequired)	**SEC = ± 3%**	**ORP = ± 10.0 mV**

Drawdown Criteria = <0.3 feet

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GROUNDWATER SAMPLING RECORD

NOTE: Information must be filled in for all gray highlighted cells. All other cells are optional info.

Project: IDEQ - 6th and Jackson St.	Well Number: IW-3
Project Number: 23114.080	Sample Number: IW-3-120624
Location: 6th and Jackson	Weather: FOG, WIND, 30°
Date: 12/06/24	Sampler(s): MW
Depth to Bottom (ft): 14.34	Purge Time: 25
Depth to Water (ft): 6.57	Purge Method: LOW FLOW
DTB-DTW (ft): 7.79	Purge Flow Rate (ml/min): 176 mg/L
Drawdown once stabilized (feet): 0.01	Total Purge Volume:

Conversion Factors (height x factor= vol in Gal)	¾" diameter 0.023	1" diameter 0.041	1 ½" diameter 0.092	2" diameter 0.163	4" diameter 0.652	8" diameter 2.611
Conversion Factors (height x factor= vol in L)	¾" diameter 0.087	1" diameter 0.155	1 ½" diameter 0.348	2" diameter 0.617	4" diameter 2.468	8" diameter 9.884

GROUNDWATER DATA

DTW	Purged Volume (Specify L or Gal)	Time	pH	Cond (µS/cm)	Temp (°C)	DO mg/L	Turbidity (NTU)	ORP (mV)
6.60	0	14:20	6.79	1598	11.4	1.97	70.89	3.6
6.60	10	14:30	6.75	1634	12.4	1.08	29.31	9.104
6.61	15 14:35	~~14:40~~ MW	6.73	1641	11.9	0.98	8.15	MW 18.8
6.61	20	14:40	6.72	1643	12.4	0.95	7.72	24.1
6.61	25	14:45	6.71	1646	12.4	0.91	7.02	27.6

Sampling Date: 12/06/24 | Sampling Method: LOW FLOW | Time Sampled: 14:45

Stabilization Criteria (MUST MEET CRITERIA BETWEEN FINAL 3 CONSECUTIVE MEASUREMENTS COLLECTED 5 MINUTES APART)

Temperature ± 10%	**pH = ± 0.1**	**DO = ± 10% or 0.2 mg/L**
Turbidity = ± 10% (notrequired)	**SEC = ± 3%**	**ORP = ± 10.0 mV**

Drawdown Criteria = <0.3 feet

Alta
Science & Engineering, Inc.

ms/d
dup

GROUNDWATER SAMPLING RECORD

NOTE: Information must be filled in for all gray highlighted cells. All other cells are optional info.

Project: IDEQ - 6th and Jackson St.	Well Number: MW-3A
Project Number: 23114.080	Sample Number: MW-3A-011525
Location: 6th and Jackson	Weather: 34° WINDY SUNNY
Date: 01/15/25	Sampler(s): MW
Depth to Bottom (ft): 14.65	Purge Time:
Depth to Water (ft): 5.76	Purge Method: LOW FLOW
DTB-DTW (ft): 8.89	Purge Flow Rate (ml/min): 181 mL/min
Drawdown once stabilized (feet):	Total Purge Volume:

Conversion Factors (height x factor= vol in Gal)	¾" diameter 0.023	1" diameter 0.041	1 ½" diameter 0.092	2" diameter 0.163	4" diameter 0.652	8" diameter 2.611
Conversion Factors (height x factor= vol in L)	¾" diameter 0.087	1" diameter 0.155	1 ½" diameter 0.348	2" diameter 0.617	4" diameter 2.468	8" diameter 9.884

GROUNDWATER DATA

(FT) DTW	~~Purged Volume~~ (Specify L or Gal)	Time	pH	Cond (uS/cm)	Temp (°C)	DO mg/L	Turbidity (NTU)	ORP (mV)
5.76	0	10:30	6.17	1289	11.7	2.28	27.53	166.7
5.77	10	10:40	6.17	1284	11.7	1.65	14.61	164.6
	15	10:45	6.17	1280	11.7	1.47	12.09	163.8
5.77	20	10:50	6.18	1278	11.6	1.32	10.59	163.0
	25	10:55	6.17	1271	11.7	1.17	11.20	162.3
5.77	30	~~10~~ 11:00	6.17	1269	11.7	1.09	13.17	161.7
	35	11:05	6.17	1267	11.8	1.04	19.61	161.1

Sampling Date: 01/15/25	Sampling Method: LOW FLOW	Time Sampled: 11:05

Stabilization Criteria (MUST MEET CRITERIA BETWEEN FINAL 3 CONSECUTIVE MEASUREMENTS COLLECTED 5 MINUTES APART)

Temperature ± 10%	**pH = ± 0.1**	**DO = ± 10% or 0.2 mg/L**
Turbidity = ± 10% (notrequired)	**SEC = ± 3%**	**ORP = ± 10.0 mV**

Drawdown Criteria = <0.3 feet

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GROUNDWATER SAMPLING RECORD

NOTE: Information must be filled in for all gray highlighted cells. All other cells are optional info.

Project: IDEQ - 6th and Jackson St.	Well Number: IW-2
Project Number: 23114.080	Sample Number: IW-2-011525
Location: 6th and Jackson	Weather: 34° WINDY, SUNNY
Date: 01/15/25	Sampler(s): MW
Depth to Bottom (ft): 5.48	Purge Time:
Depth to Water (ft): 14.46	Purge Method: LOWFLOW
DTB-DTW (ft): 8.89	Purge Flow Rate (ml/min): 166 ml/min
Drawdown once stabilized (feet): 0.02	Total Purge Volume: NA

Conversion Factors (height x factor= vol in Gal)	¾" diameter 0.023	1" diameter 0.041	1 ½" diameter 0.092	2" diameter 0.163	4" diameter 0.652	8" diameter 2.611
Conversion Factors (height x factor= vol in L)	¾" diameter 0.087	1" diameter 0.155	1 ½" diameter 0.348	2" diameter 0.617	4" diameter 2.468	8" diameter 9.884

GROUNDWATER DATA

(FT) DTW	Purged Volume (Specify L or Gal)	Time	pH	Cond (µS/cm)	Temp (°C)	DO mg/L	Turbidity (NTU)	ORP (mV)
5.55	0	11:35	6.98	1806	11.1	1.05	94.23	-145.6
	10	11:45	6.88	1560	11.3	0.73	45.17	-150.7
	15	11:50	6.82	1432	11.2	0.70	26.70	-145.2
5.57	20	11:55	6.72	1283	11.2	0.68	16.59	-138.1
	25	12:00	6.68	1205	11.2	0.67	13.33	-133.8
	30	12:05	6.63	1146	11.2	0.65	14.13	-128.4
5.57	35	12:10	6.63	1131	11.3	0.65	12.65	-125.8
	40	12:15	6.62	1107	11.2	0.65	9.70	-118.8
5.57	45	12:20	6.61	1106	11.2	0.65	10.25	-114.6
	50	12:25	6.63	1118	11.2	0.64	6.47	-111.9

Sampling Date: 01/15/25 | Sampling Method: LOW FLOW | Time Sampled: 12:25

Stabilization Criteria (MUST MEET CRITERIA BETWEEN FINAL 3 CONSECUTIVE MEASUREMENTS COLLECTED 5 MINUTES APART)

Temperature ± 10%	**pH = ± 0.1**	**DO = ± 10% or 0.2 mg/L**
Turbidity = ± 10% (notrequired)	**SEC = ± 3%**	**ORP = ± 10.0 mV**

Drawdown Criteria = <0.3 feet

Alta
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GROUNDWATER SAMPLING RECORD

NOTE: Information must be filled in for all gray highlighted cells. All other cells are optional info.

Project: IDEQ - 6th and Jackson St.	Well Number: IW-3
Project Number: 23114.080	Sample Number: IW-3-011525
Location: 6th and Jackson	Weather: 34° WINDY, SUNNY
Date: 01/15/25	Sampler(s): MW
Depth to Bottom (ft): 14.49	Purge Time:
Depth to Water (ft): 6.52	Purge Method: LOW FLOW
DTB-DTW (ft): 8.97	Purge Flow Rate (ml/min): 146
Drawdown once stabilized (feet): 0.03 FT	Total Purge Volume: NA

Conversion Factors (height x factor= vol in Gal)	¾" diameter 0.023	1" diameter 0.041	1 ½" diameter 0.092	2" diameter 0.163	4" diameter 0.652	8" diameter 2.611
Conversion Factors (height x factor= vol in L)	¾" diameter 0.087	1" diameter 0.155	1 ½" diameter 0.348	2" diameter 0.617	4" diameter 2.468	8" diameter 9.884

GROUNDWATER DATA

(FT) DTW	~~Purged Volume~~ TIME (Specify L or Gal)	Time	pH	Cond (µS/cm)	Temp (°C)	DO mg/L	Turbidity (NTU)	ORP (mV)
5.55	0	13:30	6.13	1546	10.9	1.35	99.09	91.0
5.58	10	13 40	6.08	1548	11.0	0.91	31.31	91.1
5.58	15	13 45	6.09	1549	11.1	0.85	9.86	93.6
5.58	20	13 50	6.09	1552	11.1	0.82	9.61	95.0
	~~25~~ MW	~~1355~~						
	~~30~~	~~1400~~						

Sampling Date: 01/15/25 | Sampling Method: LOW FLOW | Time Sampled: 15:50

Stabilization Criteria (MUST MEET CRITERIA BETWEEN FINAL 3 CONSECUTIVE MEASUREMENTS COLLECTED 5 MINUTES APART)

Temperature ± 10%	**pH = ± 0.1**	**DO = ± 10% or 0.2 mg/L**
Turbidity = ± 10% (notrequired)	**SEC = ± 3%**	**ORP = ± 10.0 mV**

Drawdown Criteria = <0.3 feet

Alta
Science & Engineering, Inc.

GROUNDWATER SAMPLING RECORD

NOTE: Information must be filled in for all gray highlighted cells. All other cells are optional info.

Project: IDEQ - 6th and Jackson St.	Well Number: MW-6
Project Number: 23114.080	Sample Number: MW-6-011525
Location: 6th and Jackson	Weather: ~~37°~~ WINDY, SUNNY 40°
Date: 01/15/25	Sampler(s): MW
Depth to Bottom (ft): 14.78	Purge Time: 30
Depth to Water (ft): 4.95	Purge Method: LOW FLOW
DTB-DTW (ft): 9.83	Purge Flow Rate (ml/min): 142
Drawdown once stabilized (feet): 0.0	Total Purge Volume:

Conversion Factors (height x factor= vol in Gal)	¾" diameter 0.023	1" diameter 0.041	1 ½" diameter 0.092	2" diameter 0.163	4" diameter 0.652	8" diameter 2.611
Conversion Factors (height x factor= vol in L)	¾" diameter 0.087	1" diameter 0.155	1 ½" diameter 0.348	2" diameter 0.617	4" diameter 2.468	8" diameter 9.884

GROUNDWATER DATA

(FT) DTW	~~Purged Volume~~ TIME (Specify L or Gal)	Time	pH	Cond (MS/cm)	Temp (°C)	DO mg/L	Turbidity (NTU)	ORP (mV)
4.99	0	14:15	6.72	816	11.3	5.99	241.65	61.7
4.99	10	14:25	6.66	810	11.7	5.18	31.77	77.8
	15	14:30	6.64	810	11.7	4.84	23.83	82.2
4.99	20	14:35	6.63	818	11.9	4.58	18.81	78.8
	25	14:40	6.59	820	11.8	4.29	15.66	~~83~~ 84.3
4.99	30	14:45	6.58	820	11.9	4.13	14.19	MW 87.8

Sampling Date: 01/15/25 | Sampling Method: LOW FLOW | Time Sampled: 14:45

Stabilization Criteria (MUST MEET CRITERIA BETWEEN FINAL 3 CONSECUTIVE MEASUREMENTS COLLECTED 5 MINUTES APART)

Temperature ± 10%	**pH = ± 0.1**	**DO = ± 10% or 0.2 mg/L**
Turbidity = ± 10% (notrequired)	**SEC = ± 3%**	**ORP = ± 10.0 mV**

Drawdown Criteria = <0.3 feet

MW/ RN / BM/ BB 6TH & JACKSON 10/14/24

YSI WATER METER - CALIBRATIONS

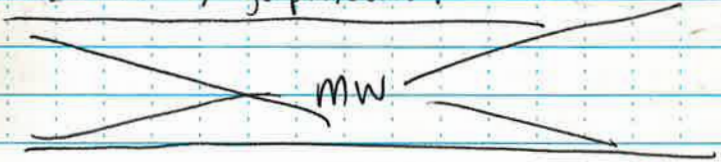
- CONDUCTIVITY - SPECIFIC CONDUCTIVITY µS/cm
  - LET THE READING WINDOW BECOME NEUTRAL = "PARALLEL LINES" - ACCEPT CALIBRATION
  ↳ MAKE SURE CALIBRATION VALUE IS CORRECT
  "CALIBRATION SUCCESSFUL" - READY TO MOVE ON
- pH 4-7-10 "PARALELL LINES" - WAIT FOR CALIBRATION SUCCESSFUL. DO 4 FIRST, 10 LAST
- ORP - CHECK RANGE ON BOTTLE (mV)
- DI INBETWEEN STANDARDS ON PROBE & TUBE - STORE PROBE W/ A LITTLE WATER TO KEEP MOIST (NOT SUBMERGED)

– DEPTH TO WATER – DEPTH TO BOTTOM ——

MW-1	DTW: 10.90'	12:52
MW-6	~~DTW~~ DTB mw: 13.79'	DTW: 10.52'
MW-3	DTW: 10.90'	DTB: 14.22
MW-3A	DTW: 11.25	DTB: 14.60

—— Health and Safety ——

S/T/F - Holes in ground, spiders, sun protection vehicle - trailer and injection tubing, roads adjacent - traffic safety, pedestrians / civilians wash hands, eye protection



Scale: 1 square = _____

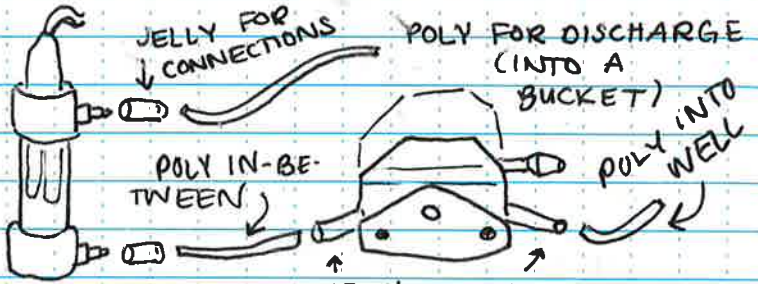
4 MW/RN/BM/BB 6TH & JACKSON 10/14/24

SAMPLE SITES

- MW-3A: ~~MW~~ MW-3A-101424 @ 13:30
  - ↳ ~~MW~~ MW-3A-101424-DUP @ 13:30
  - ↳ MW-3A-101424 ms/d @ 13:30
- IW-1: IW-1-101424 @ 14:05
- IW-2: IW-2-101424 @ 14:45
- IW-3: IW-3-101424 @ 15:30

SAMPLE ANALYSES: NITRATE - NO PRESERVE.
AMMONIA - H_2SO_4 PRESERVATIVE

SAMPLING METHODS: LOW FLOW = 100-500 mL/min
silicone "JELLY" TUBING FOR NO-CROSS CONTAM.
& POLY TUBING FOR EVERYTHING ELSE



"YSI Pro DSS METER"

"PELICAN" PERISTALTIC PUMP

- CHANGE ALL TUBING FOR EVERY SAMPLE LOCATION BESIDES DISCHARGE - RINSE & STORE METER W/ A LITTLE D.I. WATER
FILL PROBE CHAMBER, PURGE 10 MINS. READING EVERY 5 min UNTIL STABLE - ALL TIME = TOTAL PURGE

Scale: 1 square =

23114.080

MW/RN | 6TH & JACKSON | 10/18/24 [5]

CALIBRATION STANDARD	PROBE READING	AFTER CALIBRATION
pH 4.00	~~4.29~~ ~~4.18~~ MW 10/18/24 pH 4.18	4.00 pH
pH 7.00	7.14 pH	6.89 pH
pH 10.00	10.19 pH	10.00 pH
CONDUCTIVITY 1413 µS/cm	1417 µS/cm	1413 ~~µS~~ MW 10/18/24 µS/cm
ORP (Zobell's) MW 10/18/24	228.0 ~~233.5~~ MW 10/18/24 mV	228.7 mV
~~TURB 1000 NTU~~		

Health & safety: slips, trips, falls, be aware of pedestrians on lot, aware of cold temperatures/wind chill, potentially contaminated water traffic on 6th & Jackson

weather: partly cloudy, Windy ~50°

Tools: Ratched wrench (Red) screwdriver (to get lid off/-

4oz ~ 120ml 34sec/120mL

MW-3A DTW: 10.99' NO OTB TAKEN

~~MW-3 DTW: 13.2~~ MW 13.31' ~~OTB: 14.25~~ MW 10/18/24

IW-1 DTW: 10.45 DTB: 14.2 MW/10/18/24

IW-2 DTW: 10.66 ~~DT~~

IW-1 was purged for ~5min before water was "lost" - tube appeared to be in water, the well did not go dry; connection with water unable to be regained. moved on to IW-2.

