UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the Quarterly Period Ended September 30, 2023

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to .

Commission file number: 001-37515

Aqua Metals, Inc.
(Exact name of registrant as specified in its charter)

Delaware	**47-1169572**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification no.)

5370 Kietzke Lane, Suite 201
Reno, Nevada 89511
(Address of principal executive offices, including zip code)

(775) 446-4418
(Registrant's telephone number, including area code)

Not Applicable
(Former name, former address and former fiscal year, if changed since last report)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class of stock:	Trading symbol	Name of each exchange on which registered:
Common Stock	AQMS	The Nasdaq Capital Market

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company (as defined in Rule 12b-2 of the Act):

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒	Smaller reporting company	☒
		Emerging Growth Company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of November 3, 2023, there were 107,811,467 outstanding shares of the common stock of Aqua Metals, Inc.

PART I - FINANCIAL INFORMATION

Item 1. Financial Statements

AQUA METALS, INC.
Condensed Consolidated Balance Sheets - Unaudited
(in thousands, except share and per share amounts)

	September 30, 2023	December 31, 2022
ASSETS		
Current assets		
Cash and cash equivalents	$ 25,598	$ 7,082
Accounts receivable	76	12
Lease receivable	—	15,527
Inventory	891	278
Assets held for sale	—	47
Prepaid expenses and other current assets	172	263
Total current assets	26,737	23,209
Non-current assets		
Property, plant and equipment, net	12,387	7,343
Intellectual property, net	326	461
Investment in LINICO	2,000	2,000
Other assets	532	489
Total non-current assets	15,245	10,293
Total assets	$ 41,982	$ 33,502
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities		
Accounts payable	$ 987	$ 1,075
Accrued expenses	2,256	1,780
Building purchase deposit	—	3,250
Lease liability, current portion	312	307
Note payable, current portion	34	5,899
Total current liabilities	3,589	12,311
Non-current liabilities		
Lease liability, non-current portion	38	275
Note payable, non-current portion	2,916	—
Total liabilities	6,543	12,586
Commitments and contingencies (see Note 13)		
Stockholders' equity		
Common stock; $0.001 par value; 200,000,000 shares authorized; 108,200,351 and 107,771,785, shares issued and outstanding as of September 30, 2023, respectively and 79,481,751 shares issued and outstanding as of December 31, 2022	108	79
Additional paid-in capital	249,036	220,114
Accumulated deficit	(213,189)	(199,277)
Treasury stock, at cost; common shares: 428,566 and nil as of September 30, 2023 and December 31, 2022, respectively	(516)	—
Total stockholders' equity	35,439	20,916
Total liabilities and stockholders' equity	$ 41,982	$ 33,502

The accompanying notes are an integral part of these condensed consolidated financial statements.

AQUA METALS, INC.
Condensed Consolidated Statements of Operations - Unaudited
(in thousands, except share and per share amounts)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	**2022**	**2023**	**2022**
Product sales	$ 25	$ —	$ 25	$ 4
Operating cost and expense				
Plant operations	1,770	833	4,316	3,026
Research and development cost	389	490	1,359	1,561
General and administrative expense	2,815	2,611	8,670	7,615
Total operating expense	4,974	3,934	14,345	12,202
Loss from operations	(4,949)	(3,934)	(14,320)	(12,198)
Other income and (expense)				
Gain on disposal of property, plant and equipment	—	5	23	595
Interest expense	(87)	(9)	(518)	(22)
Interest and other income	489	53	903	166
Total other income, net	402	49	408	739
Loss before income tax expense	(4,547)	(3,885)	(13,912)	(11,459)
Income tax expense	—	—	—	(2)
Net loss	$ (4,547)	$ (3,885)	$ (13,912)	$ (11,461)
Weighted average shares outstanding, basic and diluted	101,617,856	77,402,763	89,103,988	74,871,423
Basic and diluted net loss per share	$ (0.04)	$ (0.05)	$ (0.16)	$ (0.15)

The accompanying notes are an integral part of these condensed consolidated financial statements.

AQUA METALS, INC.
Condensed Consolidated Statements of Stockholders' Equity - Unaudited
(in thousands, except share amounts)

	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Treasury Stock		Total Stockholders' Equity (Deficit)
	Shares	Amount			Shares	Amount	
Balances, June 30, 2023	83,507,450	$ 84	$ 224,878	$ (208,642)	510,632	$ (577)	$ 15,743
Stock-based compensation	—	—	593	—	—	—	593
Common stock issued to employees and directors, includes RSUs vesting and withholdings to satisfy tax withholdings on RSUs vesting	664,041	1	(577)	—	(82,066)	61	(515)
Common stock issued for public offering, net of $1,713 transaction costs	18,193,000	18	18,300	—	—	—	18,318
Common stock issued for Yulho agreement, net of $372 transaction costs	4,545,455	5	4,624	—	—	—	4,629
Warrant expense related to Yulho agreement	—	—	181	—	—	—	181
Common stock issued for ATM share sales, net of $31 transaction costs	834,595	—	1,005	—	—	—	1,005
Common stock issued for director fees	27,244	—	32	—	—	—	32
Net loss	—	—	—	(4,547)	—	—	(4,547)
Balances, September 30, 2023	107,771,785	$ 108	$ 249,036	$ (213,189)	428,566	$ (516)	$ 35,439
Balances, December 31, 2022	79,481,751	$ 79	$ 220,114	$ (199,277)	—	$ —	$ 20,916
Stock-based compensation	—	—	1,878	—	—	—	1,878
RSUs issued for consulting services	15,781	—	12	—	—	—	12
Common stock issued to employees and directors, includes RSUs vesting and withholdings to satisfy tax withholdings on RSUs vesting	1,544,804	2	(577)	—	428,566	(516)	(1,091)
Common stock issued for public offering, net of $1,713 transaction costs	18,193,000	18	18,300	—	—	—	18,318
Common stock issued for Yulho agreement, net of $372 transaction costs	4,545,455	5	4,624	—	—	—	4,629
Warrant expense related to Yulho agreement	—	—	181	—	—	—	181
Common stock issued for employee stock purchase plan sales	192,707	—	122	—	—	—	122
Common stock issued for class action settlement	469,366	1	500	—	—	—	501
Common stock issued for ATM share sales, net of $119 transaction costs	3,244,302	3	3,786	—	—	—	3,789
Common stock issued for director fees	84,619	—	96	—	—	—	96
Net loss	—	—	—	(13,912)	—	—	(13,912)
Balances, September 30, 2023	107,771,785	$ 108	$ 249,036	$ (213,189)	428,566	$ (516)	$ 35,439
Balances, June 30, 2022	75,772,815	$ 76	$ 217,030	$ (191,422)	—	$ —	$ 25,684
Stock-based compensation	—	—	597	—	—	—	597
RSUs issued for consulting services	13,389	—	12	—	—	—	12
Common stock issued to employees and directors, includes RSUs vesting	1,089,471	1	—	—	—	—	1
Common stock issued for ATM share sales, net of $33 transaction costs	1,189,780	1	1,033	—	—	—	1,034
Net loss	—	—	—	(3,885)	—	—	(3,885)
Balances, September 30, 2022	78,065,455	$ 78	$ 218,672	$ (195,307)	—	$ —	$ 23,443
Balances, December 31, 2021	70,416,552	$ 70	$ 211,309	$ (183,846)	—	$ —	$ 27,533
Stock-based compensation	—	—	1,735	—	—	—	1,735
RSUs issued for consulting services	13,389	—	12	—	—	—	12
Common stock issued to employees and directors, includes RSUs vesting	2,228,600	2	—	—	—	—	2
Common stock issued for ATM share sales, net of $176 transaction costs	5,406,914	6	5,616	—	—	—	5,622
Net loss	—	—	—	(11,461)	—	—	(11,461)
Balances, September 30, 2022	78,065,455	$ 78	$ 218,672	$ (195,307)	—	$ —	$ 23,443

The accompanying notes are an integral part of these condensed consolidated financial statements.

AQUA METALS, INC.
Condensed Consolidated Statements of Cash Flows - Unaudited
(in thousands)

	Nine Months Ended September 30, 2023	Nine Months Ended September 30, 2022
Cash flows from operating activities:		
Net loss	$ (13,912)	$ (11,461)
Reconciliation of net loss to net cash used in operating activities		
Depreciation and ROU asset amortization	770	736
Amortization of intellectual property	135	135
Fair value of common stock issued for director fees	96	—
Fair value of common stock issued for consulting services	12	12
Stock-based compensation	1,880	1,737
Warrant expense	181	—
Amortization of deferred financing costs	119	—
Gain on disposal of property, plant and equipment	(23)	(595)
Changes in operating assets and liabilities		
Proceeds from leasing of building	12,278	636
Accounts receivable	(64)	131
Inventory	(612)	95
Prepaid expenses and other current assets	91	(19)
Accounts payable	322	(35)
Accrued expenses	1,181	383
Other assets and liabilities	(232)	(427)
Net cash provided by (used in) operating activities	2,222	(8,672)
Cash flows from investing activities:		
Purchases of property, plant and equipment	(6,142)	(2,290)
Proceeds from sale of equipment	70	1,432
Equipment deposits and other assets	(222)	(322)
Investment in LINICO	—	(500)
Net cash used in investing activities	(6,294)	(1,680)
Cash flows from financing activities:		
Proceeds from issuance of common stock, net of transaction costs	22,947	—
Proceeds from employee stock purchase plan	14	—
Payments on note payable	(6,000)	—
Proceeds from note payable, net	2,931	5,886
Cash paid for tax withholdings on RSUs vesting	(1,092)	—
Proceeds from ATM, net	3,788	5,622
Net cash provided by financing activities	22,588	11,508
Net decrease in cash and cash equivalents	18,516	1,156
Cash and cash equivalents at beginning of period	7,082	8,137
Cash and cash equivalents at end of period	$ 25,598	$ 9,293

	Nine Months Ended September 30, 2023	Nine Months Ended September 30, 2022
Supplemental disclosure of cash flows information		
Cash paid for income taxes	$ —	$ 2
Cash paid for interest	$ 399	$ 7
Supplemental disclosure of non-cash transactions		
Acquisitions of property, plant and equipment included in accounts payable	$ 39	$ (218)
Acquisitions of property, plant and equipment included in accrued expenses	$ 674	$ (136)
Increase in equity included in accrued expenses	$ 608	$ —

The accompanying notes are an integral part of these condensed consolidated financial statements.

AQUA METALS, INC.
Notes to Condensed Consolidated Financial Statements
(Unaudited)

1. Organization

Aqua Metals (NASDAQ: AQMS) is engaged in the business of applying its commercialized clean, water-based recycling technology principles to develop cost-efficient recycling solutions for both lead and lithium-ion ("Li") batteries. Our recycling process is a patented hydro and electrometallurgical technology that is a novel, proprietary process we developed and named AquaRefining. AquaRefining is a low-emissions, closed-loop recycling technology that replaces polluting furnaces and hazardous chemicals with electricity-powered electroplating to recover valuable metals and materials from spent batteries with higher purity, decreased emissions, and with minimal waste. The modular "Aqualyzers" cleanly generate ultra-pure metal one atom at a time, closing the sustainability loop for the rapidly growing energy storage economy.

We are in the process of demonstrating that Li AquaRefining, which is fundamentally non-polluting, can create the highest quality and highest yields of recovered minerals from lithium-ion batteries with lower waste streams and lower costs than existing alternatives. Our goal is to recycle commercial quantities of nickel, cobalt, and copper in a pure metal form that can be sold to the general metals and superalloy markets and can be made into battery precursor compound materials with known processes already used in the mining industry. We also plan to recycle commercial quantities of lithium that can be sold to the lithium-ion battery manufacturers. We have installed, commissioned, and began to operate the first Li AquaRefining pilot plant.

Our focus for the lead market is providing equipment and licensing of our lead acid battery recycling technologies in an enabler model which allows us to work with anyone in the industry globally and address the entire marketplace. Our focus for the lithium market includes operating our first-of-a-kind lithium battery recycling facility, utilizing electricity to recycle instead of intensive chemical processes, fossil fuels, or high-temperature furnaces and licensing.

Revision of Prior Period Financial Statements

For the quarter ended September 30, 2022, we identified a cash flow classification error relating to proceeds from leasing of our building. The effect of this classification error was to overstate cash flow from financing activities by $636,000 and understate cash flows from operating activities by an equal amount for the nine months ended September 30, 2022. The classification error did not have an effect on net increase in cash and cash equivalents reported in the condensed consolidated statement of cash flow , the condensed consolidated balance sheet or condensed consolidated statement of operations for the related periods.

Using the guidance in ASC Topic 250, Accounting Changes and Error Corrections, ASC Topic 250-S99-1, Assessing Materiality, and ASC Topic 250-S99-2, Considering the Effects of Prior Year Misstatements when Quantifying Misstatements in Current Year Financial Statements, we evaluated whether our previously issued condensed consolidated financial statements were materially misstated due to this classification error. Based upon our evaluation of both quantitative and qualitative factors, we believe that the effect of this classification error was not material to any previously reported quarterly period.

We have revised the prior period financial statements included in this filing to reflect the correction of this classification error.

	Nine Months Ended September 30, 2022		
	As Reported	**Correction**	**As Revised**
Cash flows from operating activities:			
Lease of building		636	636
Net cash used in operating activities	$ (9,308)	$ 636	$ (8,672)
Cash flows from financing activities:			
Proceeds from leasing of building	636	(636)	—
Net cash provided by financing activities	$ 12,144	$ (636)	$ 11,508

2. Summary of significant accounting policies

The significant accounting policies and estimates used in preparation of the condensed consolidated financial statements are described in the Company's audited consolidated financial statements as of and for the year ended December 31, 2022, and the notes thereto, which are included in the Company's Annual Report on Form 10-K for the year ended December 31, 2022, as filed with the Securities and Exchange Commission, or the SEC, on March 9, 2023. There have been no material changes in the Company's significant accounting policies during the three and nine months ended September 30, 2023.

Basis of presentation

The accompanying unaudited condensed consolidated financial statements of Aqua Metals, Inc. and subsidiaries (collectively, the "Company" or "Aqua Metals") have been prepared in accordance with the interim reporting requirements of Form 10-Q, pursuant to the rules and regulations of the United States Securities and Exchange Commission (the "SEC") and should be read in conjunction with the Company's audited consolidated financial statements for the period ended December 31, 2022, which are included on Form 10-K filed with the Securities and Exchange Commission on March 9, 2023. Accordingly, they do not include all the information and footnotes required by generally accepted accounting principles in the United States of America ("U.S. GAAP") for annual consolidated financial statements. In the opinion of management, all adjustments (which include normal recurring adjustments) considered necessary to present fairly each of the condensed consolidated balance sheet as of September 30, 2023, the condensed consolidated statements of operations for the three and nine months ended September 30, 2023 and September 30, 2022, the condensed consolidated statements of stockholders' equity for the three and nine months ended September 30, 2023 and September 30, 2022 and the condensed consolidated statements of cash flows for the nine months ended September 30, 2023 and September 30, 2022, as applicable, have been made. The condensed consolidated balance sheet as of December 31, 2022 has been derived from the Company's audited consolidated financial statements as of such date, but it does not include all disclosures required by U.S. GAAP for annual presentation.

The results of operations for the three and nine months ended September 30, 2023 are not necessarily indicative of results that may be expected for the year ending December 31, 2023.

Principles of consolidation

The accompanying unaudited condensed consolidated financial statements include the accounts of the Company and its subsidiaries, all of which are wholly-owned subsidiaries. Inter-company accounts and transactions have been eliminated in consolidation.

Use of estimates

The preparation of the condensed consolidated financial statements requires management of the Company to make a number of estimates and assumptions relating to the reported amount of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the condensed consolidated financial statements, and the reported amounts of expenses during the period. Significant items subject to such estimates and assumptions include the carrying amount and valuation of long-lived assets, valuation allowances for deferred tax assets, the determination of stock-based compensation expense and the determination of the fair value of stock warrants issued. Actual results could differ from those estimates.

Net loss per share

Basic net loss per share is computed by dividing net loss by the weighted average number of common shares outstanding during the period. Diluted net loss per share is computed by dividing the net loss by the weighted average number of common share equivalents outstanding for the period determined using the treasury-stock method or the if-converted method, as applicable. For purposes of this calculation, stock options, restricted stock units (RSUs) and warrants to purchase common stock are considered to be common stock equivalents and are only included in the calculation of diluted net loss per share when their effect is dilutive. The following shares underlying outstanding convertible notes, stock options, RSUs and warrants to purchase common stock were anti-dilutive due to a net loss in the periods presented and, therefore, were excluded from the dilutive weighted average securities computation for the three and nine months ended September 30, as indicated below:

	Three Months Ended September 30,		Nine Months Ended September 30,	
Excluded potentially dilutive weighted average securities (1):	**2023**	**2022**	**2023**	**2022**
Options to purchase common stock	115,779	1,009,230	505,981	1,018,900
Unvested restricted stock units	5,035,002	3,221,803	5,525,424	3,921,702
Financing warrants to purchase common stock	436,670	6,372	151,381	6,372
Total potential dilutive weighted average securities	5,587,451	4,237,405	6,182,786	4,946,974

(1) Securities are presented on a weighted average outstanding calculation as required if the securities were dilutive.

Segment and geographic information

Our chief operating decision maker ("CODM") is the Chief Executive Officer. Operating segments are defined as components of an enterprise engaging in business activities for which discrete financial information is available and regularly reviewed by the CODM in deciding how to allocate resources and in assessing performance. The CODM views its operations and manages its business in one operating segment.

Concentration of credit risk

The Company did not generate significant revenue during the three and nine months ended September 30, 2023 and 2022, respectively, except for nominal revenue generated from the sale of lead finished goods. The Company had no trade receivables as of December 31, 2022. The accounts receivable balance on the Company's consolidated balance sheet as of December 31, 2022 consisted of proceeds from the sale of equipment. As of September 30, 2023 the Company had $25,000 in trade receivable and $51,000 in other receivables. The other receivables consisted of proceeds from a non-recurring engineering (NRE) arrangement with 6K Energy.

Recent accounting pronouncements

In August 2020, the FASB issued ASU 2020-06, *Debt - Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging - Contracts in Entity's Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity's Own Equity*, which is intended to simplify the accounting for certain financial instruments with characteristics of liabilities and equity, including convertible instruments and contracts on an entity's own equity. The guidance allows for either full retrospective adoption or modified retrospective adoption. The guidance is effective for the Company in the first quarter of fiscal year 2024 and early adoption is permitted. The Company elected early adoption of ASU 2020-06 in the first quarter of its fiscal year 2023 on a modified retrospective basis. There was no material impact to the financial statements as a result of the adoption.