MW-6 DTW: 10.25 15:01

MW

Scale: 1 square =

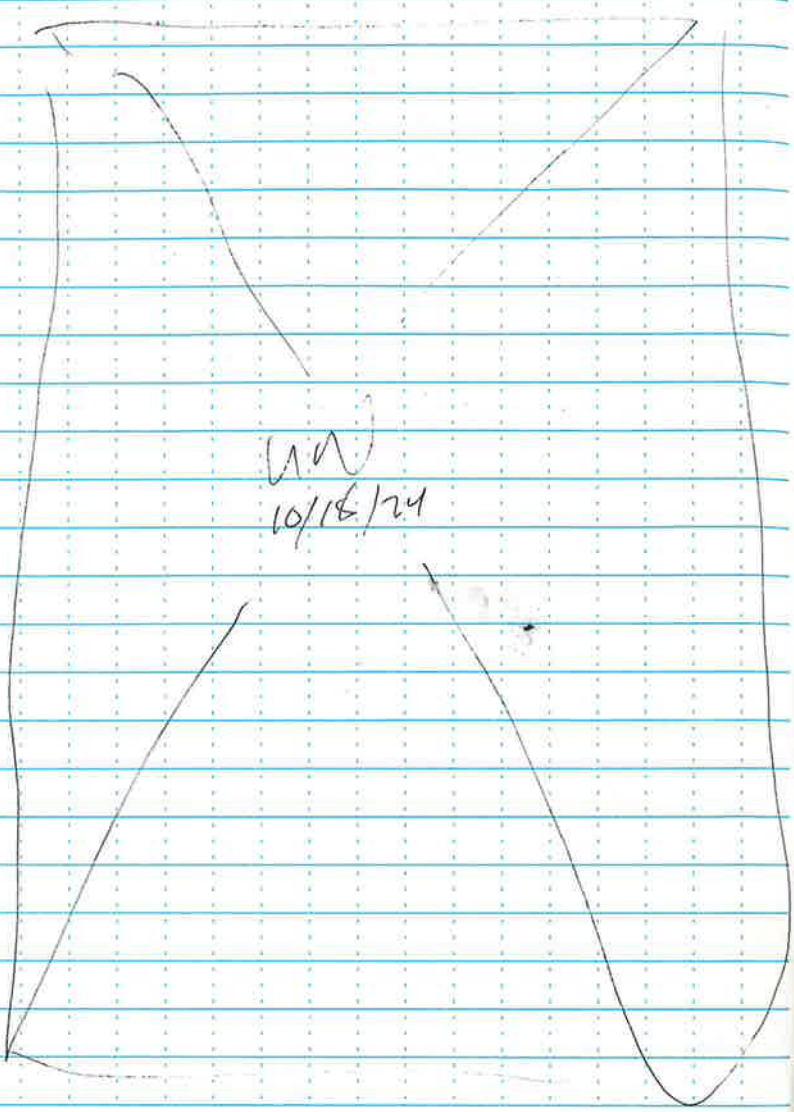
Rite in the Rain.

23114.080

6 MW/RN 6TH & JACKSON 10/18/24

IW-3 DTW 10.85 @ 15:07

MW-1 DTW 10.74 @ 15:30



Scale: 1 square = _____

24023.080

MW/SH 6TH & JACKSON 10/24/24 7

PROBE CALIBRATION YSI ProDSS: Temp: 22.0°C

STANDARD	PRE-CAL	POST-CALIBRATION	
pH 4.00	4.04 pH	4.00 pH	o BATTERY:
pH 7.00	7.00 pH	7.00 pH	82%
pH 10.00	9.87 pH	10.00 pH	(ABOVE>
ORP (Zobell's)	227.4 mV	227.1 mV	66%)
COND: 1413 µS/cm	1510 µS/cm	1413 SPC - µS/cm	

NOTES: RINSE PROBE W/ TARGET SOLUTION (SMALL AMOUNT) ↪ DISPOSE, THEN ADD AMOUNT TO CALIBRATE, SHORT RINSE

TURBIDITY READING @ 0.45 NTU - NOT CALIBRATED BECAUSE STABILIZATION NOT NECESSARY. 2PT CAL = 0: DI WATER, 126 NTU / 124 NFU WITH STREAMGUARD

DO CALIBRATION - VERY GENTLY DRY ALL PROBE TIPS - SPLASH WATER IN BOTTOM, STREAMGUARD, REST SENSORS HIGH (ADJUST RUBBER RING) DON'T TIGHTEN ↪ ODO → % DO (OKAY IF USING mg/L IN FIELD) MAKE SURE IT READS [100.0] READING 100.5, CAL TO 100.0

SAFETY

SLIPS, TRIPS, FALLS; NITRATE INJECTION - CONTAMINATED WATER - EATING/DRINKING W/ CLEAN HANDS, PEDS THROUGH LOT; TRAFFIC ON 6TH & JACKSON, WIND CHILL

MW-3A OTW: 10.62 FT OTB: 14.63 FT 100mL/35sec

IW-2 DTW: 10.99 FT OTB: 14.25 FT 100mL/38sec

IW-3 DTW: 10.55 FT OTB: 14.13 FT 100mL/ ~~32sec~~ 36 sec mw

IW-1 DTW: 10.34 FT OTB: 14.5 FT 100mL/ ~~34sec~~ 40 mw

MW

Scale: 1 square = _____

Rite in the Rain

24023.080

MW/SH 6TH & JACKSON 10/24/24

MW-3A —— MW-3A-102424 —— 11:35

↳ (DUP) MW-3A-102424-DUP —— 11:35

↳ (msld) MW-3A-102424 (msld) —— 11:35

IW-2 —— IW-2-102924 —— 12:40

IW-3 —— IW-3-102424 —— 14:00

IW-1 —— NOT SAMPLED

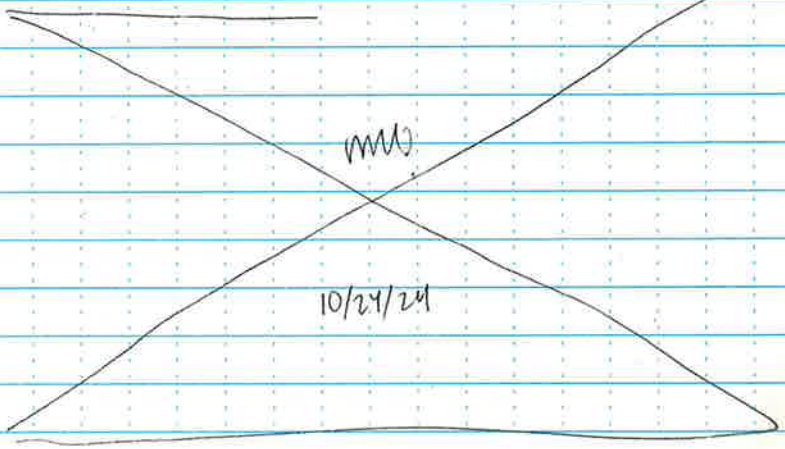
EXPENDABLE SUPPLIES

- YSI Pro OSS Probe —— POLY TUBING (~45 FT.)
- PERISTALTIC PUMP —→ ANY OTHER "NEW" SUPPLIES
- E-TAPE —— (OPEN A NEW BOX, BOTTLE, ETC.)
- "JELLY" TUBING (~2 FT) ——

NEW TUBING "INSTALLED" ON 10/24/24 ABOUT 1 FT OFF BOTTOM TO HELP WITH DRAWDOWN, IW-1 DRAWING DOWN VERY FAST - FLOW RATE REDUCED TO ~117 mL/min

MW-1 DTW: 10.39 FT. AT 15:40 ——

LEAVING SITE AT 15:50 ——



Scale: 1 square = _____

YSI Pro DSS Probe Battery: 69%. Temp: 19.4°C

STANDARD	PRECALIBRATION	POST-CAL
pH 4.00	pH 4.11 @ 21.5°C	pH 4.00
pH 7.00	pH 7.08 @ 21.5°C	pH 7.00
pH. 10.00	pH 10.02 @ 21.9°C	pH 10.00
ORP (Zobell's)	227.5 @ 22°C	227.4 mV
CON: 1413 mS/cm	1380 µS/cm	1413 µS/cm
DO % 100%	100.4 ~~% DO~~ mg/L	100% DO

(OTB - DTW = X X/2 + X = middle of screen - length of tubing

SAFETY

SLIPS, TRIPS, FALLS; NITRATE CONTAMINATED WATER, GENERAL AUTO TRAFFIC & PED TRAFFIC THROUGH LOT

WELLS

MW-3A DTW: 10.34 FT DTB: 14.64' TIME: 10:25

IW-2 DTW: 10.06 FT DTB: 14.35' TIME: 11:20

IW-3 DTW: 10.30 FT DTB: 14.37 TIME: 12:45

MW-1 DTW: 10.27 FT TIME: 13:30

SAMPLES:

MW-3A-102528 — 10:50

↳ MW-3A102528-DUP — 10:50

↳ MW-3A102528 MS/D — 10:50

IW-2-102828 — 12:05

IW-3-102828 — 13:10

ARRIVED AT SITE 10:00, PARTLY CLOUDY, WINDY, ~45°

24023.080

MW — 6TH & JACKSON — 10/28/24

MW-3A: PURGE TIME: 20 min (MP System) FLOW RATE: 171 mL/min

DTW	TIME	TIME	pH	SPC	DO (mg/L)	ORP	NTU	T°C
10.36'	0 MW ~~10:30~~	10:30	6.02	1178	0.93	201.0	7.04	15.0
10.36'	10	10:40	6.06	1181	0.67	196.3	6.87	15.1
10.37'	15	10:45	6.07	1208	0.62	194.1	6.41	15.2
10.37'	20	10:50	6.08	1201	0.62	192.4	7.14	15.2

IW-2: PURGE TIME: 25min FLOW RATE: 139 mL/min

DTW	TIME	TIME	pH	SPC (µS/cm)	DO (mg/L)	ORP	NTU	T°C
10.18'	0	11:40	7.01	1517	1.12	-143.3	52.62	14.8
10.20'	10	11:50	6.93	1493	0.94	-145.9	18.88	15.0
10.21'	15	11:55	6.85	1480	0.62	-136.3	10.04	15.0
10.21'	20	12:00	6.84	1478	0.60	-134.6	7.65	14.9

DTW: 10.18 FT @ 11:40 AFTER PURGING SEDIMENT & OTHER GUNK FROM THE FLOW CELL - FINDING THE MIDDLE OF THE WATER COLUMN. SAMPLES FROM THIS WELL HAVE HAD A SLIGHT ODOR & MILD YELLOW COLOR TO WATER CONSISTENT BETWEEN EVENTS 3 & 4

↓	↓	↓	↓	↓	↓	↓	↓	↓
10.23'	25	12:05	6.83	1472	0.59	-132.1	6.51	15.0
—	—	—	—	—	—	—	—	—

IW-3: RAINY, CLOUDY, ~45 WINDY

PURGE TIME: 20 min FLOW RATE: 158 mL/min

DTW	TIME	TIME	pH	SPC (µS/cm)	DO (mg/L)	ORP	NTU	T°C
~~10.50~~	0	12:50	6.73	1427	~~21.17~~ MW	10.7	47.52	14.7

MW DTW: 10.38 @ 12:55

MW

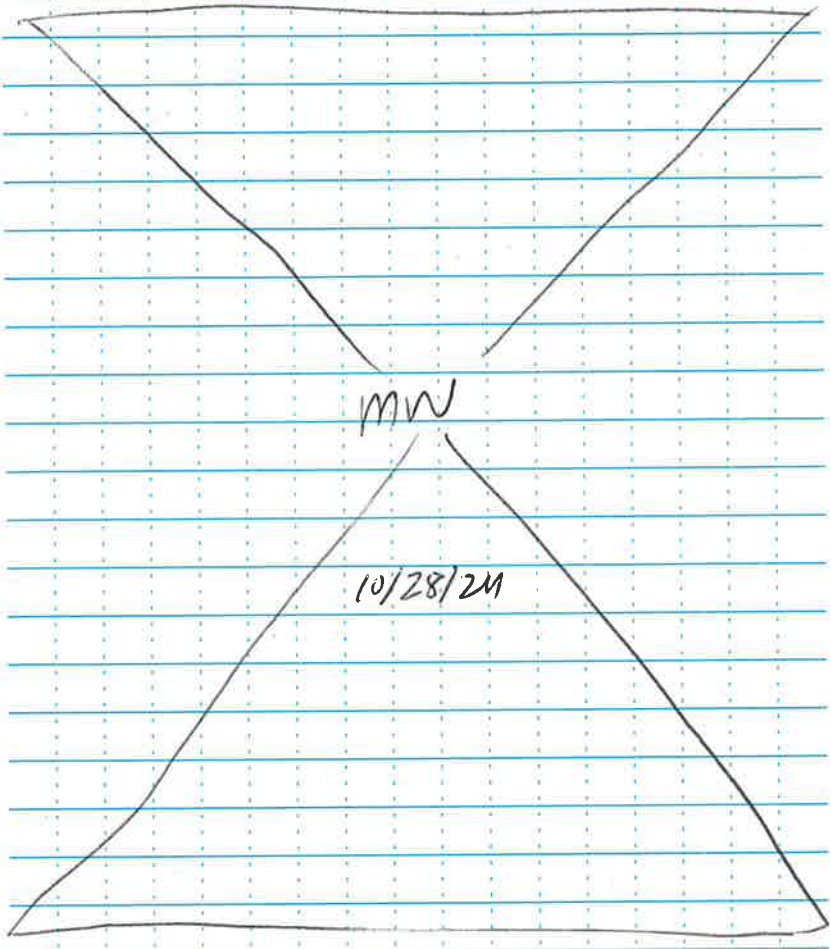
Scale: 1 square =

24023.080

MW — 6TH & JACKSON — 10/28/24

DTW =	Time	Time	pH	SpCH µs/cm	DO mg/L	ORP	NTU	T °C
10.40	10	13:00	6.73	1427	6.78	7.5	20.80	15.0
10.41	15	13:05	6.73	1424	0.70	10.8	13.10	15.0
10.42	20	13:10	6.73	1419	0.64	16.1	9.45	15.2

LEFT SITE AT 13:35



Scale: 1 square = ____ MW

Rotten on the Rails

~~24023.080~~ 23114.080 MW

MW 6TH & JACKSON PILOT TEST 12/5/24

- YSI ProDSS Probe, Battery: 98%, TEMP: 18.8°C

STANDARD	PRE-CAL	POST-CAL
pH 4.00	pH 4.11	pH 4.00
pH 7.00	pH 7.07	pH 7.00
pH 10.00	pH 9.99	pH 10.00
ORP (zobells) mV	226.0 mV	228.5 mV
CON: 1413 µS/cm	1420 µS/cm	1413 µS/cm
DO 100% (%L)	100.6 %L	100% L

SAFETY: SLIPS, TRIPS, FALLS; POTENTIALLY ICY THIS MORNING; TEMP OUTSIDE ~27°F; ROAD TRAFFIC, PEDESTRIAN TRAFFIC THROUGH LOT, CONTAMINATED WATER, NITRATE

ARRIVED ONSITE: 12:35 (12/5/24)

WELLS

MW-3A OTW: 6.79 FT DTB: 14.66 FT TIME 14:00

MW-6 OTW: 8.91 FT DTB: 13.80 FT TIME 12:45

~~IW-2 OTW: MW DTB: TIME~~

~~IW-3 OTW: DTB TIME~~

~~MW-1 OTW: TIME~~

SAMPLES:

MW-3A-120524 14:20

↳ MW-3A-120524-DUP 14:25

MW → MW-3A-120524 (ms/d 14:25

~~IW-2-120524~~

~~IW-3-120524~~

MW

Scale: 1 square = _____

~~24023.080~~ 23114.080

MW 6TH & JACKSON PILOT TEST 12/5/24

MW-6-120524 13:40

NOTES: THE TRUCK BATTERY WAS DEAD - DELAY TO GETTING TO SITE - ONLY ~~TWO~~ MW TWO SAMPLES COLLECTED, HOWEVER, I REALIZED DO% HAD NOT FULLY STABILIZED AFTER SAMPLING, SO I WILL BE REDO-ING THAT ONE TOMORROW, AND SAMPLING IW WELLS, LEAVING SITE @ 14:50.