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3. Revenue recognition

The Company was not in commercial production during the three and nine months ended September 30, 2023 and 2022, respectively. Historically, Company products transferred to customers at a single point in time accounted for 100% of its revenue.

4. Lease receivable

The Company entered into an Industrial Lease Agreement with LINICO Corporation, a Nevada corporation ("LINICO"), dated February 15, 2021 pursuant to which the Company leased to LINICO its 136,750 square foot recycling facility at TRIC. The lease commenced April 1, 2021 and expired on March 31, 2023. During the lease term, LINICO (or its parent, Comstock Inc.) had the option to purchase the land and facilities at a purchase price of $14.25 million if the option was exercised and the sale was completed by October 1, 2022 or $15.25 million if the option was exercised prior to March 31, 2023. The purchase option was subject to LINICO's payment of a nonrefundable deposit of $1.25 million, which was paid on October 15, 2021, and a second nonrefundable deposit of $2.0 million, which was paid on October 25, 2022. Both deposits were applied towards the purchase price. Under the Industrial Lease Agreement, Comstock had the right to exercise the purchase option in lieu of LINICO, and the transaction would follow the same terms of the original agreement. On March 31, 2023, Aqua Metals, Inc. received a notice of Comstock Inc.'s exercise of the option to purchase the land and building located at 2500 Peru Dr., McCarran, Nevada. On April 26, 2023, the Company sold the real property to Comstock in consideration of the final payment of $12 million. After paying the note payable as noted in Note 11, the Company received the net proceeds of approximately $5.7 million.

The lease agreement was a triple-net lease pursuant to which LINICO was responsible for all fixed costs, including maintenance, utilities, insurance, and property taxes. The lease agreement provided for LINICO's monthly lease payments starting at $68,000 per month and increasing to $100,640 in the last six months of the lease. The Company accounted for the Industrial Lease and Option to Purchase Agreement as a sales-type lease. As a component of the accounting for the agreement, the Company recognized the estimated fair market value of the land and plant of $17.0 million as a lease receivable, which was reflected on the Company's condensed consolidated balance sheet. The implied interest rate of 0.5% was utilized for the amortization of the scheduled building lease/purchase payments outlined in the agreement. The Company applied the monthly payments received as a reduction to lease receivable and interest income. The interest income recognized from the agreement is included in "Interest and other income" on the Company's condensed consolidated statements of operations. For the nine months ended September 30, 2023, the Company recognized a reduction in the lease receivable balance of approximately $12.3 million net of nonrefundable deposits applied towards the purchase price and recorded $24,000 of interest income related to this agreement.

5. Inventory

Inventory consisted of the following (in thousands):

	September 30, 2023	December 31, 2022
Finished goods	$ —	$ 28
Work in process	106	—
Raw materials	785	250
Total inventory	$ 891	$ 278

6. Assets held for sale

Assets are classified as held for sale when, among other factors, they are identified and marketed for sale in their present condition, management is committed to their disposal, and the sale of the asset is probable within one year. Management believes these assets are no longer necessary for the Company's future operating plans. As of September 30, 2023, all assets held for sale were sold.

7. Property, plant and equipment, net

Property, plant and equipment, net, consisted of the following (in thousands):

Asset Class	Useful Life (Years)	September 30, 2023	December 31, 2022
Operational equipment	3 - 10	$ 4,501	$ 1,445
Lab equipment	5	730	730
Computer equipment	3	6	6
Office furniture and equipment	3	90	90
Leasehold improvements	2.5	80	80
Land	-	1,141	—
Building	39	3,131	—
Equipment under construction		4,479	6,486
		14,158	8,837
Less: accumulated depreciation		(1,771)	(1,494)
Total property, plant and equipment, net		$ 12,387	$ 7,343

Property, plant and equipment depreciation expense was $254,000 and $591,000 for the three and nine months ended September 30, 2023 and $131,000 and $382,000 three and nine months ended September 30, 2022, respectively. Equipment under construction is comprised of various components being manufactured or installed by the Company.

8. Investments

On February 15, 2021, the Company entered into a Series A Preferred Stock Purchase Agreement with LINICO Corporation, a Nevada Corporation, or ("LINICO"), that provided for the Company's issuance of 375,000 shares ("Aqua Shares") of the Company's common stock in consideration of LINICO's issuance of 1,500 shares of its Series A Preferred Stock, at a stated aggregate value of $1.5 million, along with a three-year warrant ("Series A Warrant") to purchase an additional 500 shares of LINICO Series A Preferred Stock at an exercise price of $1,000 per share. During the three months ended March 31, 2022, the Company exercised the warrant for all 500 LINICO Series A Preferred shares. Following the exercise, the Company held a total of 2,000 shares of the Series A Preferred Stock representing approximately 12% of LINICO common stock on a fully diluted basis.

The Company accounted for the LINICO investment under ASC 321, Investments-Equity Securities, using the measurement alternative of recording at cost as the investment in LINICO doesn't have a readily determinable fair value.

The LINICO Series A Preferred Stock is senior to all other capital stock of LINICO with regard to dividends and distributions upon liquidation, dissolution and sale of the company. Each share of LINICO Series A Preferred Stock is entitled to one vote per share and votes with the common stock on all matters, subject to certain protective provisions that require the approval of the holders of the Series A Preferred Stock voting as a class. The Series A Preferred Stock accrues a cumulative dividend of 8% per annum on the original stated value of $1,000 per share, and all accrued and unpaid dividends on the Series A Preferred Stock must be paid in full prior to the payment of any dividends on any other shares of LINICO capital stock. In the event of any liquidation or dissolution of LINICO, which would include a sale of LINICO, the holders of the Series A Preferred Stock shall receive the return of their stated value of $1,000 per share plus all accrued and unpaid dividends prior to any distribution to the holders of any other capital stock of LINICO, following which the holders of the Series A Preferred Stock shall participate in the distribution of any remaining assets with the holders of the junior stock on an as-converted basis. The Series A Preferred Stock is convertible into shares of LINICO common stock at the Company's option and is automatically converted into LINICO common stock upon the election of the holders of a majority of the LINICO Series A Preferred Stock or upon a qualifying IPO of LINICO common stock. The Series A Preferred Stockholders are also provided with preemptive rights allowing them the right to purchase their proportional share of certain future LINICO equity issuances.

The Series A Preferred Stock Purchase Agreement includes customary representations, warranties, and covenants by LINICO and the Company.

As LINICO's sale of the 375,000 of Aqua Shares resulted in net proceeds to LINICO that were less than $1,500,000, the Company was required to pay LINICO the difference of $232,000 in cash.

In connection with the investment transactions, the Company also entered into an Investors Rights Agreement and a Voting Agreement, each dated February 15, 2021, pursuant to which LINICO granted the Company customary demand and piggyback registration rights, information rights and the right to nominate one person to the LINICO board of directors as long as the Company is the owner of at least 10% of the LINICO common stock on a fully-diluted basis.

Comstock Inc., a Nevada corporation (NYSE-MKT: LODE), is the beneficial owner of approximately 88% of the common shares of LINICO. The Company's Chief Financial Officer, Judd Merrill, was a member of the board of directors of Comstock Inc. until April 5, 2023.

9. Accrued expenses

Accrued expenses consist of the following (in thousands):

	September 30, 2023	December 31, 2022
Payroll related	$ 1,479	$ 418
Property, plant and equipment related	674	770
Other	60	41
Professional services	43	51
Class action settlement	—	500
	$ 2,256	$ 1,780

10. Leases

As of September 30, 2023, the Company maintained one finance lease for equipment and two operating leases for real estate. The operating leases have current terms of 36 and 37 months and include one or more options to extend the duration of the agreements. These operating leases are included in "Other assets" on the Company's condensed consolidated balance sheets and represent the Company's right to use the underlying assets for the term of the leases. The Company's obligation to make lease payments are included in "Lease liability, current portion" and "Lease liability, non-current portion" on the Company's condensed consolidated balance sheets.

Based on the present value of the lease payments for the remaining lease term of the Company's existing leases, as of September 30, 2023, total right-of-use assets were approximately $284,000 and operating lease liabilities were approximately $294,000. As of December 31, 2022, the Company's total right-of-use assets were approximately $463,000 and operating lease liabilities were approximately $475,000.

The Company currently maintains one finance lease for equipment. In November 2021, the Company entered into a finance lease for a modular laboratory which expires in October 2024.