MW 12/6/24

SAFETY: SLIPS TRIPS FALLS, ICY/FREEZING, AUTO & PEDESTRIAN TRAFFIC, CONTAM. WATER.

ARRIVED ONSITE 10:00 (12/6/24)

WELLS MW 11:35

MW-6 (REDO) OTW: 8.65 FT DTB: 13.80 FT TIME: ~~10:10~~

IW-2 OTW 6.50 DTB: 14.31 FT TIME 13:15

IW-3 OTW: 6.57 FT DTB: 14.36 FT TIME 14:15

MW-1 OTW: 6.62 FT TIME 15:15

SAMPLES

MW-6-120624 12:25

IW-2-120624 13:55

IW-3-120624 14:45

NEW BATTERY DIED WHEN LEFT IN CAR OVERNIGHT HAD TO GET OLD BATTERY DELIVERED

MW

Scale: 1 square = _____

Rite in the Rain

23114.080

14 MW 6TH & JACKSON PILOT TEST 1/13/25

YSI DSS Probe, Battery 100% TEMP: 20.9°C

STANDARD	PRE-CAL	POST-CAL
pH 4.00	pH 3.87	pH 4.00
pH 7.00	pH ~~6.88~~ 7.06 (MW)	pH 7.00
pH 10.00	pH 9.98	pH 10.00
ORP (zobells) mV	227.5 mV	229.1 mV
COND. 1413 µS/cm	1266 µS/cm	1413 µS/cm
DO 100% (% L)	98.5%	100%

WEATHER: 32°F WINDY, CLOUDY 1/14/25

SAFETY: FREEZE, SLIPS TRIPS FALLS, ROAD TRAFFIC, PEDESTRIAN TRAFFIC THROUGH LOT? CONTAMINATED H_2O WELLS

ARRIVED ONSITE: 10:15

MW-6 DTW: 4.94 FT DTB 13.52FT @ 11:30

MW-3A DTW: 5.70 FT DTB 14.65FT @ 11:00

~~IW-2 DTW: DTB: @~~

~~IW-3 DTW: DTB: @~~

~~MW-1 DTW: @~~

SAMPLES

~~MW-3A-011425~~

~~↳MW-3A-011425-DUP~~

~~↳MW-3A-011425 (MS/d)~~

~~MW-6~~

~~IW-2~~

~~IW-3~~

Scale: 1 square = _____ MW

23114.080

MW 6TH & JACKSON PILOT TEST 1/15/25 15

WEATHER: 34° WINDY, SUNNY

SAFETY: SLIPS TRIPS FALLS, FREEZING, AUTO & PEDESTRIAN TRAFFIC, NITRATES

ARRIVED ONSITE: 10:05

MW-3A DTW: 5.76 FT DTB: 14.65 FT @ 10:20

MW-6 DTW: 4.95 FT DTB 14.78 FT @ 14:10

IW-2 DTW: 5.48 FT DTB: 14.46 FT @ 11:30

IW-3 DTW: 5.52 FT DTB: 14.49 @ ~~13:25~~ 13:25 MW

SAMPLES

MW-3A-011525 11:05

↳MW-3A-011525-DUP 11:05

↳MW-3A-011525 (MS/d) 11:05

MW-6 14:45

IW-2 12:25

IW-3 13:50

MW-1 DTW: 5.4 FT @ 15:00

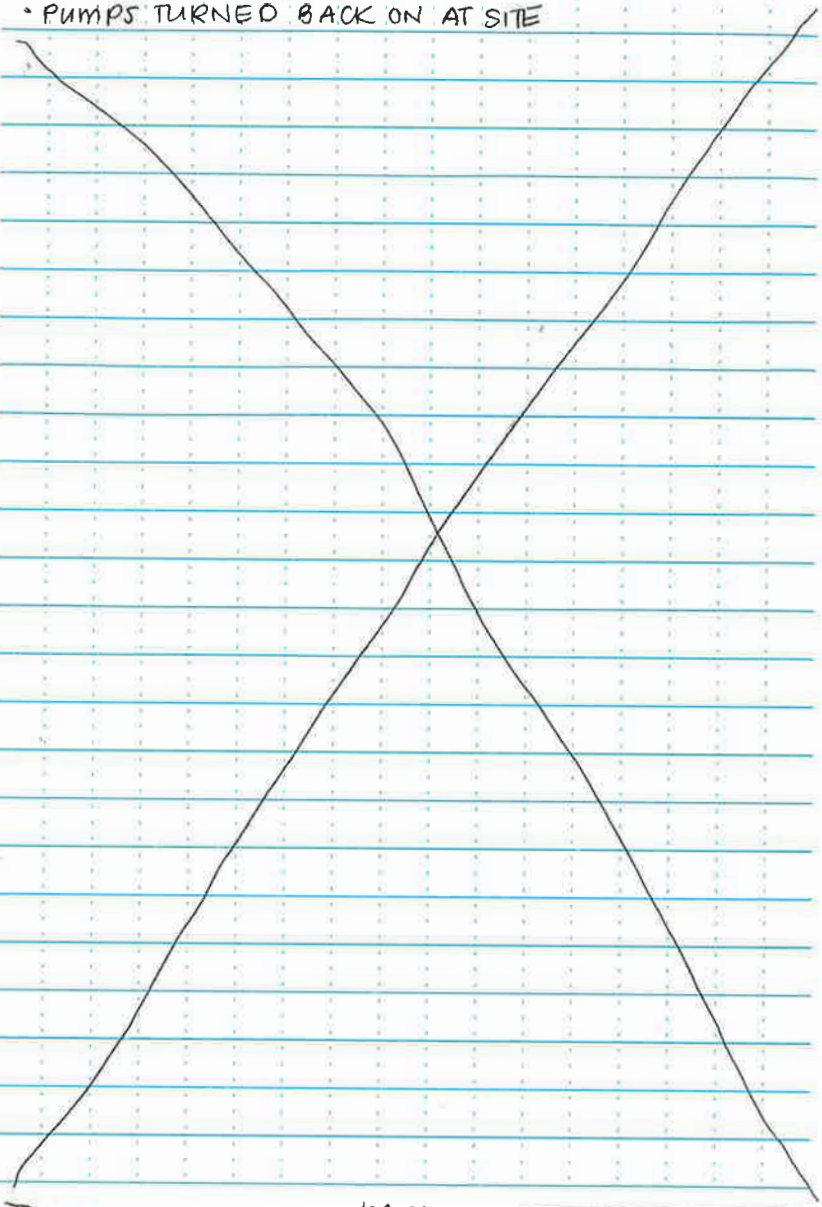
EOD

Scale: 1 square = _____ MW

Rite in the Rain

16 MW 6TH & JACKSON PILOT TEST 1/16/25

• PUMPS TURNED BACK ON AT SITE



Scale: 1 square = _____ MW

Attachment C

Data Validation Memorandum

Alta Science & Engineering, Inc.

alta-se.com

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Boise, Idaho 83706
Ph: (208) 336-7080; Fax: (208) 908-4980

INTERNAL MEMORANDUM

To:	Robin Nimmer, Alta Moscow
From:	Mikahala Waters, Alta Moscow Rachel Gibeault, Alta Boise
Date:	5/7/2025
Contract Title:	K305 TO #69, Alta project 23114.090
Alta Project No.:	23114.090
Subject:	**QA/QC Review for the Nitrification Injection Pilot Test Monitoring at the 6th Street and Jackson Street Site in Moscow, Idaho**

1 Introduction

This internal memorandum provides a summary of the data validation performed and the resulting data quality for the groundwater sample results for the groundwater monitoring activities that occurred between October 14, 2024, and January 15, 2025, at the 6th and Jackson site located at 217 and 317 West 6th Street, Moscow, Idaho.

Sampling procedures and the quality assurance/quality control (QA/QC) review followed guidelines set forth in the following documents:

- *Final Quality Assurance Project Plan (QAPP) for 217 & 317 W 6th Street Moscow, Idaho* (TerraGraphics 2015)
- *Addendum to the Quality Assurance Project Plan for a Pilot Study for 6th & Jackson Street, Moscow, Idaho* (Alta 2024)
- *National Functional Guidelines for Inorganic Superfund Methods Data Review* (USEPA 2020)
- *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use* (USEPA 2009)
- *USEPA Guidance on Environmental Data Verification and Data Validation* (USEPA 2002)

This memorandum discusses the data validation and quality review performed by Alta Science & Engineering, Inc. (Alta) for the Work Orders listed in Table 1. Alta's Data Validator and Quality Assurance Officer (QAO) conducted a Stage 2A data validation level (USEPA 2009) on all the data analyzed by Anatek Labs, Inc. (Anatek) in Moscow, Idaho. Data qualifiers used in this review are defined by the U.S. Environmental Protection Agency (USEPA) (2020). All Anatek Work Orders are provided in 4Attachment A.

Table 1. Alta's Stage 2A Data Validation Review of Groundwater Monitoring Data at the 6th and Jackson Street Site

Anatek Labs, Inc. Work Order	Analysis	Groundwater Sampling Date
MEJ0518	NH3-N [a] and NO3/N [b]	10/14/2024 (Baseline)
MEJ0688	NH3-N [a] and NO3/N [b]	10/18/2024 (4 days post-injection)
MEJ0864	NH3-N [a] and NO3/N [b]	10/24/2024 (10 days post-injection)
MEJ0911	NH3-N [a] and NO3/N [b]	10/28/2024 (14 days post-injection)
MEL0169	NH3-N [a], NO3/N [b], and NO2/N [c]	12/5/2024 (52 days post-injection)
MEL0228	NH3-N [a], NO3/N [b], and NO2/N [c]	12/6/2024 (53 days post-injection)
MFA0394	NH3-N [a] and NO3/N [b]	1/15/2025 (93 days post-injection)

[a] ammonia as nitrogen analyzed using Standard Method (SM) 4500 NH_3-G (SM 2011).

[b] nitrate as nitrogen analyzed using USEPA Method 300.0 (USEPA 1993).

[c] nitrite as nitrogen analyzed using USEPA Method 300.0 (USEPA 1993).

2 Data Validation and Quality Assessment Summary of Groundwater Results

Alta's Stage 2A validation of the analytical data and review of the field data are summarized in Table 2. Procedures/checks that require further discussion are explained below the table, as necessary.

Table 2. Data Quality Review Summary for Groundwater

Data Validation Procedure or Check	Acceptable Frequency [a]	Acceptable Performance [b]	Data Qualified?	Discussion Item Number
Completed tailgate safety meeting	Y	Y	--	--
Field parameters stabilized	Y	N	N	1
Sample condition upon receipt at laboratory and COC	Y	Y	--	--
Preservation	Y	Y	N	2
Holding times	Y	N	N	3
Laboratory followed specified analytical methods	Y	Y	N	--
Methods and analyses dates are present	Y	Y	N	--
Laboratory reported requested target analytes, qualifiers, units, and practical quantitation limits	Y	N	--	4
Method blanks	N	Y	Y	5
Laboratory Control Samples	Y	Y	N	--

Table 2. Data Quality Review Summary for Groundwater

Data Validation Procedure or Check	Acceptable Frequency [a]	Acceptable Performance [b]	Data Qualified?	Discussion Item Number
Matrix Spike/Matrix Spike Duplicate pairs	Y	Y	Y	6
Field Duplicates (Table 3)	Y	Y	N	7

[a] Frequencies as defined in the QAPP (TerraGraphics 2015) and Addendum to the QAPP (Alta 2024).

[b] As defined in the QAPP (TerraGraphics 2015), the Addendum to the QAPP (Alta 2024), or based on professional judgment of the data validator.

-- = not applicable

Discussion Items

1. Field Parameter Stabilization

   Prior to the injection of in-situ biological nitrification, most field parameters were stabilized except for oxidation-reduction potential, which was 0.02% out of range for stabilization. Because this is only slightly out of range, no qualifiers are needed. The discrepancy of field parameter measurements was discussed with the field crew to ensure proper calculations were completed for all future sampling events as listed in Table 1.

2. Preservation

   For most sampling events listed in Table 1 (except Work Order MEL0228 [53 days post-injection]), the groundwater samples were received at the laboratory with cooler temperatures above the preservation requirement of 4°C±2°C as specified in the QAPP (TerraGraphics 2015) and Addendum to the QAPP (Alta 2024) with recorded temperatures ranging from 6.1°C to 13.1°C. However, the samples were delivered to the laboratory the same day they were sampled. Although none of the samples reached a lower temperature, cooling had already begun. Therefore, the Alta QAO did not qualify any data based on preservation requirements.

3. Holding times

   Most holding times were met by Anatek except for sample location IW-2 in Work Orders MEJ0688 (4 days post-injection), MEJ0864 (10 days post-injection), and MEJ0911 (14 days post-injection), where the initial analysis for nitrate as nitrogen (nitrate/N) was performed within holding time; however, reanalysis for the required dilution was past holding time. Therefore, Alta will qualify non-detections of nitrate/N and nitrite/N in Work Orders MEJ0688, MEJ0864, and MEJ0911 as non-detect-estimates (UJ).

4. Laboratory reported requested practical quantitation limits

   Due to sample dilution, the reported practical quantitation limits (PQLs) exceeded QAPP (TerraGraphics 2015) requirements for the analytes reported in the following samples from a corresponding Work Order (note that there are no PQL QAPP requirements for nitrite/N):

   - In Work Order MEJ0518, ammonia/N and nitrate/N in samples MW-3A (original and duplicate), IW-1, IW-2, and IW-3.

- In Work Order MEJ0688, ammonia/N and nitrate/N in samples MW-3A (original and duplicate) and IW-2.
- In Work Order MEJ0864, ammonia/N and nitrate/N in samples MW-3A (original and duplicate), IW-2, and IW-3.
- In Work Order MEJ0911, ammonia/N and nitrate/N in samples MW-3A (original and duplicate), IW-2, and IW-3.
- In Work Order ME0169, ammonia/N, nitrate/N, and nitrite/N in samples MW-3A (original and duplicate).
- In Work Order MEL0228, ammonia/N, nitrate/N, and nitrite/N in samples MW-6, IW-2, and IW-3.
- In Work Order MFA0394, nitrate/N in samples MW-3A (original and duplicate), MW-6, IW-2, and IW-3; and ammonia/N in samples MW-3A (original and duplicate), IW-2, and IW-3.

The Alta QAO compared the elevated PQLs to the screening levels (TerraGraphics 2015) and did not qualify any data based on sensitivity issues.

5. Method blanks

   For all Work Orders and analyses listed in Table 1, the laboratory analyzed one method blank for each Work Order's sample analyses except for Work Order MEL0169 (52 days post-injection), where both the nitrate/N and nitrite as nitrogen (nitrite/N) analyses did not have method blanks. Therefore, based on the NFG-Inorganics (USEPA 2020), the Alta QAO will qualify detections of nitrate/N and nitrite/N in all field samples in Work Order MEL0169 as estimates (J), while non-detects will be qualified as non-detect-estimates (UJ).

6. Matrix Spike/Matrix Spike Duplicate pairs

   a. Frequency:. Alta submitted additional volume for Matrix Spike/Matrix Spike Duplicate (MS/MSD) with every batch. The lab did analyze an MS/MSD with every work order per laboratory protocol, but did not use the site-specific volume collected for every work order. Three analyzed MS/MSD pairs were conducted on site-specific samples, which meets a frequency of 1 MS/MSD per 20 field samples, the current acceptable frequency. Anatek analyzed the following site-specific MS/MSD sample pairs for the listed analyses/Work Order:

      - In Work Order MEJ0688 (4 days post-injection), ammonia as nitrogen (ammonia/N).
      - In Work Order MEL0228 (53 days post-injection), nitrite/N and nitrate/N.
      - In Work Order MFA0394 (93 days post-injection), nitrate/N.

   b. Percent Recovery (accuracy assessment): From the site-specific MS samples for the Work Orders listed above, the percent recoveries were within acceptable laboratory limits and the Alta QAO did not qualify any data based on accuracy.
   c. Relative Percent Difference (RPD; precision assessment): From the site-specific MS/MSD sample pairs for the Work Orders listed above, the RPDs were within acceptable laboratory limits and the Alta QAO did not qualify any data based on precision.

7. Field Duplicate

   For each day of sampling as listed in Table 1, from a total of four sampling locations, the Alta field crew collected one field duplicate from sampling location MW-3A, which meets the required frequency of 1:20 (Alta 2024). The Alta QAO calculated the RPD between the original and duplicate sample results that were greater than 5 times the PQL (Table 3). For results that are less than 5 times the PQL, Alta assessed precision by comparing the absolute difference of the original and duplicate results to the PQL. The Alta QAO did not qualify any data based on the field duplicate analysis as the RPDs for ammonia and nitrate were below the data quality indicator for precision of 30% (TerraGraphics 2015).

Table 3. Field Duplicate Sample Analysis

Sample ID	Sample Date	Analyte	Original Concentration (mg/L)	Duplicate Concentration (mg/L)	RPD
MW-3A / MW-3A-DUP	10/14/2024	Ammonia/N	50.1	50.3	0%
		Nitrate/N	29.4	29.3	0%
MW-3A / MW-3A-DUP	10/18/2024	Ammonia/N	48.0	46.9	NC
		Nitrate/N	14.0	14.0	0%
MW-3A / MW-3A-DUP	10/24/2024	Ammonia/N	41.1	40.3	2%
		Nitrate/N	13.6	13.6	0%
MW-3A / MW-3A-DUP	10/28/2024	Ammonia/N	38.9	38.7	1%
		Nitrate/N	10.9	9.8	NC
MW-3A / MW-3A-DUP	12/05/2025	Ammonia/N	36.6	36.4	1%
		Nitrate/N	35.9	35.4	1%
		Nitrite/N	<1.0	<1.0	NC
MW-3A / MW-3A-DUP	1/15/2025	Ammonia/N	36.1	36	0%
		Nitrate/N	54.9	55.9	2%

Relative Percent Difference (RPD) = |X1-X2|/((X1+X2)/2)*100

Where: X1 = Original Concentration and X2 = Duplicate Concentration

mg/L = milligrams per liter

< = not detected greater than the practical quantitation limit shown.

NC = non-calculable; original and duplicate concentrations were less than 5x analyte-specific PQLs (USEPA 2020).

3 Overall Assessment

Based on this data quality review, Alta determines the laboratory and field data to be of acceptable quality. However, Alta's QAO qualified the following data:

- Nitrate/N at sample location IW-2 in Work Orders MEJ0688 (4 days post-injection), MEJ0864 (10 days post-injection), and MEJ0911 (14 days post-injection), where the initial analysis was performed within holding time; however, reanalysis for the required dilution was past holding time.
- Anatek did not analyze method blanks for nitrate/N and nitrite/N analyses in Work Order MEL0169. Therefore, the Alta QAO qualified these analytes in all field samples in the listed Work Order as estimates (J), while non-detects are qualified as non-detect-estimates (UJ).

3.1 Data Accuracy and Precision

Accuracy and precision are acceptable based on the Laboratory Control Samples, the MS/MSD sample pairs, and the field duplicate pairs. Data Usability

Although there were deviations from the QAPP Addendum for the sites sampled (as described in the Section 2.3 of the Technical Memorandum: Nitrification Injection Pilot Test and Groundwater Sampling at 6th and Jackson Street Site, Moscow, Idaho where this QA/QC memo is an attachment), all newly planned samples were collected during each sampling event and no data are rejected or considered unusable for this project. Therefore, the calculated completeness for these combined groundwater monitoring events is 100%. Alta did not reject data or consider data as unusable for this project; therefore, the calculated completeness for this sampling event is 100%.

4 Resources and References Used

Alta, 2024. Addendum to the Quality Assurance Project Plan for a Pilot Study for 6th & Jackson Street, Moscow, Idaho. Prepared for Idaho Department of Environmental Quality. October 7, 2024.

Standard Method (SM), 2011. Method 4500-NH3: Standard Methods for the Examination of Water and Wastewater. Section D. Ammonia-Selective Electrode Method.

TerraGraphics Environmental Engineering, Inc. (TerraGraphics), 2015. Final Quality Assurance Project Plan (QAPP) for 217 & 317 West 6th Street Moscow, Idaho, Environmental Remediation. Prepared for Moscow Urban Renewal Agency. October 16, Revision #3.

US Environmental Protection Agency (USEPA), 1993. Method 300.0. Determination of Inorganic Anions by Ion Chromatography. Revision2.1. August.

USEPA, 2002. USEPA Guidance on Environmental Data Verification and Data Validation. USEPA QA/G-8; November.

USEPA, 2009. Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use. OSWER No. 9200.1-85, EPA 540-R-08-005 prepared by the Office of Solid Waste and Emergency Response; January.

USEPA, 2020. National Functional Guidelines for Inorganic Superfund Methods Data Review, (SFAM01.1), Office of Superfund Remediation and Technology Innovation (OSRTI). OLEM 9240.0-66, USEPA-542-R-20-006; November.

Attachment A
Laboratory Work Orders

ANATEK LABS

Analytical Results Report For:

Alta Science & Engineering

Project Number:

6th & Jackson 23114.092

Anatek Work Order:

MEJ0518

Anatek Moscow - 1282 Alturas Drive - Moscow, ID 83843 - 208-883-2839 - moscow@anateklabs.com - FL NELAP E87893
Anatek Spokane - 504 E Sprague Ste. D - Spokane, WA 99202 - 509-838-3999 - spokane@anateklabs.com - FL NELAP E871099
Anatek Yakima - 4802 Tieton Drive - Yakima, WA 98908 - 509-225-9404 - yakima@anateklabs.com - FL NELAP E871190
Anatek Wenatchee - 3019 Gs Center Rd - Wenatchee, WA 98801 - 509-701-8362

Anatek Labs, Inc.

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

Client:	Alta Science & Engineering	Work Order:	MEJ0518
Address:	220 E. 5th St Suite 325	Project:	6th & Jackson 23114.092
	Moscow, ID 83843	Reported:	10/30/2024 14:43
Attn:	Robin Nimmer		

Analytical Results Report

Sample Location:	MW-3A-101424		
Lab/Sample Number:	MEJ0518-01	Collect Date:	10/14/24 13:30
Date Received:	10/14/24 16:40	Collected By:	Mikahala Waters
Matrix:	Groundwater		

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	50.1	mg/L	2.00	10/22/24 15:03	MMC	SM 4500-NH3 G	
Nitrate/N	29.4	mg/L	1.00	10/15/24 15:48	DA	EPA 300.0	

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Sample Location:	MW-3A-101424-DUP		
Lab/Sample Number:	MEJ0518-02	Collect Date:	10/14/24 13:30
Date Received:	10/14/24 16:40	Collected By:	Mikahala Waters
Matrix:	Groundwater		

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	50.3	mg/L	2.00	10/22/24 15:03	MMC	SM 4500-NH3 G	
Nitrate/N	29.3	mg/L	1.00	10/15/24 16:09	DA	EPA 300.0	

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Sample Location:	MW-3A-101424 MS/MSD		
Lab/Sample Number:	MEJ0518-03	Collect Date:	10/14/24 13:30
Date Received:	10/14/24 16:40	Collected By:	Mikahala Waters
Matrix:	Groundwater		

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	50.1	mg/L	2.00	10/22/24 15:03	MMC	SM 4500-NH3 G	
Nitrate/N	29.5	mg/L	1.00	10/15/24 16:30	DA	EPA 300.0	

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Sample Location:	IW-1-101424		
Lab/Sample Number:	MEJ0518-04	Collect Date:	10/14/24 14:05
Date Received:	10/14/24 16:40	Collected By:	Mikahala Waters
Matrix:	Groundwater		

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	6.71	mg/L	2.00	10/16/24 13:42	MMC	SM 4500-NH3 G	
Nitrate/N	ND	mg/L	1.00	10/15/24 16:52	DA	EPA 300.0	

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Sample Location:	IW-2-101424		
Lab/Sample Number:	MEJ0518-05	Collect Date:	10/14/24 14:45
Date Received:	10/14/24 16:40	Collected By:	Mikahala Waters
Matrix:	Groundwater		

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	92.3	mg/L	20.0	10/22/24 15:03	MMC	SM 4500-NH3 G	
Nitrate/N	ND	mg/L	1.00	10/15/24 17:13	DA	EPA 300.0	

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Sample Location:	IW-3-101424		
Lab/Sample Number:	MEJ0518-06	Collect Date:	10/14/24 15:30
Date Received:	10/14/24 16:40	Collected By:	Mikahala Waters
Matrix:	Groundwater		

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	106	mg/L	20.0	10/22/24 15:03	MMC	SM 4500-NH3 G	
Nitrate/N	8.21	mg/L	1.00	10/15/24 17:35	DA	EPA 300.0	

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Authorized Signature,

Cheyenne Garrett for Todd Taruscio, Lab Manager

PQL	Practical Quantitation Limit
ND	Not Detected
MCL	EPA's Maximum Contaminant Level
Dry	Sample results reported on a dry weight basis
*	Not a state-certified analyte

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Quality Control Data

Inorganics

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEJ0774 - FIA										
Blank (BEJ0774-BLK1)					Prepared: 10/16/24 08:55- Analyzed: 10/16/24 13:42					
Ammonia/N	ND		0.200	mg/L						
Blank (BEJ0774-BLK2)					Prepared: 10/16/24 08:55- Analyzed: 10/16/24 13:42					
Ammonia/N	ND		0.200	mg/L						
LCS (BEJ0774-BS1)					Prepared: 10/16/24 08:55- Analyzed: 10/16/24 13:42					
Ammonia/N	0.957		0.200	mg/L	1.00		95.7	90-110		
LCS (BEJ0774-BS2)					Prepared: 10/16/24 08:55- Analyzed: 10/16/24 13:42					
Ammonia/N	0.952		0.200	mg/L	1.00		95.2	90-110		
Matrix Spike (BEJ0774-MS1)		**Source: MEJ0367-01**			Prepared: 10/16/24 08:55- Analyzed: 10/16/24 13:42					
Ammonia/N	0.898		0.200	mg/L	1.00	0.0146	88.3	80-120		
Matrix Spike (BEJ0774-MS2)		**Source: MEJ0516-01**			Prepared: 10/16/24 08:55- Analyzed: 10/16/24 13:42					
Ammonia/N	0.876		0.200	mg/L	1.00	0.0159	86.0	80-120		
Matrix Spike Dup (BEJ0774-MSD1)		**Source: MEJ0367-01**			Prepared: 10/16/24 08:55- Analyzed: 10/16/24 13:42					
Ammonia/N	0.904		0.200	mg/L	1.00	0.0146	88.9	80-120	0.622	20
Matrix Spike Dup (BEJ0774-MSD2)		**Source: MEJ0516-01**			Prepared: 10/16/24 08:55- Analyzed: 10/16/24 13:42					
Ammonia/N	0.872		0.200	mg/L	1.00	0.0159	85.6	80-120	0.389	20
Batch: BEJ0807 - Anions										
Blank (BEJ0807-BLK1)					Prepared & Analyzed: 10/15/24 12:13					
Nitrate as N	ND		0.100	mg/L						

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Quality Control Data
(Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEJ0807 - Anions (Continued)										
LCS (BEJ0807-BS1)					Prepared & Analyzed: 10/15/24 12:56					
Nitrate as N	4.26		0.100	mg/L	4.00		107	90-110		
Matrix Spike (BEJ0807-MS1)		**Source: MEJ0516-01**			Prepared & Analyzed: 10/15/24 14:43					
Nitrate as N	41.8		1.00	mg/L	40.0	0.510	103	90-110		
Matrix Spike Dup (BEJ0807-MSD1)		**Source: MEJ0516-01**			Prepared & Analyzed: 10/15/24 15:05					
Nitrate as N	42.3		1.00	mg/L	40.0	0.510	104	90-110	1.02	20
Batch: BEJ1031 - FIA										
Blank (BEJ1031-BLK1)					Prepared: 10/22/24 08:55- Analyzed: 10/22/24 15:03					
Ammonia/N	ND		0.200	mg/L						
LCS (BEJ1031-BS1)					Prepared: 10/22/24 08:55- Analyzed: 10/22/24 15:03					
Ammonia/N	1.02		0.200	mg/L	1.00		102	90-110		
Matrix Spike (BEJ1031-MS1)		**Source: MEJ0688-01**			Prepared: 10/22/24 08:55- Analyzed: 10/22/24 15:03					
Ammonia/N	150		20.0	mg/L	100	48.0	102	80-120		
Matrix Spike Dup (BEJ1031-MSD1)		**Source: MEJ0688-01**			Prepared: 10/22/24 08:55- Analyzed: 10/22/24 15:03					
Ammonia/N	152		20.0	mg/L	100	48.0	104	80-120	1.00	20

ANATEK LABS

Chain of Custody Record

Anatek
1282 Alturas Drive, Mos
504 E Sprague Ste D, Spok

MEJ0518

Due: 10/29/24

Turn

Please r

www.anateklabs.com/pricing-lists

Company Name: Alta Science & Engineering	Project Manager: Robin Nimmer
Address: 220 E 5th St. Suite 325	Project Name & #: 6TH & JACKSON 23114.092
City: Moscow State: ID Zip: 83843	~~Purchase Order #~~:
Phone: 208-882-7858	Sampler Name & Phone: Mikahala Waters 208-750-8650
Email Address(es): robin.nimmer@alta-se.com	

X Normal
__Next Day*
__2nd Day*
__Other*_____

__Phone
X Email

*All rush order requests must have prior approval

List Analyses Requested

Lab ID	Sample Identification	Sampling Date/Time	Matrix	# of Containers	Sample Volume	Preservative:		—	H_2SO_4							
								NITRATE	AMMONIA							
	MW-3A-101424	10/14/24	GW	2	125ml			'	'							
	MW-3A-101424-DUP	13:30	GW	2	125ml			'	'							
	MW-3A-101424 MS/D	↓	GW	2	125ml			'	'							
	IW-1-101424	10/14/24 14:05	GW	2	125ml			'	'							
	IW-2-101424	10/14/24 14:45	GW	2	125ml			'	'							
	IW-3-101424	10/14/24 15:30	GW	2	125ml			'	'							

Note Special Instructions/Comments

AMMONIA PRESERVATIVE: H_2SO_4 (2S1)

Inspection Checklist

Received Intact?	Y	N
Labels & Chains Agree?	Y	N
Containers Sealed?	Y	N
No VOC Head Space?	Y	N
Cooler?	Y	N
Ice/Ice Packs Present?	Y	N

Temperature (°C): 6.1 1k-4
Number of Containers:
Shipped Via:
Preservative:
Date & Time:
Inspected By:

	Printed Name	Signature	Company	Date	Time
Relinquished by	Mikahala Waters		Alta S&E	10/14/24	16:40
Received by	Cheyenne Garrett		Anatek	10/14/24	16:40
Relinquished by					
Received by					
Relinquished by					
Received by					

Samples submitted to Anatek Labs may be subcontacted to other accredited labs if necessary. This message serves as notice of this possibility. Subcontracted analyses will be clearly noted on the analytical report.