Information related to the Company's right-of-use assets and related lease liabilities were as follows (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Cash paid for operating lease liabilities	$ 66	$ 65	$ 199	$ 279
Operating lease cost	$ 65	$ 65	$ 196	$ 272
Cash paid for finance lease liabilities	$ 15	$ 15	$ 46	$ 46
Interest expense	$ 2	$ 2	$ 5	$ 7

	September 30, 2023
Weighted-average remaining lease term (years) - operating leases	1.1
Weighted-average discount rate - operating leases	6.17%
Weighted-average remaining lease term (years) - finance leases	1.1
Weighted-average discount rate - finance leases	8.17%

Future maturities of lease liabilities as of September 30, 2023 are as follows (in thousands):

Due in 12-month period ended September 30,	Operating Leases	Finance Leases
2023	$ 271	$ 54
2024	$ 34	$ 5
2025	$ —	$ —
Less imputed interest	$ (11)	$ (3)
Total lease liabilities	$ 294	$ 56
Current lease liabilities	$ 260	$ 52
Non-current lease liabilities	$ 34	$ 4
	$ 294	$ 56

11. Notes payable

On September 30, 2022, Aqua Metals Reno, Inc., our wholly-owned subsidiary, entered into a Loan Agreement with Summit Investment Services, LLC, a Nevada limited liability company as to an undivided 90.8334% interest, Darren McBride, Trustee of the Arduino 1 Trust, U/A dated April 25, 2022, as to an undivided 8.3333% interest and Jason Yelowitz, Trustee of the Jason Yelowitz 2006 Trust, Dated March 31, 2006 as to an undivided .8333% interest (collectively, the “Lenders”), pursuant to which the Lenders provided us with a loan in the amount of $6 million. The loan accrued interest at a fixed annual rate of 8.50%. Interest-only payments were due monthly for the first twenty-four months and the principal and all unpaid accrued interest was due on September 29, 2024. The loan was collateralized by a first priority lien interest on our land and recycling facility at TRIC. The costs associated with obtaining the loan were recorded as a reduction to the carrying amount of the note and were being amortized over the life of the loan. We had the right to prepay the loan at any time, provided that we must pay guaranteed minimum interest of $255,000 (6-months of interest). The Loan Agreement includes representations, warranties, and affirmative and negative covenants that are customary of institutional loan agreements. On April 26, 2023, the property at TRIC was sold and the proceeds from the sale were used to pay off the loan. Upon the completion of the sale, the commitments and obligations per our loan agreement with the Lenders were terminated. All amounts outstanding on April 26, 2023 were paid.

On February 1, 2023, Aqua Metals Reno, Inc., our wholly-owned subsidiary, entered into a Loan Agreement with Summit Investment Services, LLC, a Nevada limited liability company (the “Lender”), pursuant to which the Lender provided us with a loan in the amount of $3 million. The loan proceeds were used to purchase a building located at 2999 Waltham Way McCarran, NV 89434 (the “Building”). The loan accrues interest at a fixed annual rate of 9.50%. Interest-only payments are due monthly for the first twenty-four months and the principal and all unpaid interest is due on March 1, 2025. We have the right to prepay the loan at any time, provided that we must pay guaranteed minimum interest of $213,750 (9-months of interest). The Loan Agreement includes representations, warranties, and affirmative and negative covenants that are customary of institutional loan agreements. As of September 30, 2023 and December 31, 2022, the Company was in compliance with all of the covenants. The loan is collateralized by a first priority lien on the building and site improvements, and is guaranteed by Aqua Metals, Inc.

Notes payable is comprised of the following (in thousands):

	September 30, 2023	December 31, 2022
Notes payable, current portion		
The Lenders, net of issuance costs	$ —	$ 5,899
Summit Investment Services, LLC, net of issuance costs	$ 34	$ —
Total notes payable, current portion	$ 34	$ 5,899
Notes payable, non-current portion		
Summit Investment Services, LLC, net of issuance costs	$ 2,916	$ —
Total notes payable, non-current portion	$ 2,916	$ —

12. Stockholders’ equity

Shares issued

During the nine months ended September 30, 2023, the Company issued 1,413,886 shares of common stock upon vesting of Restricted Stock Units ("RSUs") granted by the Company to management and employees, including 510,632 of reissued treasury stock. We withheld 939,198 shares to satisfy approximately $1,091,000 of employees’ tax obligations during the nine months ended September 30, 2023. We treat shares of common stock withheld for tax purposes on behalf of our employees in connection with the vesting of RSUs in a similar manner as common stock repurchases and reported as treasury stock.

During the nine months ended September 30, 2023, the Company issued 130,918 shares of common stock upon vesting of RSUs granted to Board members.

During the nine months ended September 30, 2023, the Company issued 3,244,302 shares of common stock pursuant to the At The Market Issuance Sales Agreement for net proceeds of $3.8 million.

During the nine months ended September 30, 2023, the Company issued 15,781 shares of common stock to a former Board member to fulfill obligations related to consulting services.

During the nine months ended September 30, 2023, the Company issued 84,619 shares of common stock to a Board member related to director fees.

During the nine months ended September 30, 2023, the Company issued 469,366 shares of common stock upon the settlement of the securities class action lawsuit.

During the nine months ended September 30, 2023, the Company issued 192,707 shares of common stock pursuant to the employee stock purchase plan.

In July 2023, the Company completed a public offering of 18,193,000 shares of its common stock, for net proceeds of $18.3 million.

In August 2023, the Company issued 4,545,455 shares of its common stock pursuant to that certain Securities Purchase Agreement (the "Yulho SPA"), with Yulho Co, Ltd., for net proceeds of $4.6 million.

Warrant issued

In July 2023, the Company issued a warrant to purchase 363,860 shares of the Company's common stock to the underwriter of the Company's public offering, equal to 2% of the 18,193,000 shares sold. The warrants are exercisable at $1.375 per share, commencing six months after July 17, 2023. The warrants have an expiration date of 5 years from the date of issuance and will expire on July 17, 2028.

In August 2023, the Company issued a warrant to purchase 205,761 shares of the Company's common stock to the underwriter of the transaction in connection with the Yulho SPA. The warrants have an expiration date of 5 years from the date of issuance and are exercisable immediately at $1.25 per share. The warrant will expire on August 4, 2028.

Stock-based compensation

The stock-based compensation expense was allocated as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Plant operations	$ 35	$ 27	$ 82	$ 75
Research and development cost	8	—	48	36
General and administrative expense	551	571	1,750	1,626
Total	$ 594	$ 598	$ 1,880	$ 1,737

There were no options issued during the three and nine months ended September 30, 2023 or the three and nine months ended September 30, 2022.

2014 Stock Incentive Plan

We have adopted the Aqua Metals, Inc. 2014 Stock Incentive Plan providing for the grant of non-qualified stock options and incentive stock options to purchase shares of our common stock and for the grant of restricted and unrestricted share grants. All of our officers, directors, employees and consultants are eligible to participate under the plan. The purpose of the plan is to provide eligible participants with an opportunity to acquire an ownership interest in our company. As of September 30, 2023, there were 522,020 remaining shares available for future grants.

2019 Stock Incentive Plan

In 2019, our board of directors adopted the Aqua Metals, Inc. 2019 Stock Incentive Plan (the "2019 Plan"). A total of 18,500,000 shares of common stock was authorized for issuance pursuant to the 2019 Plan. The 2019 Plan provides for the following types of stock-based awards: incentive stock options; non-statutory stock options; restricted stock; and performance stock. The 2019 Plan, under which equity incentives may be granted to employees and directors under incentive and non-statutory agreements, requires that the option price may not be less than the fair value of the stock at the date the option is granted. Option awards are exercisable until their expiration, which may not exceed 10 years from the grant date. As of September 30, 2023, there were 5,385,633 remaining shares available for future grants.

		Options Outstanding	RSUs Outstanding
	Number of Shares Available for Grant	Number of Shares	Number of RSUs
Balances, December 31, 2022	5,262,254	994,267	6,387,937
Granted	(489,569)	—	489,569
Exercised/ Released	—	—	(2,568,621)
Expired inducement grant	—	(840,000)	—
Forfeited	187,550	(41,072)	(146,478)
Returned to Plan	947,418	—	947,418
Balances, September 30, 2023	5,907,653	113,195	5,109,825

(1) Consists of 840,000 shares relating to outstanding options granted in reliance on Nasdaq Rule 5635(c)(4).

Restricted stock units

During the first quarter of 2023, the Company granted 64,149 RSUs, all of which were subject to vesting, with a grant date fair value of $70,000 to employees. The shares vest in three equal installments over a three-year period.

During the second quarter of 2023, the Company granted 204,547 RSUs, all of which were subject to vesting, with a grant date fair value of $225,000 to Board Members. The shares vest in four equal installments over a twelve-month period.

During the third quarter of 2023, the Company granted 136,254 RSUs, all of which were subject to vesting, with a grant date fair value of $155,000 to employees. The shares vest in three equal installments over a three-year period.

13. Commitments and contingencies

We are subject to various claims that arise in the ordinary course of business. We believe that our potential liability under such claims, individually or in the aggregate, will not have a material effect on our consolidated financial statements.

14. Subsequent events

None.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

Cautionary Statement

The following discussion and analysis should be read in conjunction with our unaudited condensed consolidated financial statements and the related notes thereto contained elsewhere in this report. The information contained in this quarterly report on Form 10-Q is not a complete description of our business or the risks associated with an investment in our common stock. We urge you to carefully review and consider the various disclosures made by us in this report and in our other filings with the Securities and Exchange Commission, or SEC, including our Annual Report on Form 10-K for the year ended December 31, 2022 filed with the SEC on March 9, 2023, or our Annual Report.

In this report we make, and from time to time we otherwise make written and oral statements regarding our business and prospects, such as projections of future performance, statements of management's plans and objectives, forecasts of market trends, and other matters that are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Statements containing the words or phrases "will likely result," "are expected to," "will continue," "is anticipated," "estimates," "projects," "believes," "expects," "anticipates," "intends," "target," "goal," "plans," "objective," "should" or similar expressions identify forward-looking statements, which may appear in our documents, reports, filings with the SEC, and news releases, and in written or oral presentations made by officers or other representatives to analysts, stockholders, investors, news organizations and others, and in discussions with management and other of our representatives.