Anatek Labs, Inc.

Sample Receipt and Preservation Form

Client Name: Alta Science & Engineering

TAT: (Normal) RUSH: _____ days

Samples Received From: FedEx UPS USPS (Client) Courier Other: _____

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

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

Packing Material: Bubble Wrap Bags Foam/Peanuts Paper (None) Other: _____

Cooler Temp As Read (°C): 6.1 Cooler Temp Corrected (°C): 6.1 Thermometer Used: (IR-4) IR-6

				Comments:
Samples Received Intact?	(Yes)	No	N/A	
Chain of Custody Present/Complete?	(Yes)	No	N/A	
Labels and Chains Agree?	(Yes)	No	N/A	
Samples Received Within Hold Time?	(Yes)	No	N/A	
Correct Containers Received?	(Yes)	No	N/A	
Anatek Bottles Used?	(Yes)	No	Unknown	
Total Number of Sample Bottles Received: 12				

				Initial pH:	pH Paper ID:
Samples Properly Preserved?	(Yes)	No	N/A	<2 or	
If No, record preservation and pH-after details					
VOC Vials Free of Headspace (<6mm)?	Yes	No	(N/A)		
VOC Trip Blanks Present?	Yes	No	(N/A)		

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

p125ml - Ø - Nitrate x 6
p125ml - H2SO4 (H2SO4) - Ammonia x 6

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

Received/Inspected By: _____ Date/Time: 10/14/24 16:40

Form F19.01 - Eff 1 Dec 2022

ANATEK LABS

Analytical Results Report For:

Alta Science & Engineering

Project Number:

6th & Jackson

Anatek Work Order:

MEJ0688

Anatek Moscow - 1282 Alturas Drive - Moscow, ID 83843 - 208-883-2839 - moscow@anateklabs.com - FL NELAP E87893
Anatek Spokane - 504 E Sprague Ste. D - Spokane, WA 99202 - 509-838-3999 - spokane@anateklabs.com - FL NELAP E871099
Anatek Yakima - 4802 Tieton Drive - Yakima, WA 98908 - 509-225-9404 - yakima@anateklabs.com - FL NELAP E871190
Anatek Wenatchee - 3019 Gs Center Rd - Wenatchee, WA 98801 - 509-701-8362

Anatek Labs, Inc.

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

Client:	Alta Science & Engineering	Work Order:	MEJ0688
Address:	220 East 5th St Suite 325	Project:	6th & Jackson
	Moscow, ID 83843	Reported:	11/5/2024 11:16
Attn:	Tom Jenkins		

Analytical Results Report

Sample Location:	MW-3A-101824		
Lab/Sample Number:	MEJ0688-01	Collect Date:	10/18/24 12:35
Date Received:	10/18/24 15:47	Collected By:	Mikahala Waters
Matrix:	Groundwater		

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	48.0	mg/L	20.0	10/22/24 15:03	MMC	SM 4500-NH3 G	
Nitrate/N	14.0	mg/L	2.00	10/18/24 17:37	DA	EPA 300.0	

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Sample Location:	MW-3A-101824-DUP		
Lab/Sample Number:	MEJ0688-02	Collect Date:	10/18/24 12:35
Date Received:	10/18/24 15:47	Collected By:	Mikahala Waters
Matrix:	Groundwater		

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	46.9	mg/L	20.0	10/22/24 15:03	MMC	SM 4500-NH3 G	
Nitrate/N	14.0	mg/L	2.00	10/18/24 17:59	DA	EPA 300.0	

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Sample Location:	IW-2-101824		
Lab/Sample Number:	MEJ0688-03	Collect Date:	10/18/24 15:00
Date Received:	10/18/24 15:47	Collected By:	Mikahala Waters
Matrix:	Groundwater		

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	25.5	mg/L	20.0	10/22/24 15:03	MMC	SM 4500-NH3 G	
Nitrate/N	ND	mg/L	1.00	10/23/24 23:54	DA	EPA 300.0	H2

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Authorized Signature,

Cheyenne Garrett for Todd Taruscio, Lab Manager

H2	Initial analysis within holding time, Reanalysis for the required dilution was past holding time.
PQL	Practical Quantitation Limit
ND	Not Detected
MCL	EPA's Maximum Contaminant Level
Dry	Sample results reported on a dry weight basis
*	Not a state-certified analyte

RPD	Relative Percent Difference
%REC	Percent Recovery
Source	Sample that was spiked or duplicated.

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Quality Control Data

Inorganics

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEJ1031 - FIA										
Blank (BEJ1031-BLK1)					Prepared: 10/22/24 08:55- Analyzed: 10/22/24 15:03					
Ammonia/N	ND		0.200	mg/L						
LCS (BEJ1031-BS1)					Prepared: 10/22/24 08:55- Analyzed: 10/22/24 15:03					
Ammonia/N	1.02		0.200	mg/L	1.00		102	90-110		
Matrix Spike (BEJ1031-MS1)		**Source: MEJ0688-01**			Prepared: 10/22/24 08:55- Analyzed: 10/22/24 15:03					
Ammonia/N	150		20.0	mg/L	100	48.0	102	80-120		
Matrix Spike Dup (BEJ1031-MSD1)		**Source: MEJ0688-01**			Prepared: 10/22/24 08:55- Analyzed: 10/22/24 15:03					
Ammonia/N	152		20.0	mg/L	100	48.0	104	80-120	1.00	20
Batch: BEJ1052 - Anions										
Blank (BEJ1052-BLK1)					Prepared & Analyzed: 10/18/24 11:54					
Nitrate as N	ND		0.100	mg/L						
LCS (BEJ1052-BS1)					Prepared & Analyzed: 10/18/24 12:37					
Nitrate as N	4.22		0.100	mg/L	4.00		105	90-110		
MRL Check (BEJ1052-MRL1)					Prepared & Analyzed: 10/18/24 12:15					
Nitrate as N	0.103		0.100	mg/L	0.100		103	0-200		
Matrix Spike (BEJ1052-MS1)		**Source: MEJ0624-03**			Prepared & Analyzed: 10/18/24 14:24					
Nitrate as N	52.9		1.00	mg/L	40.0	8.99	110	90-110		
Matrix Spike Dup (BEJ1052-MSD1)		**Source: MEJ0624-03**			Prepared & Analyzed: 10/18/24 14:46					
Nitrate as N	53.0		1.00	mg/L	40.0	8.99	110	90-110	0.113	20

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Quality Control Data
(Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEJ1252 - Anions										
Blank (BEJ1252-BLK1)					Prepared: 10/23/24 10:00- Analyzed: 10/23/24 11:22					
Nitrate as N	ND		0.100	mg/L						
LCS (BEJ1252-BS1)					Prepared: 10/23/24 10:00- Analyzed: 10/23/24 12:05					
Nitrate as N	4.19		0.100	mg/L	4.00		105	90-110		
Matrix Spike (BEJ1252-MS1)		**Source: MEJ0771-01**			Prepared: 10/23/24 10:00- Analyzed: 10/23/24 15:18					
Nitrate as N	59.4		1.00	mg/L	40.0	16.3	108	90-110		
Matrix Spike Dup (BEJ1252-MSD1)		**Source: MEJ0771-01**			Prepared: 10/23/24 10:00- Analyzed: 10/23/24 15:40					
Nitrate as N	59.4		1.00	mg/L	40.0	16.3	108	90-110	0.0674	20

ANATEK LABS

Chain of Custody Record

A
1282 Alturas Dri
504 E Sprague Ste

MEJ0688

Due: 11/04/24

Company Name: ALTA SCIENCE & ENGINEERING	Project Manager: ROBIN NIMMER
Address: 220 E 5TH STREET SUITE 325	Project Name & #: 6TH & JACKSON
City: MOSCOW State: ID Zip: 83843	Purchase Order #: 23114.080
Phone: 208-882-7858	Sampler Name & Phone: MIKAHALA WATERS
Email Address(es): robin.nimmer@alta-se.com	

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X Normal
__ Next Day*
__ 2nd Day*
__ Other*_____

__ Phone
X Email

*All rush order requests must have prior approval

Lab ID	Sample Identification	Sampling Date/Time	Matrix	# of Containers	Sample Volume	Preservative: H_2SO_4 AMMONIA	NITRATE
	MW-8A-101824	10/18/24 12:35	GW	4	125ml	X	X
	MW-3A-101824-DUP	10/18/24 12:35	GW	2	125ml	X	X
	IW-2-101824	10/18/24 15:00	GW	2	125ml	X	X

List Analyses Requested

Note Special Instructions/Comments

AMMONIA PRESERVATIVE: H_2SO_4

Inspection Checklist

Received Intact?	Y	N
Labels & Chains Agree?	Y	N
Containers Sealed?	Y	N
No VOC Head Space?	Y	N
Cooler?	Y	N
Ice/Ice Packs Present?	Y	N

Temperature (°C): 9.7 (R-4

Number of Containers:_____

Shipped Via:_____

Preservative:_____

Date & Time:_____

Inspected By:_____

	Printed Name	Signature	Company	Date	Time
Relinquished by	MIKAHALA WATERS		ALTA SE	10/18/24	15:47
Received by	Morgan Corbett		Anatek	10/18/24	15:47
Relinquished by					
Received by					
Relinquished by					
Received by					

Samples submitted to Anatek Labs may be subcontacted to other accredited labs if necessary. This message serves as notice of this possibility. Subcontracted analyses will be clearly noted on the analytical report.

Anatek Labs, Inc.

Sample Receipt and Preservation Form

Client Name: Alta S+E

TAT: (Normal) RUSH: _____ days

Samples Received From: FedEx UPS USPS (Client) Courier Other: _____

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

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

Packing Material: Bubble Wrap Bags Foam/Peanuts Paper (None) Other: _____

Cooler Temp As Read (°C): 9.7 Cooler Temp Corrected (°C): 9.7 Thermometer Used: (IR-4) IR-6

				Comments:
Samples Received Intact?	(Yes)	No	N/A	
Chain of Custody Present/Complete?	(Yes)	No	N/A	
Labels and Chains Agree?	(Yes)	No	N/A	
Samples Received Within Hold Time?	(Yes)	No	N/A	
Correct Containers Received?	(Yes)	No	N/A	
Anatek Bottles Used?	(Yes)	No	Unknown	
Total Number of Sample Bottles Received: 8				

				Initial pH:	pH Paper ID:
Samples Properly Preserved?	(Yes)	No	N/A	<2 or	
If No, record preservation and pH after details					
VOC Vials Free of Headspace (<6mm)?	Yes	No	(N/A)		
VOC Trip Blanks Present?	Yes	No	(N/A)		

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

p125ml - H2SO4 - Ammonia x4
p125ml - Ø - ~~ADD~~ NO3 x4

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

Received/Inspected By: [signature] Date/Time: 15:47 10/18/24

ANATEK LABS

Analytical Results Report For:

Alta Science & Engineering

Project Number:

6th & Jackson

Anatek Work Order:

MEJ0864

Anatek Moscow - 1282 Alturas Drive - Moscow, ID 83843 - 208-883-2839 - moscow@anateklabs.com - FL NELAP E87893
Anatek Spokane - 504 E Sprague Ste. D - Spokane, WA 99202 - 509-838-3999 - spokane@anateklabs.com - FL NELAP E871099
Anatek Yakima - 4802 Tieton Drive - Yakima, WA 98908 - 509-225-9404 - yakima@anateklabs.com - FL NELAP E871190
Anatek Wenatchee - 3019 Gs Center Rd - Wenatchee, WA 98801 - 509-701-8362

Anatek Labs, Inc.

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

Client:	Alta Science & Engineering	Work Order:	MEJ0864
Address:	220 E. 5th St Suite 325	Project:	6th & Jackson
	Moscow, ID 83843	Reported:	11/8/2024 11:03
Attn:	Robin Nimmer		

Analytical Results Report

Sample Location:	MW-3A-102424		
Lab/Sample Number:	MEJ0864-01	Collect Date:	10/24/24 11:35
Date Received:	10/24/24 15:55	Collected By:	Mikahala Waters
Matrix:	Groundwater		

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	41.1	mg/L	2.00	11/1/24 14:20	MMC	SM 4500-NH3 G	
Nitrate/N	13.6	mg/L	2.00	10/24/24 23:14	DA	EPA 300.0	

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Sample Location:	MW-3A-102424-DUP		
Lab/Sample Number:	MEJ0864-02	Collect Date:	10/24/24 11:35
Date Received:	10/24/24 15:55	Collected By:	Mikahala Waters
Matrix:	Groundwater		

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	40.3	mg/L	2.00	11/1/24 14:20	MMC	SM 4500-NH3 G	
Nitrate/N	13.6	mg/L	2.00	10/24/24 23:35	DA	EPA 300.0	

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Sample Location:	IW-2-102424		
Lab/Sample Number:	MEJ0864-03	Collect Date:	10/24/24 12:40
Date Received:	10/24/24 15:55	Collected By:	Mikahala Waters
Matrix:	Groundwater		

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	42.2	mg/L	2.00	11/1/24 14:20	MMC	SM 4500-NH3 G	
Nitrate/N	ND	mg/L	1.00	10/29/24 22:24	DA	EPA 300.0	H2

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Sample Location:	IW-3-102424		
Lab/Sample Number:	MEJ0864-04	Collect Date:	10/24/24 14:00
Date Received:	10/24/24 15:55	Collected By:	Mikahala Waters
Matrix:	Groundwater		

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	72.9	mg/L	20.0	11/1/24 14:20	MMC	SM 4500-NH3 G	
Nitrate/N	5.12	mg/L	2.00	10/25/24 0:18	DA	EPA 300.0	

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Authorized Signature,

Cheyenne Garrett for Todd Taruscio, Lab Manager

H2	Initial analysis within holding time, Reanalysis for the required dilution was past holding time.
M2	Matrix spike recovery was low; the associated blank spike recovery was acceptable. Potential matrix effect.
PQL	Practical Quantitation Limit
ND	Not Detected
MCL	EPA's Maximum Contaminant Level
Dry	Sample results reported on a dry weight basis
*	Not a state-certified analyte

RPD	Relative Percent Difference
%REC	Percent Recovery
Source	Sample that was spiked or duplicated.

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Quality Control Data

Inorganics

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEJ1287 - Anions										
Blank (BEJ1287-BLK1)					Prepared & Analyzed: 10/24/24 17:09					
Nitrate as N	ND		0.100	mg/L						
LCS (BEJ1287-BS1)					Prepared & Analyzed: 10/24/24 17:52					
Nitrate as N	4.13		0.100	mg/L	4.00		103	90-110		
Matrix Spike (BEJ1287-MS1)		**Source: MEJ0828-01**			Prepared & Analyzed: 10/24/24 21:05					
Nitrate as N	40.4		1.00	mg/L	40.0	0.860	98.9	90-110		
Matrix Spike Dup (BEJ1287-MSD1)		**Source: MEJ0828-01**			Prepared & Analyzed: 10/24/24 21:26					
Nitrate as N	44.6		1.00	mg/L	40.0	0.860	109	90-110	9.92	20
Batch: BEJ1502 - Anions										
Blank (BEJ1502-BLK1)					Prepared & Analyzed: 10/29/24 12:44					
Nitrate as N	ND		0.100	mg/L						
LCS (BEJ1502-BS1)					Prepared & Analyzed: 10/29/24 13:27					
Nitrate as N	4.14		0.100	mg/L	4.00		104	90-110		
Matrix Spike (BEJ1502-MS1)		**Source: MEJ0833-03**			Prepared & Analyzed: 10/29/24 14:53					
Nitrate as N	46.3		1.00	mg/L	40.0	4.23	105	90-110		
Matrix Spike Dup (BEJ1502-MSD1)		**Source: MEJ0833-03**			Prepared & Analyzed: 10/29/24 15:15					
Nitrate as N	46.1		1.00	mg/L	40.0	4.23	105	90-110	0.303	20
Batch: BEK0023 - FIA										
Blank (BEK0023-BLK1)					Prepared: 11/01/24 10:55- Analyzed: 11/01/24 14:20					
Ammonia/N	ND		0.200	mg/L						

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Quality Control Data
(Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEK0023 - FIA (Continued)										
Blank (BEK0023-BLK2)					Prepared: 11/01/24 10:55- Analyzed: 11/01/24 14:20					
Ammonia/N	ND		0.200	mg/L						
LCS (BEK0023-BS1)					Prepared: 11/01/24 10:55- Analyzed: 11/01/24 14:20					
Ammonia/N	1.02		0.200	mg/L	1.00		102	90-110		
LCS (BEK0023-BS2)					Prepared: 11/01/24 10:55- Analyzed: 11/01/24 14:20					
Ammonia/N	1.02		0.200	mg/L	1.00		102	90-110		
Matrix Spike (BEK0023-MS1)		**Source: MEJ0743-01**			Prepared: 11/01/24 10:55- Analyzed: 11/04/24 09:16					
Ammonia/N	12.2		2.00	mg/L	1.00	11.2	94.4	80-120		
Matrix Spike (BEK0023-MS2)		**Source: MEJ0932-01**			Prepared: 11/01/24 10:55- Analyzed: 11/04/24 09:16					
Ammonia/N	22.4	M2	2.00	mg/L	1.00	21.7	70.6	80-120		
Matrix Spike Dup (BEK0023-MSD1)		**Source: MEJ0743-01**			Prepared: 11/01/24 10:55- Analyzed: 11/04/24 09:16					
Ammonia/N	12.2		2.00	mg/L	1.00	11.2	95.6	80-120	0.0985	20
Matrix Spike Dup (BEK0023-MSD2)		**Source: MEJ0932-01**			Prepared: 11/01/24 10:55- Analyzed: 11/04/24 09:16					
Ammonia/N	22.6		2.00	mg/L	1.00	21.7	91.9	80-120	0.946	20

ANATEK LABS

Chain of Custody Record

Anatek
1282 Alturas Drive, Mo
504 E Sprague Ste D, Sp

MEJ0864

Due: 11/08/24

Tu

Company Name: ALTA SE	Project Manager: Robin Nimmer
Address: 220 E. 5TH STREET SUITE 325	Project Name & #: 6TH & JACKSON
City: MOSCOW State: ID Zip: 83843	Purchase Order #: 23114.080
Phone: 208-882-7858	Sampler Name & Phone: MIKAHALA WATERS 208-750-8650
Email Address(es): robin.nimmer@alta-se.com	

Please refer to our normal turn around times at: www.anateklabs.com/pricing-lists

X Normal
__Next Day*
__2nd Day*
__Other*_____

__Phone
X Email

*All rush order requests must have prior approval

List Analyses Requested

Lab ID	Sample Identification	Sampling Date/Time	Matrix	# of Containers	Sample Volume	Preservative: H_2SO_4 Ammonia	Preservative: – Nitrate
	MW-3A-102424	10/24/24 11:35	GW	4	125mL	X	X
	MW-3A-102424-DUP	10/24/24 11:35	GW	2	125mL	X	X
	IW-2-102424	10/24/24 12:40	GW	2	125mL	X	X
	IW-3-102424	10/24/24 14:00	GW	2	125mL	X	X

Note Special Instructions/Comments

Inspection Checklist

Received Intact?	Y	N
Labels & Chains Agree?	Y	N
Containers Sealed?	Y	N
No VOC Head Space?	Y	N
Cooler?	Y	N
Ice/Ice Packs Present?	Y	N

Temperature (°C): 13.1 IR4
Number of Containers:
Shipped Via:
Preservative:
Date & Time:
Inspected By:

	Printed Name	Signature	Company	Date	Time
Relinquished by	MIKAHALA WATERS		ALTA SE	10/24/24	15:55
Received by	Olivia Garrett		Anatek	10/24/24	15:55
Relinquished by					
Received by					
Relinquished by					
Received by					

Samples submitted to Anatek Labs may be subcontacted to other accredited labs if necessary. This message serves as notice of this possibility. Subcontracted analyses will be clearly noted on the analytical report.

Anatek Labs, Inc.

Sample Receipt and Preservation Form

Client Name: Alta SE

TAT: (Normal) RUSH: _____ days

Samples Received From: FedEx UPS USPS (Client) Courier Other: _____

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

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

Packing Material: Bubble Wrap (Bags) Foam/Peanuts Paper None Other: _____

Cooler Temp As Read (°C): 13.1 Cooler Temp Corrected (°C): 13.1 Thermometer Used: (IR-4) IR-6

				Comments:
Samples Received Intact?	(Yes)	No	N/A	
Chain of Custody Present/Complete?	(Yes)	No	N/A	
Labels and Chains Agree?	(Yes)	No	N/A	
Samples Received Within Hold Time?	(Yes)	No	N/A	
Correct Containers Received?	(Yes)	No	N/A	
Anatek Bottles Used?	(Yes)	No	Unknown	
Total Number of Sample Bottles Received: 10				

				Initial pH:	pH Paper ID:
Samples Properly Preserved?	(Yes)	No	N/A	<2 or	
If No, record preservation and pH-after details					
VOC Vials Free of Headspace (<6mm)?	Yes	No	(N/A)		
VOC Trip Blanks Present?	Yes	No	(N/A)		

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

p125ml-O- Nitrate x 5
p125ml-H2SO4(2317)- Ammonia x 5

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

Received/Inspected By: [signature] Date/Time: 13:55 10/24/24

ANATEK LABS

Analytical Results Report For:

Alta Science & Engineering

Project Number:

6th & Jackson

Anatek Work Order:

MEJ0911

Anatek Moscow - 1282 Alturas Drive - Moscow, ID 83843 - 208-883-2839 - moscow@anateklabs.com - FL NELAP E87893
Anatek Spokane - 504 E Sprague Ste. D - Spokane, WA 99202 - 509-838-3999 - spokane@anateklabs.com - FL NELAP E871099
Anatek Yakima - 4802 Tieton Drive - Yakima, WA 98908 - 509-225-9404 - yakima@anateklabs.com - FL NELAP E871190
Anatek Wenatchee - 3019 Gs Center Rd - Wenatchee, WA 98801 - 509-701-8362

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

Client:	Alta Science & Engineering	Work Order:	MEJ0911
Address:	220 E. 5th St Suite 325	Project:	6th & Jackson
	Moscow, ID 83843	Reported:	11/11/2024 09:01
Attn:	Robin Nimmer		

Analytical Results Report

Sample Location:	MW-3A-102824		
Lab/Sample Number:	MEJ0911-01	Collect Date:	10/28/24 10:50
Date Received:	10/28/24 13:50	Collected By:	Mikahala Waters
Matrix:	Groundwater		

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	38.9	mg/L	2.00	11/1/24 14:20	MMC	SM 4500-NH3 G	
Nitrate/N	10.9	mg/L	2.00	10/29/24 20:58	DA	EPA 300.0	

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Sample Location:	MW-3A-102824-DUP		
Lab/Sample Number:	MEJ0911-02	Collect Date:	10/28/24 10:50
Date Received:	10/28/24 13:50	Collected By:	Mikahala Waters
Matrix:	Groundwater		

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	38.7	mg/L	2.00	11/1/24 14:20	MMC	SM 4500-NH3 G	
Nitrate/N	9.80	mg/L	2.00	10/29/24 21:20	DA	EPA 300.0	

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Sample Location:	IW-2-102824		
Lab/Sample Number:	MEJ0911-03	Collect Date:	10/28/24 12:05
Date Received:	10/28/24 13:50	Collected By:	Mikahala Waters
Matrix:	Groundwater		

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	57.7	mg/L	20.0	11/1/24 14:20	MMC	SM 4500-NH3 G	
Nitrate/N	ND	mg/L	1.00	10/30/24 23:09	DA	EPA 300.0	H2

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Sample Location:	IW-3-102824		
Lab/Sample Number:	MEJ0911-04	Collect Date:	10/28/24 13:10
Date Received:	10/28/24 13:50	Collected By:	Mikahala Waters
Matrix:	Groundwater		

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	79.0	mg/L	20.0	11/1/24 14:20	MMC	SM 4500-NH3 G	
Nitrate/N	9.36	mg/L	2.00	10/29/24 22:03	DA	EPA 300.0	

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Authorized Signature,

Cheyenne Garrett for Todd Taruscio, Lab Manager

H2	Initial analysis within holding time, Reanalysis for the required dilution was past holding time.
M2	Matrix spike recovery was low; the associated blank spike recovery was acceptable. Potential matrix effect.
PQL	Practical Quantitation Limit
ND	Not Detected
MCL	EPA's Maximum Contaminant Level
Dry	Sample results reported on a dry weight basis
*	Not a state-certified analyte

RPD	Relative Percent Difference
%REC	Percent Recovery
Source	Sample that was spiked or duplicated.

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Quality Control Data

Inorganics

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEJ1502 - Anions										
Blank (BEJ1502-BLK1)					Prepared & Analyzed: 10/29/24 12:44					
Nitrate as N	ND		0.100	mg/L						
LCS (BEJ1502-BS1)					Prepared & Analyzed: 10/29/24 13:27					
Nitrate as N	4.14		0.100	mg/L	4.00		104	90-110		
Matrix Spike (BEJ1502-MS1)		**Source: MEJ0833-03**			Prepared & Analyzed: 10/29/24 14:53					
Nitrate as N	46.3		1.00	mg/L	40.0	4.23	105	90-110		
Matrix Spike Dup (BEJ1502-MSD1)		**Source: MEJ0833-03**			Prepared & Analyzed: 10/29/24 15:15					
Nitrate as N	46.1		1.00	mg/L	40.0	4.23	105	90-110	0.303	20
Batch: BEK0023 - FIA										
Blank (BEK0023-BLK1)					Prepared: 11/01/24 10:55- Analyzed: 11/01/24 14:20					
Ammonia/N	ND		0.200	mg/L						
Blank (BEK0023-BLK2)					Prepared: 11/01/24 10:55- Analyzed: 11/01/24 14:20					
Ammonia/N	ND		0.200	mg/L						
LCS (BEK0023-BS1)					Prepared: 11/01/24 10:55- Analyzed: 11/01/24 14:20					
Ammonia/N	1.02		0.200	mg/L	1.00		102	90-110		
LCS (BEK0023-BS2)					Prepared: 11/01/24 10:55- Analyzed: 11/01/24 14:20					
Ammonia/N	1.02		0.200	mg/L	1.00		102	90-110		
Matrix Spike (BEK0023-MS1)		**Source: MEJ0743-01**			Prepared: 11/01/24 10:55- Analyzed: 11/04/24 09:16					
Ammonia/N	12.2		2.00	mg/L	1.00	11.2	94.4	80-120		

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Quality Control Data
(Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEK0023 - FIA (Continued)										
Matrix Spike (BEK0023-MS2)		**Source: MEJ0932-01**			Prepared: 11/01/24 10:55- Analyzed: 11/04/24 09:16					
Ammonia/N	22.4	M2	2.00	mg/L	1.00	21.7	70.6	80-120		
Matrix Spike Dup (BEK0023-MSD1)		**Source: MEJ0743-01**			Prepared: 11/01/24 10:55- Analyzed: 11/04/24 09:16					
Ammonia/N	12.2		2.00	mg/L	1.00	11.2	95.6	80-120	0.0985	20
Matrix Spike Dup (BEK0023-MSD2)		**Source: MEJ0932-01**			Prepared: 11/01/24 10:55- Analyzed: 11/04/24 09:16					
Ammonia/N	22.6		2.00	mg/L	1.00	21.7	91.9	80-120	0.946	20
Batch: BEK0095 - Anions										
Blank (BEK0095-BLK1)					Prepared & Analyzed: 10/30/24 16:42					
Nitrate as N	ND		0.100	mg/L						
LCS (BEK0095-BS1)					Prepared & Analyzed: 10/30/24 17:25					
Nitrate as N	4.11		0.100	mg/L	4.00		103	90-110		
Matrix Spike (BEK0095-MS1)		**Source: MEJ0958-01**			Prepared & Analyzed: 10/30/24 22:26					
Nitrate as N	70.0		1.00	mg/L	40.0	28.5	104	90-110		
Matrix Spike Dup (BEK0095-MSD1)		**Source: MEJ0958-01**			Prepared & Analyzed: 10/30/24 22:48					
Nitrate as N	70.8		1.00	mg/L	40.0	28.5	106	90-110	1.04	20

ANATEK LABS

Chain of Custody Record

Anate
1282 Alturas Drive, M
504 E Sprague Ste D, S

MEJ0911

Due: 11/11/24

Company Name: ALTA SCIENCE & ENGINEERING	Project Manager: Robin Nimmer
Address: 220 E 5TH ST. SUITE 325	Project Name & #: 6TH & JACKSON
City: MOSCOW State: ID Zip: 83843	Purchase Order #: 23114.080
Phone: 208-882-7850	Sampler Name & Phone: Mikahala Waters 208-750-8650
Email Address(es): robin.nimmer@alta-se.com	

Ple... www.anatek...

X Normal
__ Next Day*
__ 2nd Day*
__ Other*_____

__ Email
X Email

*All rush order requests must have prior approval

Lab ID	Sample Identification	Sampling Date/Time	Matrix	# of Containers	Sample Volume	AMMONIA	NITRATE
	MW-3A-102824	10/28/24 10:50	GW	4	125mL	X	X
	MW-3A-102824-DUP	10/28/24 10:50	GW	2	125mL	X	X
	IW-2-102824	10/28/24 12:05	GW	2	125mL	X	X
	IW-3-102824	10/28/24 13:10	GW	2	125mL	X	X

Preservative: H2SO4

List Analyses Requested

Note Special Instructions/Comments

	Printed Name	Signature	Company	Date	Time
Relinquished by	Mikahala Waters		Alta SE	10/28/24	13:50
Received by	Unyme Gauntt		Anatek	10/28/24	13:50
Relinquished by					
Received by					
Relinquished by					
Received by					

Inspection Checklist

Received Intact?	Y	N
Labels & Chains Agree?	Y	N
Containers Sealed?	Y	N
No VOC Head Space?	Y	N
Cooler?	Y	N
Ice/Ice Packs Present?	Y	N

Temperature (°C): 9.0 IR-4
Number of Containers:
Shipped Via:
Preservative:
Date & Time:
Inspected By:

Samples submitted to Anatek Labs may be subcontacted to other accredited labs if necessary. This message serves as notice of this possibility. Subcontracted analyses will be clearly noted on the analytical report.

Anatek Labs, Inc.