Our future results, including results related to forward-looking statements, involve a number of risks and uncertainties, including those risks included below in Part II, Item 1 "Risk Factors". No assurance can be given that the results reflected in any forward-looking statements will be achieved. Any forward-looking statement speaks only as of the date on which such statement is made. Our forward-looking statements are based upon assumptions that are sometimes based upon estimates, data, communications and other information from suppliers, government agencies and other sources that may be subject to revision. Except as required by law, we do not undertake any obligation to update or keep current either (i) any forward-looking statement to reflect events or circumstances arising after the date of such statement or (ii) the important factors that could cause our future results to differ materially from historical results or trends, results anticipated or planned by us, or which are reflected from time to time in any forward-looking statement.

General

Aqua Metals is engaged in the business of applying its commercialized clean, water-based, recycling technology principles to develop cost-efficient recycling solutions for both lead and lithium-ion ("Li") batteries. Our recycling process is a patented hydro and electrometallurgical technology that is a novel, proprietary and patented process we developed and named AquaRefining. AquaRefining is a low-emissions, closed-loop recycling technology that has the potential to replace polluting furnaces and hazardous chemicals with electricity-powered electroplating to recover valuable metals and materials from spent batteries with higher purity, lower emissions, and with minimal waste. The modular "Aqualyzers" cleanly generate ultra-pure metal one atom at a time, closing the sustainability loop for the rapidly growing energy storage economy.

Our process was originally designed for lead recycling. We are also applying our commercialized clean, water-based recycling technology principles with the goal of developing the cleanest and most cost-efficient recycling solution for lithium-ion batteries. We believe our process has the potential to produce higher quality products at a lower operating cost without the damaging effects of furnaces and greenhouse emissions. Aqua Metals estimates the total addressable market for lithium-ion battery recycling will be approximately $9 billion by 2025 and grow to exceed lead battery recycling by the end of the decade.

In February 2021, we announced our entry into the lithium-ion battery (LiB) recycling market through a key provisional patent we filed that applies the same innovative AquaRefining approach. In August 2021, we announced we had established our Innovation Center in TRIC focused on applying our proven technology to LiB recycling research and development and prototyping. Our strategic decision to apply our proven clean, closed-loop hydrometallurgical and electrochemical recycling experience to lithium-ion battery recycling is designed to meet the growing demand for critical metals driven by the global transition to electric vehicles; growth in internet data centers; and alternative energy applications including solar, wind, and grid-scale storage.

During the first half of 2022, we announced our ability to recover copper, lithium hydroxide, nickel and cobalt from lithium-ion battery black mass at the Company's Innovation Center. During 2022, we built our fully-integrated pilot system, located within the Company's Innovation Center, which is designed to allow Aqua Metals to be the first company in North America to recycle battery minerals from black mass and sell them in the U.S. and position the Company as the first LiB recycler in North America to align with the U.S. government's goal of retaining strategic battery minerals within the domestic supply chain.

During 2022, we conducted environmental comparisons based on Argonne National Lab's modeling of lithium battery supply chains – called EverBatt. The initial results indicate that AquaRefining is a cleaner approach to LiB recycling, producing far less CO2 waste streams than the two evaluated primary processes currently on the market which include smelting and chemically driven hydrometallurgical process. In December 2022, we completed equipment installation and began to operate our first-of-a-kind LiB recycling facility, utilizing electricity to recycle instead of intensive chemical processes, fossil fuels, or high-temperature furnaces. In January 2023, Aqua Metals recovered its first metals from recycling lithium batteries using the patent-pending Li AquaRefining process. In June 2023, we announced the completion of our Li AquaRefining™ recycling pilot, transition to 24/5 operations and production of high-purity, saleable quantities of sustainably recycled battery materials.

In February 2023, we acquired a five-acre recycling campus at TRIC. The facility is designed, when fully developed, to process up to 10,000 tonnes of lithium-ion battery material each year using our proprietary AquaRefining technology. Subject to our receipt of additional development financing on a timely basis, we expect to complete development of Phase One, including all equipment installation, by the end of second quarter of 2024 and to commence processing battery material at the new campus in 2024. Our initial plans call for upgrading the current building to install a commercial-scale Li AquaRefining system capable of recycling 3,000 tonnes of lithium battery 'black mass' each year. The purchase of the new property was funded with a non-dilutive loan.

As noted below, in July 2023, we completed a public offering of our common stock for net proceeds of $18.3 million and entered into a securities purchase agreement with a strategic partner for our sale of another $4.6 million of our common stock. We intend to use the net proceeds from the two capital raises for working capital, including expenditures related to the commencement of the Phase One build-out of our recently acquired five-acre recycling campus at the Tahoe Reno Industrial Center in McCarran, Nevada, and general corporate purposes. We are currently pursuing additional capital, with an emphasis on debt financing and government grants, in order to finance the completion of the Phase One build-out. However, there can be no assurance that such funds will be available.

On July 18, 2023, we entered into a Securities Purchase Agreement with Yulho Co, Ltd., a Korean-based company engaged in the recycling of lithium-ion batteries, pursuant to which we agreed to sell and issue to Yulho in a registered direct offering 4,545,455 shares of our common stock, at an offering price of $1.10 per share, for the gross proceeds of $5 million before selling commissions and other offering expenses payable by us. The transaction closed on August 4, 2023 with net proceeds of $4.6 million.

In addition to the capital investment, we entered into an Agreement to Execute a License Agreement or the Yulho Agreement, with Yulho pursuant to which each party has agreed to use their good faith best efforts to negotiate and execute a definitive license agreement, or the Yulho License Agreement. Pursuant to the proposed Yulho License Agreement, we will grant Yulho a license to our AquaRefining technology for Yulho's use in recycling lithium-ion batteries in the Republic of Korea. Under the proposed Yulho License Agreement, Yulho will pay us a royalty on net sales. We will agree to support and assist Yulho in business development efforts in establishing offtake partnerships for the Yulho recycled metals. We will also work with Yulho to engage with potential partners to foster and expand business opportunities. The Yulho License Agreement is expected to contain customary representations, warranties and covenants for agreements of such nature.

On July 21, 2023, we completed a public offering of 18,193,000 shares of our common stock, at the public offering price of $1.10 per share. After the deduction of the underwriter's discount and the underwriter expenses payable by us, we received net proceeds of $18.3 million.

Our current focus is building and operating our first-of-a-kind lithium battery recycling facility, utilizing electricity to recycle instead of intensive chemical processes, fossil fuels, or high-temperature furnaces. We are also pursuing potential partnership and/or joint ventures agreements and licensing agreements, particularly as our Li AquaRefining continues to develop and improve. We believe that Aqua Metals is in a position to become one of the few critical minerals recovery players for which our environmental and economic value proposition should generate both great commercial wins and potentially government grants to accelerate our credibility and progress.

Plan of Operations

Our business strategy is based on the pursuit of building, operating and licensing Li AquaRefining recycling capacity to meet the growing demand for critical metals in lithium-ion batteries driven by innovations in automobile batteries, growth in internet data centers, and alternative energy applications, including solar, wind, and grid-scale storage.

We are in the process of demonstrating that Li AquaRefining, which is fundamentally non-polluting, can create the highest quality and highest yields of recovered minerals from lithium-ion batteries with lower waste streams and lower costs than existing alternatives. We have already demonstrated at our pilot facility our ability to recover key valuable minerals in lithium-ion batteries, such as lithium hydroxide, copper, nickel, cobalt, and other compounds. Our goal is to recycle commercial quantities of nickel, cobalt, and copper in a pure metal form that can be sold to the general metals and superalloy markets and can be made into battery precursor compound materials with known processes already used in the mining industry. We also intend to recycle commercial amounts of lithium that can be sold to lithium-ion battery manufacturers. We have installed, commissioned, and began to operate the first Li AquaRefining pilot plant at the end of 2022, scaling towards a commercial demonstration plant operation with capacity of processing approximately 3,000 tonnes of black mass per year. The location for the pilot demonstration is currently the Innovation Center with expansion to happen at our new 5-acre recycling campus starting with processing ~3,000 tonnes of black mass per year and growing to commercial quantities of ~10,000 tonnes per year or more of production starting in 2025 and 2026, which would be enough material to build ~100,000 average EVs or ~400,000 average home energy storage systems. At average 2023 year to date metals prices, ~10,000 tonnes per year capacity could also generate $200 million of revenues for the company.

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Results of Operations

We have not engaged in commercial operations since 2019, and since that time our operations have been devoted to improvements to our AquaRefining processes and developing our Li AquaRefining battery recycling technology. During 2022, our primary focus was research and development and the build out of the initial Li battery recycling pilot at the Innovation Center. During the nine months ended September 30, 2023, Aqua Metals was focused on quickly advancing from the planning and validation phases to execution and operation of our pilot facility and the build out of our commercial facility. We did not earn any revenue during the three and nine months ended September 30, 2023 and 2022 other than nominal revenue generated from the sale of lead finished goods. The following table summarizes our results of operations with respect to the items set forth below for the three and nine months ended September 30, 2023 and 2022 together with the dollar and percentage changes in those items (in thousands).