Sample Receipt and Preservation Form

Client Name: Alter S+E

TAT: (Normal) RUSH: _____ days

Samples Received From: FedEx UPS USPS (Client) Courier Other: _____

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

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

Packing Material: Bubble Wrap (Bags) Foam/Peanuts Paper None Other: _____

Cooler Temp As Read (°C): 9.0 Cooler Temp Corrected (°C): 9.0 Thermometer Used: (IR-4) IR-6

				Comments:
Samples Received Intact?	(Yes)	No	N/A	
Chain of Custody Present/Complete?	(Yes)	No	N/A	
Labels and Chains Agree?	(Yes)	No	N/A	
Samples Received Within Hold Time?	(Yes)	No	N/A	
Correct Containers Received?	(Yes)	No	N/A	
Anatek Bottles Used?	(Yes)	No	Unknown	
Total Number of Sample Bottles Received: 10				

				Initial pH:	pH Paper ID:
Samples Properly Preserved?	(Yes)	No	N/A	<2 or	
If No, record preservation and pH-after details					
VOC Vials Free of Headspace (<6mm)?	Yes	No	(N/A)		
VOC Trip Blanks Present?	Yes	No	(N/A)		

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

p125ml-Ø - Nitrate x5
p125ml-H2SO4 - Ammonia x5

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

Received/Inspected By: [signature] Date/Time: 10/29/24 13:50

ANATEK LABS

Analytical Results Report For:

Alta Science & Engineering

Project Number:

6th & Jackson

Anatek Work Order:

MEL0169

Anatek Moscow - 1282 Alturas Drive - Moscow, ID 83843 - 208-883-2839 - moscow@anateklabs.com - FL NELAP E87893
Anatek Spokane - 504 E Sprague Ste. D - Spokane, WA 99202 - 509-838-3999 - spokane@anateklabs.com - FL NELAP E871099
Anatek Yakima - 4802 Tieton Drive - Yakima, WA 98908 - 509-225-9404 - yakima@anateklabs.com - FL NELAP E871190
Anatek Wenatchee - 3019 Gs Center Rd - Wenatchee, WA 98801 - 509-701-8362

Anatek Labs, Inc.

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

Client:	Alta Science & Engineering	Work Order:	MEL0169
Address:	220 E. 5th St Suite 325	Project:	6th & Jackson
	Moscow, ID 83843	Reported:	12/17/2024 11:55
Attn:	Robin Nimmer		

Analytical Results Report

Sample Location:	MW-3A-120524		
Lab/Sample Number:	MEL0169-01	Collect Date:	12/05/24 14:20
Date Received:	12/05/24 14:55	Collected By:	Mikahala Waters
Matrix:	Groundwater		

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	36.6	mg/L	2.00	12/12/24 14:21	MMC	SM 4500-NH3 G	
Nitrate/N	35.9	mg/L	1.00	12/5/24 22:23	DA	EPA 300.0	
Nitrite/N	ND	mg/L	1.00	12/5/24 22:23	DA	EPA 300.0	

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Sample Location:	MW-3A-120524-DUP		
Lab/Sample Number:	MEL0169-02	Collect Date:	12/05/24 14:25
Date Received:	12/05/24 14:55	Collected By:	Mikahala Waters
Matrix:	Groundwater		

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	36.4	mg/L	2.00	12/12/24 14:21	MMC	SM 4500-NH3 G	
Nitrate/N	35.4	mg/L	1.00	12/5/24 22:44	DA	EPA 300.0	
Nitrite/N	ND	mg/L	1.00	12/5/24 22:44	DA	EPA 300.0	

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

Authorized Signature,

Justin Doty for Todd Taruscio, Lab Manager

PQL	Practical Quantitation Limit
ND	Not Detected
MCL	EPA's Maximum Contaminant Level
Dry	Sample results reported on a dry weight basis
*	Not a state-certified analyte

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Quality Control Data

Inorganics

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEL0277 - Anions										
LCS (BEL0277-BS1)					Prepared & Analyzed: 12/05/24 18:05					
Nitrite as N	4.26		0.100	mg/L	4.00		106	90-110		
Nitrate as N	4.21		0.100	mg/L	4.00		105	90-110		
Matrix Spike (BEL0277-MS1)		**Source: MEL0096-01**			Prepared & Analyzed: 12/05/24 21:40					
Nitrite as N	41.2		1.00	mg/L	40.0	ND	103	90-110		
Nitrate as N	71.7		1.00	mg/L	40.0	28.6	108	90-110		
Matrix Spike Dup (BEL0277-MSD1)		**Source: MEL0096-01**			Prepared & Analyzed: 12/05/24 22:01					
Nitrite as N	41.4		1.00	mg/L	40.0	ND	104	90-110	0.460	20
Nitrate as N	71.7		1.00	mg/L	40.0	28.6	108	90-110	0.0139	20
Batch: BEL0506 - FIA										
Blank (BEL0506-BLK1)					Prepared: 12/12/24 09:05- Analyzed: 12/12/24 14:21					
Ammonia/N	ND		0.200	mg/L						
Blank (BEL0506-BLK2)					Prepared: 12/12/24 09:05- Analyzed: 12/12/24 14:21					
Ammonia/N	ND		0.200	mg/L						
LCS (BEL0506-BS1)					Prepared: 12/12/24 09:05- Analyzed: 12/12/24 14:21					
Ammonia/N	1.03		0.200	mg/L	1.00		103	90-110		
LCS (BEL0506-BS2)					Prepared: 12/12/24 09:05- Analyzed: 12/12/24 14:21					
Ammonia/N	0.983		0.200	mg/L	1.00		98.3	90-110		
Matrix Spike (BEL0506-MS1)		**Source: MEL0095-01**			Prepared: 12/12/24 09:05- Analyzed: 12/12/24 14:21					
Ammonia/N	0.949		0.200	mg/L	1.00	ND	94.9	80-120		

Anatek Labs, Inc.

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

Quality Control Data
(Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEL0506 - FIA (Continued)										
Matrix Spike (BEL0506-MS2)		**Source: MEL0244-03**			Prepared: 12/12/24 09:05- Analyzed: 12/12/24 14:21					
Ammonia/N	1.04		0.200	mg/L	1.00	0.0598	97.7	80-120		
Matrix Spike Dup (BEL0506-MSD1)		**Source: MEL0095-01**			Prepared: 12/12/24 09:05- Analyzed: 12/12/24 14:21					
Ammonia/N	0.957		0.200	mg/L	1.00	ND	95.7	80-120	0.850	20
Matrix Spike Dup (BEL0506-MSD2)		**Source: MEL0244-03**			Prepared: 12/12/24 09:05- Analyzed: 12/12/24 14:21					
Ammonia/N	1.03		0.200	mg/L	1.00	0.0598	96.9	80-120	0.804	20

ANATEK LABS

Chain of Custody Record

Anatek Labs, Inc.
1282 Alturas Drive,
504 E Sprague Ste D,

MEL0169

Due: 12/20/24

Company Name: ALTA SCIENCE & ENGINEERING	Project Manager: ROBIN NIMMER
Address: 220 E 5TH St.	Project Name & #: 6TH & JACKSON
City: Moscow State: ID Zip: 83843	Purchase Order #: 23114.080
Phone: 208-882-7858	Sampler Name & Phone: MIKAHALA WATERS 208-750-8650
Email Address(es): robin.nimmer@alta-se.com	

Ple

__Normal
__Next Day*
__2nd Day*
__Other*_____

__Email

*All rush order requests must have prior approval

List Analyses Requested

Preservative: H_2SO_4

Lab ID	Sample Identification	Sampling Date/Time	Matrix	# of Containers	Sample Volume (mL)	AMMONIA	NITRATE	NITRITE
	MW3A-120524	12/05/24 14:20	GW	4	125	X	X	X
	MW-3A-120524-DUP	12/05/24 14:25	GW	2	125	X	X	X

Note Special Instructions/Comments

Inspection Checklist

Received Intact?	Y	N
Labels & Chains Agree?	Y	N
Containers Sealed?	Y	N
No VOC Head Space?	Y	N
Cooler?	Y	N
Ice/Ice Packs Present?	Y	N

Temperature (°C): 9.4 IR-4
Number of Containers:
Shipped Via:
Preservative:
Date & Time:
Inspected By:

	Printed Name	Signature	Company	Date	Time
Relinquished by	MIKAHALA WATERS		ALTA SE	12/5/24	14:55
Received by	Cheyenne Garnett		Anatek	12/5/24	14:55
Relinquished by					
Received by					
Relinquished by					
Received by					

Samples submitted to Anatek Labs may be subcontacted to other accredited labs if necessary. This message serves as notice of this possibility. Subcontracted analyses will be clearly noted on the analytical report.

Anatek Labs, Inc.

Sample Receipt and Preservation Form

Client Name: Alta Sciences

TAT: (Normal) RUSH: _____ days

Samples Received From: FedEx UPS USPS (Client) Courier Other: _____

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

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

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

Cooler Temp As Read (°C): 9.4 Cooler Temp Corrected (°C): 9.4 Thermometer Used: IR-4 IR-6

				Comments:
Samples Received Intact?	(Yes)	No	N/A	
Chain of Custody Present/Complete?	(Yes)	No	N/A	
Labels and Chains Agree?	(Yes)	No	N/A	
Samples Received Within Hold Time?	(Yes)	No	N/A	
Correct Containers Received?	(Yes)	No	N/A	
Anatek Bottles Used?	(Yes)	No	Unknown	
Total Number of Sample Bottles Received: 6				

				Initial pH:	pH Paper ID:
Samples Properly Preserved?	(Yes)	No	N/A	<2 or	
If No, record preservation and pH-after details					
VOC Vials Free of Headspace (<6mm)?	Yes	No	(N/A)		
VOC Trip Blanks Present?	Yes	No	(N/A)		

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

p125ml - H2SO4 (2417) - Ammonia x3
p125ml - Ø - NO2/NO3 x3

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

Received/Inspected By: [signature] Date/Time: 14:55 12/5/24

Form F19.01 - Eff 1 Dec 2022

ANATEK LABS

Analytical Results Report For:

Alta Science & Engineering

Project Number:

6th & Jackson 23114.080

Anatek Work Order:

MEL0228

Anatek Moscow - 1282 Alturas Drive - Moscow, ID 83843 - 208-883-2839 - moscow@anateklabs.com - FL NELAP E87893
Anatek Spokane - 504 E Sprague Ste. D - Spokane, WA 99202 - 509-838-3999 - spokane@anateklabs.com - FL NELAP E871099
Anatek Yakima - 4802 Tieton Drive - Yakima, WA 98908 - 509-225-9404 - yakima@anateklabs.com - FL NELAP E871190
Anatek Wenatchee - 3019 Gs Center Rd - Wenatchee, WA 98801 - 509-701-8362

Anatek Labs, Inc.

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

Client:	Alta Science & Engineering	Work Order:	MEL0228
Address:	220 E. 5th St Suite 325	Project:	6th & Jackson 23114.080
	Moscow, ID 83843	Reported:	12/20/2024 11:04
Attn:	Robin Nimmer		

Analytical Results Report

Sample Location:	MW-6-120624		
Lab/Sample Number:	MEL0228-01	Collect Date:	12/06/24 12:25
Date Received:	12/06/24 15:20	Collected By:	Mikahala Waters
Matrix:	Groundwater		

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	ND	mg/L	0.200	12/12/24 14:21	MMC	SM 4500-NH3 G	
Nitrate/N	38.4	mg/L	1.00	12/6/24 19:36	icuser2	EPA 300.0	
Nitrite/N	ND	mg/L	1.00	12/6/24 19:36	icuser2	EPA 300.0	

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Sample Location:	IW-2-120624		
Lab/Sample Number:	MEL0228-02	Collect Date:	12/06/24 13:55
Date Received:	12/06/24 15:20	Collected By:	Mikahala Waters
Matrix:	Groundwater		

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	47.2	mg/L	2.00	12/12/24 14:21	MMC	SM 4500-NH3 G	
Nitrate/N	ND	mg/L	1.00	12/6/24 20:41	icuser2	EPA 300.0	
Nitrite/N	ND	mg/L	1.00	12/6/24 20:41	icuser2	EPA 300.0	

Anatek Labs, Inc.

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

Sample Location:	IW-3-120624		
Lab/Sample Number:	MEL0228-03	Collect Date:	12/06/24 14:45
Date Received:	12/06/24 15:20	Collected By:	Mikahala Waters
Matrix:	Groundwater		

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	78.1	mg/L	20.0	12/12/24 14:21	MMC	SM 4500-NH3 G	
Nitrate/N	4.30	mg/L	1.00	12/6/24 21:02	icuser2	EPA 300.0	
Nitrite/N	ND	mg/L	1.00	12/6/24 21:02	icuser2	EPA 300.0	

Anatek Labs, Inc.

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

Authorized Signature,

Cheyenne Garrett for Todd Taruscio, Lab Manager

PQL	Practical Quantitation Limit
ND	Not Detected
MCL	EPA's Maximum Contaminant Level
Dry	Sample results reported on a dry weight basis
*	Not a state-certified analyte

Anatek Labs, Inc.

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Quality Control Data

Inorganics

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEL0506 - FIA										
Blank (BEL0506-BLK1)					Prepared: 12/12/24 09:05- Analyzed: 12/12/24 14:21					
Ammonia/N	ND		0.200	mg/L						
Blank (BEL0506-BLK2)					Prepared: 12/12/24 09:05- Analyzed: 12/12/24 14:21					
Ammonia/N	ND		0.200	mg/L						
LCS (BEL0506-BS1)					Prepared: 12/12/24 09:05- Analyzed: 12/12/24 14:21					
Ammonia/N	1.03		0.200	mg/L	1.00		103	90-110		
LCS (BEL0506-BS2)					Prepared: 12/12/24 09:05- Analyzed: 12/12/24 14:21					
Ammonia/N	0.983		0.200	mg/L	1.00		98.3	90-110		
Matrix Spike (BEL0506-MS1)		**Source: MEL0095-01**			Prepared: 12/12/24 09:05- Analyzed: 12/12/24 14:21					
Ammonia/N	0.949		0.200	mg/L	1.00	ND	94.9	80-120		
Matrix Spike (BEL0506-MS2)		**Source: MEL0244-03**			Prepared: 12/12/24 09:05- Analyzed: 12/12/24 14:21					
Ammonia/N	1.04		0.200	mg/L	1.00	0.0598	97.7	80-120		
Matrix Spike Dup (BEL0506-MSD1)		**Source: MEL0095-01**			Prepared: 12/12/24 09:05- Analyzed: 12/12/24 14:21					
Ammonia/N	0.957		0.200	mg/L	1.00	ND	95.7	80-120	0.850	20
Matrix Spike Dup (BEL0506-MSD2)		**Source: MEL0244-03**			Prepared: 12/12/24 09:05- Analyzed: 12/12/24 14:21					
Ammonia/N	1.03		0.200	mg/L	1.00	0.0598	96.9	80-120	0.804	20
Batch: BEL0548 - Anions										
Blank (BEL0548-BLK1)					Prepared & Analyzed: 12/06/24 18:32					
Nitrite as N	ND		0.100	mg/L						
Nitrate as N	ND		0.100	mg/L						

Anatek Labs, Inc.

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Quality Control Data
(Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEL0548 - Anions (Continued)										
LCS (BEL0548-BS1)					Prepared & Analyzed: 12/06/24 19:15					
Nitrite as N	4.26		0.100	mg/L	4.00		107	90-110		
Nitrate as N	4.26		0.100	mg/L	4.00		106	90-110		
MRL Check (BEL0548-MRL1)					Prepared & Analyzed: 12/06/24 18:53					
Nitrite as N	0.114		0.100	mg/L	0.100		114	0-200		
Nitrate as N	0.129		0.100	mg/L	0.100		129	0-200		
Matrix Spike (BEL0548-MS1)		**Source: MEL0228-01**			Prepared & Analyzed: 12/06/24 19:58					
Nitrite as N	39.0		1.00	mg/L	40.0	ND	97.4	90-110		
Nitrate as N	78.2		1.00	mg/L	40.0	38.4	99.5	90-110		
Matrix Spike Dup (BEL0548-MSD1)		**Source: MEL0228-01**			Prepared & Analyzed: 12/06/24 20:19					
Nitrite as N	41.5		1.00	mg/L	40.0	ND	104	90-110	6.26	20
Nitrate as N	79.9		1.00	mg/L	40.0	38.4	104	90-110	2.13	20

ANATEK LABS

Chain of Custody Record

A
1282 Alturas Dr
504 E Sprague Ste

MEL0228

9

Due: 12/23/24

Company Name: ALTA SCIENCE & ENGINEERING	Project Manager: Robin Nimmer
Address: 220 E 5th St. Suite 325	Project Name & #: 6TH & JACKSON 23114.020
City: MOSCOW State: ID Zip: 83843	Purchase Order #:
Phone: 208-882-7858	Sampler Name & Phone: Mikahala Waters 208-750-8650
Email Address(es): robin.nimmer@alta-se.com	

__Normal __Next Day* __2nd Day* __Other*_____ __Phone __Email

*All rush order requests must have prior approval

List Analyses Requested

Lab ID	Sample Identification	Sampling Date/Time	Matrix	# of Containers	Sample Volume	Preservative: H_2SO_4 Ammonia	Nitrate	Nitrite
	MW-6-120624	12/6/24 12:25	GW	2	125	X	X	X
	IW-2-120624	12/06/24 13:55	GW	2	125	X	X	X
	IW-3-120624	12/06/24 14:45	GW	2	125	X	X	X

Note Special Instructions/Comments

48-hr holding for ammonia

Inspection Checklist

Received Intact?	Y	N
Labels & Chains Agree?	Y	N
Containers Sealed?	Y	N
No VOC Head Space?	Y	N
Cooler?	Y	N
Ice/Ice Packs Present?	Y	N

Temperature (°C): 5.7 IR-4

Number of Containers:

Shipped Via:

Preservative:

Date & Time:

Inspected By:

	Printed Name	Signature	Company	Date	Time
Relinquished by	Mikahala Waters		Alta SE	12/06/24	15:20
Received by	Olesya Gavets		Anatek	12/6/24	15:20
Relinquished by					
Received by					
Relinquished by					
Received by					

Samples submitted to Anatek Labs may be subcontacted to other accredited labs if necessary. This message serves as notice of this possibility. Subcontracted analyses will be clearly noted on the analytical report.