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2023	2022	Favorable (Unfavorable)	% Change	2023	2022	Favorable (Unfavorable)	% Change
Product sales	$ 25	$ —	$ 25	0.0%	$ 25	$ 4	$ 21	525.0%
Plant operations	1,770	833	(937)	112.5%	4,316	3,026	(1,290)	42.6%
Research and development cost	389	490	101	(20.6)%	1,359	1,561	202	(12.9)%
General and administrative expense	2,815	2,611	(204)	7.8%	8,670	7,615	(1,055)	13.9%
Total operating expense	$ 4,974	$ 3,934	$ (1,040)	26.4%	$ 14,345	$ 12,202	$ (2,143)	17.6%

Plant operations include raw materials, supplies related costs, salaries and benefits, consulting, outside services costs, inventory adjustments, depreciation, amortization, insurance, travel and overhead costs. Plant operations increased approximately $937,000 or 112.5% and $1.3 million or 42.6% for the three and nine months ended September 30, 2023 as compared to the three and nine months ended September 30, 2022. The increase in plant operations for the three and nine months ended September 30, 2023 was primarily due to an increase in payroll and payroll related fees of approximately $497,000 and $971,000, respectively, as we hired additional staff to operate the pilot facility and process black mass, as well as $440,000 and $319,000, respectively, in supplies and materials.

Research and development cost includes expenditures related to the improvement of the AquaRefining technology and the development of our lithium-ion battery recycling process. During the three months ended September 30, 2023, research and developments costs decreased $101,000, or approximately 20.6% compared to the three months ended September 30, 2022. For the nine months ended September 30, 2023, research and developments costs decreased $202,000, or approximately 12.9% compared to the nine months ended September 30, 2022. The decrease was driven by moving our focus from R&D to operating our fully integrated pilot system at the Innovation Center.

General and administrative expense increased $204,000, or approximately 7.8% for the three months ended September 30, 2023 compared to the three months ended September 30, 2022 and approximately $1.1 million or 13.9% for the nine months ended September 30, 2023 compared to the nine months ended September 30, 2022. The increase in general and administrative expenses for the three months ended September 30, 2023 includes $154,000 in changes in payroll and payroll related expenses as we ramp up and support the growth of our lithium-ion recycling business model, as well as increases in travel related expenses, advertising and promotion expenses, and facility expenses. The increase in general and administrative expenses for the nine months ended September 30, 2023 includes $636,000 in payroll and payroll-related expenses, as well as an increase of $596,000 in travel-related expenses, advertising and promotion expenses, and overhead expenses, offset by a $173,000 decrease in professional fees.

The following table summarizes our other income and interest expense for the three and nine months ended September 30, 2023 and 2022 together with the dollar and percentage changes in those items (in thousands).

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2023	2022	Favorable (Unfavorable)	% Change	2023	2022	Favorable (Unfavorable)	% Change
Other income and (expense)								
Gain on disposal of property, plant and equipment	$ -	$ 5	$ (5)	(100.0)%	$ 23	$ 595	$ (572)	(96.1)%
Interest expense	(87)	(9)	(78)	866.7%	(518)	(22)	(496)	2254.5%
Interest and other income	489	53	436	822.6%	903	166	737	444.0%
Total other income, net	$ 402	$ 49	$ 353	720.4%	$ 408	$ 739	$ (331)	(44.8)%

We recognized a gain on disposal of property, plant and equipment of approximately nil and $23,000 during the three and nine months ended September 30, 2023 compared to a gain of $5,000 and $595,000 for the three and nine months ended September 30, 2022. For the three and nine months ended September 30, 2022, the gain on property, plant and equipment resulted from the write-off of plant commitment accrued expenses. Plant clean-up and repair of fire damaged areas began in 2021 and were completed by the end of June 30, 2022.

The increase in interest expense for the three and nine months ended September 30, 2023 is due to the interest paid on the notes payable.

We recognized approximately $489,000 and $903,000 in interest and other income during the three and nine months ended September 30, 2023, respectively, an increase from $53,000 and $166,000 during the three and nine months ended September 30, 2022, respectively. The increase in interest and other income is primarily due to the increase in interest received on our bank deposits and the miscellaneous income from the non-recurring engineering agreement with 6K Energy.

Liquidity and Capital Resources

As of September 30, 2023, we had total assets of $42.0 million and working capital of $23.1 million.

The following table summarizes our cash provided by (used in) operating, investing and financing activities (in thousands):

	Nine Months Ended September 30,	
	2023	2022
Net cash provided by (used in) operating activities	$ 2,222	$ (8,672)
Net cash used in investing activities	$ (6,294)	$ (1,680)
Net cash provided by financing activities	$ 22,588	$ 11,508

Net cash provided by (used in) operating activities

Net cash provided by operating activities for the nine months ended September 30, 2023 was $2.2 million. Net cash provided by operating activities includes approximately $12.3 million of cash received related to our lease receivable offset by operating expenses. Net cash used in operating activities for the nine months ended September 30, 2022 was $8.7 million. Net cash used in operating activities during each of these periods consisted primarily of our net loss adjusted for non-cash items such as depreciation, amortization, stock-based compensation, and loss (gain) on the disposal of property, plant and equipment, as well as net changes in working capital.

Net cash used in investing activities

Net cash used in investing activities for the nine months ended September 30, 2023 was $6.3 million and consisted mainly of $4.3 million utilized towards the purchase of the building located at 2999 Waltham Way McCarran, NV 89434 and $1.8 million utilized towards purchases of fixed assets mainly related to the build out of our commercial facility. Net cash used in investing activities for the nine months ended September 30, 2022 was $1.7 million and consisted mainly of $2.3 million utilized towards the purchase of property, plant and equipment, $1.4 million of proceeds from the sale of equipment, $500,000 utilized towards the warrant exercise and $322,000 utilized towards the equipment deposits.

Net cash provided by financing activities

Net cash provided by financing activities of $22.6 million for the nine months ended September 30, 2023 consisted of $3.8 million in net proceeds from the sale of Aqua Metals shares pursuant to the at-the-market offering, or ATM, $2.9 million in net proceeds from the loan agreement secured with the Summit Investment Services, LLC, and $18.3 million in net proceeds from our July 2023 public offering and $4.6 million in net proceeds from the Yulho transaction, offset by the $6 million used to pay off the note payable as noted in Note 11 and by $1.1 million related to tax withholdings to cover RSU vesting. Net cash provided by financing activities for the nine months ended September 30, 2022 was approximately $11.5 million consisted of $5.6 million in net proceeds from the sale of Aqua Metals shares pursuant to the ATM and $5.9 million in net proceeds from the loan secured with the Lenders.

As of September 30, 2023, we had total cash of $25.6 million and working capital of $23.1 million. As of the date of this report, and after giving effect to the net proceeds of our July 2023 public offering, we believe that we have sufficient capital to fund our proposed operating plan for, at least, 12 months following the date of this report, including the commencement of the Phase One build-out of our recently acquired five-acre recycling campus at TRIC. However, as of the date of this report, we believe that we will require additional capital in order to fund our proposed business plan beyond the next 12 months, including the completion of the Phase One build-out of our recycling campus at TRIC and start of our full-scale commercial operations.

We intend to raise additional capital through conventional loans, potential government backed debt offerings, government grants or through the sale of our common shares via our current at-the-market offering. However, there can be no assurance that additional capital will be available to us on reasonable terms or at all. Funding that includes the sale of our equity may be dilutive. If financing is not available on satisfactory terms, we will be unable to further pursue our business plans and we will be unable to continue operations.

Critical Accounting Estimates

No material changes from what was reported in the 2022 Form 10-K.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

Not applicable.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our chief executive officer and chief financial officer, evaluated the effectiveness of the design and operation of our disclosure controls and procedures pursuant to Rule 13a-15 of the Securities Exchange Act of 1934. Based on that evaluation, management, including our chief executive officer and chief financial officer, concluded that our disclosure controls and procedures were effective as of September 30, 2023.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting that occurred during the three month period ended September 30, 2023 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II - OTHER INFORMATION

Item 1A. Risk Factors

Investing in our common stock involves a high degree of risk. Before purchasing our common stock, you should read and consider carefully the following risk factors as well as all other information contained in this report, including our consolidated financial statements and the related notes. Each of these risk factors, either alone or taken together, could adversely affect our business, operating results and financial condition, as well as adversely affect the value of an investment in our common stock. There may be additional risks that we do not presently know of or that we currently believe are immaterial, which could also impair our business and financial position. If any of the events described below were to occur, our financial condition, our ability to access capital resources, our results of operations and/or our future growth prospects could be materially and adversely affected and the market price of our common stock could decline. As a result, you could lose some or all of any investment you may make in our common stock.