Anatek Labs, Inc.

Sample Receipt and Preservation Form

Client Name: Alta S+E

TAT: (Normal) RUSH: _____ days

Samples Received From: FedEx UPS USPS (Client) Courier Other: _____

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

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

Packing Material: Bubble Wrap (Bags) Foam/Peanuts Paper None Other: _____

Cooler Temp As Read (°C): 5.7 Cooler Temp Corrected (°C): 5.7 Thermometer Used: (IR-4) IR-6

				Comments:
Samples Received Intact?	(Yes)	No	N/A	
Chain of Custody Present/Complete?	(Yes)	No	N/A	
Labels and Chains Agree?	(Yes)	No	N/A	
Samples Received Within Hold Time?	(Yes)	No	N/A	
Correct Containers Received?	(Yes)	No	N/A	
Anatek Bottles Used?	(Yes)	No	Unknown	
Total Number of Sample Bottles Received: 6				

				Initial pH:	pH Paper ID:
Samples Properly Preserved?	(Yes)	No	N/A	<2 or	
If No, record preservation and pH after details					
VOC Vials Free of Headspace (<6mm)?	Yes	No	(N/A)		
VOC Trip Blanks Present?	Yes	No	(N/A)		

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

p125ml- H2SO4- Ammonia x 3
p125ml- Ø- NO2/NO3 x 3

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

Received/Inspected By: _____ Date/Time: 15:20

ANATEK LABS

Analytical Results Report For:

Alta Science & Engineering

Project Number:

6th & Jackson 23114.080

Anatek Work Order:

MFA0394

Anatek Moscow - 1282 Alturas Drive - Moscow, ID 83843 - 208-883-2839 - moscow@anateklabs.com - FL NELAP E87893
Anatek Spokane - 504 E Sprague Ste. D - Spokane, WA 99202 - 509-838-3999 - spokane@anateklabs.com - FL NELAP E871099
Anatek Yakima - 4802 Tieton Drive - Yakima, WA 98908 - 509-225-9404 - yakima@anateklabs.com - FL NELAP E871190
Anatek Wenatchee - 3019 Gs Center Rd - Wenatchee, WA 98801 - 509-701-8362

Anatek Labs, Inc.

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

Client:	Alta Science & Engineering	Work Order:	MFA0394
Address:	220 E. 5th St Suite 325	Project:	6th & Jackson 23114.080
	Moscow, ID 83843	Reported:	1/29/2025 11:25
Attn:	Robin Nimmer		

Analytical Results Report

Sample Location:	MW-3A-011525		
Lab/Sample Number:	MFA0394-01	Collect Date:	01/15/25 11:05
Date Received:	01/15/25 15:20	Collected By:	Mikahala Waters
Matrix:	Groundwater		

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	36.1	mg/L	2.00	1/24/25 11:08	MMC	SM 4500-NH3 G	
Nitrate/N	54.9	mg/L	1.00	1/15/25 19:55	DTA	EPA 300.0	

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Sample Location:	MW-3A-011525-DUP		
Lab/Sample Number:	MFA0394-02	Collect Date:	01/15/25 11:05
Date Received:	01/15/25 15:20	Collected By:	Mikahala Waters
Matrix:	Groundwater		

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	36.0	mg/L	2.00	1/24/25 11:08	MMC	SM 4500-NH3 G	
Nitrate/N	55.9	mg/L	1.00	1/15/25 21:00	DTA	EPA 300.0	

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Sample Location:	MW-6-011525		
Lab/Sample Number:	MFA0394-03	Collect Date:	01/15/25 14:45
Date Received:	01/15/25 15:20	Collected By:	Mikahala Waters
Matrix:	Groundwater		

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	ND	mg/L	0.200	1/24/25 11:08	MMC	SM 4500-NH3 G	
Nitrate/N	20.6	mg/L	1.00	1/15/25 21:22	DTA	EPA 300.0	

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Sample Location:	IW-2-011525		
Lab/Sample Number:	MFA0394-04	Collect Date:	01/15/25 12:25
Date Received:	01/15/25 15:20	Collected By:	Mikahala Waters
Matrix:	Groundwater		

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	22.5	mg/L	2.00	1/24/25 11:08	MMC	SM 4500-NH3 G	
Nitrate/N	ND	mg/L	1.00	1/15/25 21:43	DTA	EPA 300.0	

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Sample Location:	IW-3-011525		
Lab/Sample Number:	MFA0394-05	Collect Date:	01/15/25 13:50
Date Received:	01/15/25 15:20	Collected By:	Mikahala Waters
Matrix:	Groundwater		

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	42.4	mg/L	2.00	1/24/25 11:08	MMC	SM 4500-NH3 G	
Nitrate/N	57.7	mg/L	1.00	1/15/25 22:05	DTA	EPA 300.0	

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Authorized Signature,

Cheyenne Garrett for Todd Taruscio, Lab Manager

PQL	Practical Quantitation Limit
ND	Not Detected
MCL	EPA's Maximum Contaminant Level
Dry	Sample results reported on a dry weight basis
*	Not a state-certified analyte

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Quality Control Data

Inorganics

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BFA0649 - Anions										
Blank (BFA0649-BLK1)					Prepared & Analyzed: 01/15/25 18:51					
Nitrate as N	ND		0.100	mg/L						
LCS (BFA0649-BS1)					Prepared & Analyzed: 01/15/25 19:34					
Nitrate as N	4.07		0.100	mg/L	4.00		102	90-110		
MRL Check (BFA0649-MRL1)					Prepared & Analyzed: 01/15/25 19:12					
Nitrate as N	0.114		0.100	mg/L	0.100		114	0-200		
Matrix Spike (BFA0649-MS1)		**Source: MFA0394-01**			Prepared & Analyzed: 01/15/25 20:17					
Nitrate as N	94.3		1.00	mg/L	40.0	54.9	98.5	90-110		
Matrix Spike Dup (BFA0649-MSD1)		**Source: MFA0394-01**			Prepared & Analyzed: 01/15/25 20:39					
Nitrate as N	93.3		1.00	mg/L	40.0	54.9	96.1	90-110	1.02	20
Batch: BFA0888 - FIA										
Blank (BFA0888-BLK1)					Prepared: 01/24/25 08:29- Analyzed: 01/24/25 11:08					
Ammonia/N	ND		0.200	mg/L						
LCS (BFA0888-BS1)					Prepared: 01/24/25 08:29- Analyzed: 01/24/25 11:08					
Ammonia/N	0.984		0.200	mg/L	1.00		98.4	90-110		
Matrix Spike (BFA0888-MS1)		**Source: MFA0503-02**			Prepared: 01/24/25 08:29- Analyzed: 01/24/25 11:08					
Ammonia/N	0.948		0.200	mg/L	1.00	ND	94.8	80-120		
Matrix Spike Dup (BFA0888-MSD1)		**Source: MFA0503-02**			Prepared: 01/24/25 08:29- Analyzed: 01/24/25 11:08					
Ammonia/N	0.977		0.200	mg/L	1.00	ND	97.7	80-120	3.07	20

ANATEK LABS

Chain of Custody Record

Anatek Labs, Inc
1282 Alturas Drive, M
504 E Sprague Ste D, Sp

MFA0394

Due: 01/30/25

Tu

Please

Company Name: ALTA SCIENCE & ENGINEERING	Project Manager: Robin Nimmer
Address: 220 E 5th ST. SUITE 325	Project Name & #: 6TH & JACKSON 23114.080
City: MOSCOW State: ID Zip: 83843	Purchase Order #:
Phone: 208-882-7858	Sampler Name & Phone: Mikahala Waters 208-750-8650
Email Address(es): robin.nimmer@alta-se.com	

__Normal
__Next Day*
__2nd Day*
__Other*_____
__Email
*All rush order requests must have prior approval

01/15/25

Lab ID	Sample Identification	Sampling Date/Time	Matrix	# of Containers	Sample Volume	Ammonia	NO_3/NO_2
	MW-3A-011525	11:05	GW	4	↳	125	250
	MW-3A-011525-DUP	11:05	GW	2	↳	125	125
	MW-4-011525	14:45	GW	2	↳	125	250
	AIW-2-011525	12:25	GW	2	↳	125	250
	IW-3-011525	13:50	GW	2	↳	125	250

List Analyses Requested — Preservative: H_2SO_4

Note Special Instructions/Comments

48-hr holding for ammonia → H_2SO_4

Inspection Checklist

Received Intact?	Y	N
Labels & Chains Agree?	Y	N
Containers Sealed?	Y	N
No VOC Head Space?	Y	N
Cooler?	Y	N
Ice/Ice Packs Present?	Y	N

Temperature (°C): 8.5 IR-4
Number of Containers:
Shipped Via:
Preservative:
Date & Time: 1/15/25 15:20
Inspected By:

	Printed Name	Signature	Company	Date	Time
Relinquished by	Mikahala Waters		Alta SE	1/15/25	15:20
Received by	Cheyenne Garrett		Anatek	1/15/25	15:20
Relinquished by					
Received by					
Relinquished by					
Received by					

Samples submitted to Anatek Labs may be subcontacted to other accredited labs if necessary. This message serves as notice of this possibility. Subcontracted analyses will be clearly noted on the analytical report.

Anatek Labs, Inc.

Sample Receipt and Preservation Form

Client Name: Alta SE

TAT: (Normal) RUSH: _____ days

Samples Received From: FedEx UPS USPS (Client) Courier Other: _____

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

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

Packing Material: Bubble Wrap (Bags) Foam/Peanuts Paper None Other: _____

Cooler Temp As Read (°C): 8.5 Cooler Temp Corrected (°C): 8.5 Thermometer Used: (IR-4) IR-6

				Comments:
Samples Received Intact?	(Yes)	No	N/A	
Chain of Custody Present/Complete?	(Yes)	No	N/A	
Labels and Chains Agree?	(Yes)	No	N/A	
Samples Received Within Hold Time?	(Yes)	No	N/A	
Correct Containers Received?	(Yes)	No	N/A	
Anatek Bottles Used?	(Yes)	No	Unknown	
Total Number of Sample Bottles Received: 12				

				Initial pH:	pH Paper ID:
Samples Properly Preserved?	(Yes)	No	N/A	<2 or	
If No, record preservation and pH-after details					
VOC Vials Free of Headspace (<6mm)?	Yes	No	(N/A)		
VOC Trip Blanks Present?	Yes	No	(N/A)		

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

p125mL H2SO4 (2317) - Ammonia x 6
p125ml - Ø - NO3 x2
p250ml - ~~H2SO4~~ Ø - NO3 x4

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

Received/Inspected By: [signature] Date/Time: 1/15/25 15:20

Alta Science & Engineering, Inc.

alta-se.com

220 East Fifth Street, Suite 325
Moscow, Idaho 83843
Ph: (208) 882-7858; Fax: (208) 883-3785

To:	Cody Riddle, Moscow Urban Renewal Agency (URA)
From:	Robin Nimmer
Date:	August 26, 2025
Alta Project No.:	25075
Subject:	**Proposed Scope of Work for 6th and Jackson Offsite Groundwater**

Following up on our conference call with you, Bill Belknap, and the Idaho Department of Environmental Quality (IDEQ) on July 24, 2025, Alta Science & Engineering, Inc. is pleased to provide a scope of work (SOW) and cost estimate for the 6th and Jackson Offsite Groundwater project located at the corner of 6th and Jackson Streets in Moscow, Idaho.

This work will supplement limited funding provided by IDEQ to support additional groundwater investigation activities. IDEQ will provide limited funds for the installation of two shallow groundwater monitoring wells downgradient of the property. The funding covers the well installation and a portion of two sampling events to evaluate ammonia and nitrate concentrations in groundwater. Additional funds are requested from the Moscow URA to complete the second sampling event and reporting. This task order (TO) with the Moscow URA provides the necessary funds to complete the project.

The data will support the evaluation of the existing Environmental Covenant on the 6th and Jackson property, which requires a pump-and-discharge of groundwater to prevent offsite migration.

Tasks include:

- Task 1: Sampling Event #2
    - Alta will sample groundwater from the two new monitoring wells and one on-site well in November 2025 following the Quality Assurance Project Plan (QAPP) Addendum (in progress). Labor for one person and minor miscellaneous supplies are included in this TO. Other labor and expenses will be part of the IDEQ-funded project.
- Task 2: Reporting
    - Alta will complete a technical memorandum which will include a description of the new well installations; a field summary and data quality review for Sampling Events #1 and #2; and present sampling results, conclusions, and recommendations.

Estimated Cost of Work

Please see the attached detailed cost estimate. All work will be invoiced on a time and materials basis. The estimated total cost for this scope of work is not to exceed $8,800.

Schedule and Deliverables

Task / Deliverable	Completion Date
Task 1: Sampling Event #2	November 2025
Task 2: Technical memorandum	December 2025

Alta Science & Engineering, Inc.

Cost Proposal

Date: 08/26/25

Client Name: Moscow Urban Renewal Agency
Client Contact: Cody Riddle
Client Address: 504 S. Washington St., Moscow, ID 83843
Project Number: 25075
Project Name: MURA - 6th and Jackson Offsite Groundwater
Project Address: 6th and Jackson Street Area
Project Manager: Robin Nimmer

	Labor Category/Direct Expense	Hours/Qty	Billing Rate		Total
Task 1 Sampling Event #2					
Labor					
	Geologist I	16	$ 104.00	$	1,664.00
			Total Labor	**$**	**1,664.00**
Direct Expenses					
	Direct Supplies	1	$ 30.91	$	30.91
			Subtotal Direct Expenses	**$**	**30.91**
			Direct Expense Fee	**$**	**3.09**
			Total Direct Expenses	**$**	**34.00**
			Task 1 Sampling Event #2		**$1,698.00**
Task 2 Well and Groundwater Reporting					
Labor					
	Geologist I	14	$ 104.00	$	1,456.00
	Geologist II	10	$ 158.00	$	1,580.00
	Geologist I	8	$ 104.00	$	832.00
	Sr.Hydrogeologist	10	$ 210.00	$	2,100.00
	Project Administrator II	6	$ 106.00	$	636.00
	Principal Scientist	2	$ 249.00	$	498.00
			Total Labor	**$**	**7,102.00**
			Task 2 Well and Groundwater Reporting		**$7,102.00**
			Total Proposal		**$8,800.00**

Alta Science & Engineering, Inc.

Cost Proposal

Date: 08/26/25

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Client Contact: Cody Riddle
Client Address: 504 S. Washington St., Moscow, ID 83843
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