Risks Relating to Our Business

We have a limited operating history and limited revenue producing operations and are currently undertaking a reset of our business strategy. Therefore, it is difficult for potential investors to evaluate our business. We formed our corporation in June 2014. From inception through September 30, 2023, we generated a total of $11.7 million of revenue, all of which was derived primarily from the sale of lead compounds and plastics and, to a lesser extent, the sale of lead bullion and AquaRefined lead, and all but approximately $285,000 of which was derived prior to the November 2019 fire at our former LAB recycling facility at TRIC. Following the TRIC fire, we chose to suspend all plant-based revenue producing operations, entered into a lease-to-buy agreement with respect to TRIC and have shifted our business model, for lead battery recycling, to focus exclusively on the licensing of our AquaRefining technology to partners engaged in LAB recycling. We also commenced the research and development of the application of our AquaRefining technology to the recycling of lithium-ion batteries. Based upon our success to date in recovering high value metals from lithium-ion batteries using our AquaRefining technology, we have commenced the development of a five-acre recycling campus designed to process up to 10,000 tonnes of lithium-ion battery material annually. While we intend to continue to pursue our licensing business model, the development of our lithium-ion battery recycling facility represents a significant change in our business strategy and course of operations. As of the date of this report, we estimate that we will begin to realize some revenues from lithium-ion battery recycling in 2024, however we are unable to estimate when we expect to commence any meaningful commercial or revenue producing operations from either our licensing model or our lithium-ion battery recycling facility. Our limited operating history makes it difficult for potential investors to evaluate our technology or prospective operations and we are, for all practical purposes, an early-stage company subject to all the risks inherent in the initial organization, financing, expenditures, complications and delays in a new business, including, without limitation:

- our ability to successfully apply, and realize the expected benefits of applying, our AquaRefining technology to the plating of high value metals found in lithium-ion batteries, including cobalt, nickel, and copper;
- the timing and success of our plan of commercialization and the fact that we have not entered into a commercial license for our AquaRefining technology and only have recently commenced the development of our lithium-ion recycling facility;
- our ability to successfully develop our proposed lithium-ion recycling facility;
- our ability to demonstrate that our AquaRefining technology can recycle either LABs or lithium-ion batteries on a commercial scale; and
- our ability to license our AquaRefining process and sell our AquaRefining equipment to Yulho, ACME Metal Enterprise Co., Ltd and other recyclers of LABs and lithium-ion batteries.

Investors should evaluate an investment in us in light of the uncertainties encountered by developing companies in a competitive environment. There can be no assurance that our efforts will be successful or that we will ultimately be able to attain profitability.

We recently commenced the development of a lithium-ion recycling facility, however we are in the early stages of developing the facility and there can be no assurance that we will be able to successfully develop the facility or, if we do, realize the expected benefits of the facility. In January 2023, we announced our plans to conduct the phased development of a five-acre recycling campus in the Tahoe-Reno Industrial Center, or TRIC, in McCarran, Nevada. The facility is designed, when fully developed, to process up to 10,000 tonnes of lithium-ion battery material each year using our proprietary AquaRefining technology. On February 1, 2023, we closed on the acquisition financing and purchased the five-acre site, plus the existing 21,000 square foot building, and as noted elsewhere, in July 2023 we raised a net of $18.3 million in a public offering of our common shares and $4.6 million from the sale of common stock to Yulho. We believe the net proceeds will allow us to commence the Phase One build-out of the facility. However, we will need additional financing to complete the build-out of Phase One, which we intend to pursue through conventional non-dilutive loans, potential government backed debt offerings, government grants or through the sale of our common stock via our current at-the-market offering. Subject to our receipt of development financing on a timely basis, we expect to complete development of Phase One, including all equipment installation, by the end of first half of 2024 and to commence operations at the new campus in the second quarter of 2024. However, there can be no assurance we will be able to do so.

We have initiated the research and development of the application of our AquaRefining technology to the recycling and recovery of lithium-ion batteries, however there can be no assurance that our efforts will be successful. In September 2021, we announced the establishment of our Innovation Center, in McCarran, Nevada, focused on applying our AquaRefining technology to lithium-ion battery recycling research and development and prototype system activities. Earlier in 2021, we filed a provisional patent for recovering high-value metals from recycled lithium-ion batteries to complement the patents for AquaRefining. At the end of 2022 and through second quarter of 2023, we successfully recovered all valuable materials from spent lithium batteries at production scale using our AquaRefining technology: lithium hydroxide, copper, nickel, cobalt, and manganese dioxide. We are continuing our efforts to improve our Li AquaRefining process; however, there can be no assurance that our efforts will be successful or that we will be able to conduct the recycling and recovery of the high value metals from lithium-ion batteries on a commercial scale.

Our business strategy includes licensing arrangements and entering into joint ventures and strategic alliances, however as of the date of this report we have no such agreements in place and there can be no assurance we will be able to do so. Failure to successfully integrate such licensing arrangements, joint ventures, or strategic alliances into our operations could adversely affect our business. We propose, as one of our business strategies, to commercially exploit our AquaRefining process by licensing our technology to third parties and entering into joint ventures and strategic relationships with parties involved in the manufacture and recycling of LABs, and lithium-ion batteries. In July 2021, we entered into an agreement with ACME Metal Enterprise Co., Ltd to deploy and potentially license our AquaRefining equipment at ACME's LAB recycling facility in Keelung, Taiwan, however as of the date of this report, our collaboration with ACME has not led to a licensing arrangement. In July 2023, we entered into an Agreement to Execute a License Agreement with Yulho pursuant to which each party has agreed to use their good faith best efforts to negotiate and execute a definitive license agreement by which we would grant Yulho a license to our AquaRefining technology for Yulho's use in recycling lithium-ion batteries in the Republic of Korea. We are also currently seeking to negotiate agreements with others. However, there can be no assurance we will be able to conclude a licensing agreement with ACME, Yulho or any others, or that we will be able to do so on terms that benefit us. Our ability to enter into licensing, joint ventures and strategic relationships with third parties will depend on our ability to demonstrate the technological and commercial advantages of our AquaRefining process, of which there can be no assurance. Also, even if we are able to enter into licensing, joint venture or strategic alliance agreements, there can be no assurance that we will be able to obtain the expected benefits of any such arrangements. In addition, licensing programs, joint ventures and strategic alliances may involve significant other risks and uncertainties, insufficient revenue generation to offset liabilities assumed and expenses associated with the transaction, potential additional challenges in protecting our intellectual property, and unidentified issues not discovered in our due diligence process, such as product quality, technology issues and legal contingencies. In addition, we may be unable to effectively integrate any such programs and ventures into our operations. Our operating results could be adversely affected by any problems arising during or from any licenses, joint ventures or strategic alliances.

Our business is dependent upon our successful implementation of novel technologies and processes and there can be no assurance that we will be able to implement such technologies and processes in a manner that supports the successful commercial roll-out of our business model. While much of the technology and processes involved in battery recycling operations are widely used and proven, our AquaRefining process is largely novel and, to date, has been demonstrated on a modest scale of operations. While we have shown that our proprietary technology can produce AquaRefined lead from LABs and high value metals from lithium-ion batteries on a small scale, we have not processed either LABs or lithium-ion batteries on a commercial scale. We recently commenced the development of a five-acre recycling campus designed to process lithium-ion batteries, however there can be no assurance that we will be able to complete the development of the recycling facility or, if we are able to do so, that we will be able to successfully process lithium-ion batteries on a commercial scale. In this regard, as we developed our LAB recycling facility at TRIC during 2018 and 2019, there can be no assurance that we will not encounter unforeseen complications as we pursue our revised business model.

We will need additional financing to execute our business plan and fund operations, which additional financing may not be available on reasonable terms or at all. As of September 30, 2023, we had total cash of $25.6 million and working capital of $23.1 million. As of the date of this report, we believe that we have sufficient capital to fund our proposed operating plan for, at least, 12 months following the date of this report, including the commencement of the Phase One build-out of our recently acquired five-acre recycling campus at TRIC. However, we believe that we will require additional capital in order to fund our proposed business plan beyond the next 12 months, including the completion of the Phase One build-out of our recycling campus at TRIC and start of our full-scale commercial operations. We intend to raise additional capital through conventional loans, potential government backed debt offerings, government grants or through the sale of our common shares via our current at-the-market offering. However, there can be no assurance that additional capital will be available to us on reasonable terms or at all. Funding that includes the sale of our equity may be dilutive. If financing is not available on satisfactory terms, we will be unable to further pursue our business plans and we will be unable to continue operations.

Unfavorable geopolitical and macroeconomic developments could adversely affect our business, financial condition or results of operations. Our business could be adversely affected by conditions in the U.S. and global economies, the United States and global financial markets and adverse geopolitical and macroeconomic developments, including rising inflation rates, the ongoing COVID-19 pandemic, the Ukrainian/Russian and Israeli/Palestinian conflicts and related sanctions, bank failures, and economic uncertainties related to these conditions. In December 2019, a novel strain of coronavirus was reported to have surfaced in Wuhan, China. In January 2020, this coronavirus spread to other countries, including the United States, and efforts to contain the spread of this coronavirus intensified. The outbreak and any preventative or protective actions that we or our partners and suppliers may take in respect of this coronavirus may result in a period of disruption to work in progress. Our partners' and suppliers' businesses could be disrupted, and our ongoing operations and license negotiations could be negatively affected.

Additionally, inflation rates, particularly in the United States, have increased recently to levels not seen in years, and increased inflation may result in increases in our operating costs (including our labor costs), reduced liquidity and limits on our ability to access credit or otherwise raise capital on acceptable terms, if at all. In response to rising inflation, the U.S. Federal Reserve has raised, and may again raise, interest rates, which, coupled with reduced government spending and volatility in financial markets, may have the effect of further increasing economic uncertainty and heightening these risks. The failures of Silvergate Bank, Silicon Valley Bank and Signature Bank in March 2023 and First Republic Bank in May 2023, and fears of other bank failures, may exacerbate these risks. A weak or declining economy could also strain our suppliers and manufacturers, possibly resulting in supply disruption.

Further, financial markets around the world experienced volatility following the invasion of Ukraine by Russia in February 2022 and the eruption of the Israeli/Palestinian conflict in October 2023, including as a result of economic sanctions and export controls against Russia and countermeasures taken by Russia. The full economic and social impact of these sanctions and countermeasures, in addition to the ongoing military conflicts in Ukraine and Gaza, which could conceivably expand, remains uncertain; however, both the conflicts and related sanctions have resulted and could continue to result in disruptions to trade, commerce, pricing stability, credit availability, and/or supply chain continuity, in both Europe and globally, and has introduced significant uncertainty into global markets. While we do not currently operate in Russia, Ukraine or the Middle East, as the adverse effects of these conflicts continue to develop our business and results of operations may be adversely affected.

Any of the foregoing could harm our business. Any resulting financial impact cannot be reasonably estimated at this time but may materially affect our business and financial condition. The extent to which the foregoing impacts our results will depend on future developments, which are highly uncertain and cannot be predicted.

Our business model is new and has not been proven by us or anyone else. We are engaged in the business of producing recycled metals from batteries through a novel, and proven on a modest scale, technology. While the production of recycled batteries is an established business, to date virtually all recycled lead and high value metals have been produced by way of traditional smelting processes. To our knowledge, no one has successfully produced recycled lead or lithium-ion batteries in commercial quantities other than by way of smelting. In addition, neither we nor anyone else has ever successfully built a production line that commercially recycles batteries without smelting. Further, there can be no assurance that either we will be able to produce AquaRefined metals from batteries in commercial quantities at a cost of production that will provide us with an adequate profit margin. The uniqueness of our AquaRefining process presents potential risks associated with the development of a business model that is untried and unproven.

Even if our licensees are successful in recycling lead or lithium-ion batteries using our processes, there can be no assurance that the AquaRefined lead or other recycled metals will meet the certification and purity requirements of the potential customers. A key component of our business plan is the production of recycled metals through our AquaRefining process. Our customers will require that our AquaRefined metals meet certain minimum purity standards and, in all likelihood, require independent assays to confirm the metal's purity. As of the date of this report, we have produced limited quantities of AquaRefined lead. We have not produced AquaRefined metals in significant commercial quantities and there can be no assurance that we will be able to do so or, that such metals will meet the required purity standards of our customers. Further, while we have recently commenced the application of our AquaRefining process towards the recovery of high value metals found in lithium-ion batteries, such as cobalt, nickel, lithium hydroxide, lithium carbonate, copper, and manganese dioxide, we have only recently begun to conduct research and development in the recycling of lithium-ion batteries, and there can be no assurance that our efforts will be successful or that we will be able to conduct the recycling and recovery of the high value metals from lithium-ion batteries on a commercial scale.

While we have been successful in producing AquaRefined lead in small volumes, there can be no assurance that either we or our licensees will be able to replicate the process, along with all of the expected economic advantages, on a large commercial scale either for us or our prospective licensees. Our initial commercial operations involved the production of lead compounds and plastics from recycled LABs, and the sale of lead bullion and AquaRefined lead. While we believe that our development, testing and limited production to date has validated the concept of our AquaRefining process, the limited nature of our operations to date are not sufficient to confirm the economic returns on our production of recycled metals. Further, we have only recently commenced commercial operations in the area of recycling of lithium-ion batteries. There can be no assurance that either us or our licensees will be able to produce AquaRefined metals from batteries in commercial quantities at a cost of production that will provide us and our proposed licensees with an adequate profit margin.

Our business may be negatively affected by labor issues and higher labor costs. Our ability to maintain our workforce depends on our ability to attract and retain new and existing employees. As of the date of this report, none of our employees are covered by collective bargaining agreements and we consider our labor relations to be acceptable. However, we could experience workforce dissatisfaction which could trigger bargaining issues, employment discrimination liability issues as well as wage and benefit consequences, especially during critical operation periods. We could also experience a work stoppage or other disputes which could disrupt our operations and could harm our operating results. In addition, legislation or changes in regulations could result in labor shortages and higher labor costs. There can be no assurance that we may not experience labor issues that negatively impact our operations or results of operations.

Our intellectual property rights may not be adequate to protect our business. As of the date of this report, we have 3 issued US patents, 30 international patents, and 3 international allowances related to our AquaRefining process.

We also have further patent applications pending in the United States and numerous corresponding patent applications pending in 17 additional jurisdictions relating to certain elements of the technology underlying our AquaRefining process and related apparatus and chemical formulations. However, no assurances can be given that any patent issued, or any patents issued on our current and any future patent applications, will be sufficiently broad to adequately protect our technology. In addition, we cannot assure you that any patents issued now or in the future will not be challenged, invalidated, or circumvented.

Even patents issued to us may not stop a competitor from illegally using our patented processes and materials. In such event, we would incur substantial costs and expenses, including lost time of management in addressing and litigating, if necessary, such matters. Additionally, we rely upon a combination of trade secret laws and nondisclosure agreements with third parties and employees having access to confidential information or receiving unpatented proprietary know-how, trade secrets and technology to protect our proprietary rights and technology. These laws and agreements provide only limited protection. We can give no assurance that these measures will adequately protect us from misappropriation of proprietary information.

Our processes may infringe on the intellectual property rights of others, which could lead to costly disputes or disruptions. The applied science industry is characterized by frequent allegations of intellectual property infringement. Though we do not expect to be subject to any of these allegations, any allegation of infringement could be time consuming and expensive to defend or resolve, result in substantial diversion of management resources, cause suspension of operations or force us to enter into royalty, license, or other agreements rather than dispute the merits of such allegation. If patent holders or other holders of intellectual property initiate legal proceedings, we may be forced into protracted and costly litigation. We may not be successful in defending such litigation and may not be able to procure any required royalty or license agreements on acceptable terms or at all.

Global economic conditions could negatively affect our prospects for growth and operating results. Our prospects for growth and operating results will be directly affected by the general global economic conditions of the industries in which our suppliers, partners and customer groups operate. We believe that the market price of battery metal is relatively volatile and reacts to general global economic conditions. Our business will be highly dependent on the economic and market conditions in each of the geographic areas in which we operate. These conditions affect our business by reducing the demand for batteries and decreasing the price of metals in times of economic downturn and increasing the price of used batteries in times of increasing demand of batteries and recycled metals. There can be no assurance that global economic conditions will not negatively impact our liquidity, growth prospects and results of operations.

We are subject to the risks of conducting business outside the United States. A part of our strategy involves our pursuit of growth opportunities in certain international market locations. We intend to pursue licensing or joint venture arrangements with local partners who will be primarily responsible for the day-to-day operations. Any expansion outside of the U.S. will require significant management attention and financial resources to successfully develop and operate any such facilities, including the sales, supply and support channels, and we cannot assure you that we will be successful or that our expenditures in this effort will not exceed the amount of any resulting revenues. Our international operations expose us to risks and challenges that we would otherwise not face if we conducted our business only in the United States, such as:

- increased cost of enforcing our intellectual property rights;
- diminished ability to protect our intellectual property rights;
- heightened price sensitivities from customers in emerging markets;
- our ability to establish or contract for local manufacturing, support and service functions;
- localization of battries and components, including translation into foreign languages and the associated expenses;
- compliance with multiple, conflicting and changing governmental laws and regulations;
- compliance with the Federal Corrupt Practices Act and other anti-corruption laws;
- foreign currency fluctuations;
- laws favoring local competitors;
- weaker legal protections of contract terms, enforcement on collection of receivables and intellectual property rights and mechanisms for enforcing those rights;
- market disruptions created by public health crises in regions outside the United States;
- difficulties in staffing and managing foreign operations, including challenges presented by relationships with workers' councils and labor unions;
- issues related to differences in cultures and practices; and
- changing regional economic, political and regulatory conditions.

U.S. government regulation and environmental, health and safety concerns may adversely affect our business. Our operations and the operations of our licensees in the United States will be subject to the federal, state and local environmental, health and safety laws applicable to the reclamation of lead acid batteries including the Occupational Safety and Health Act ("OSHA") of 1970 and comparable state statutes. Our facilities and the facilities of our licensees will have to obtain environmental permits or approvals to expand, including those associated with air emissions, water discharges, and waste management and storage. We and our licensees may face opposition from local residents or public interest groups to the installation and operation of our respective facilities. In addition to permitting requirements, our operations and the operations of our licensees are subject to environmental health, safety and transportation laws and regulations that govern the management of and exposure to hazardous materials such as the lead and acids involved in battery reclamation. These include hazard communication and other occupational safety requirements for employees, which may mandate industrial hygiene monitoring of employees for potential exposure to lead.

We and our licensees are also subject to inspection from time to time by various federal, state and local environmental, health and safety regulatory agencies and, as a result of these inspections, we and our licensees may be cited for certain items of non-compliance. For example, in August 2018, the Nevada Occupational Safety and Health Administration, or Nevada OSHA, delivered to us a citation and notification of penalty. The citation listed a number of items related to our compliance with Nevada OSHA's Lead Standard. We reached a settlement agreement with Nevada OSHA on the amount of penalties associated with the citation. We also agreed to engage a lead compliance expert to audit our facility at TRIC for compliance with all provision of the Lead Standard and to generate a written report with findings of any noncompliance, recommended corrective actions, and a time frame to correct the findings of noncompliance. We agreed with Nevada OSHA to correct all findings of noncompliance within the time frame proposed by the lead compliance expert in their report. The lead compliance expert has been engaged, has visited the facility at TRIC and has completed the written report. We have corrected all findings of noncompliance in a timely manner.

Failure to comply with the requirements of federal, state and local environmental, health and safety laws could subject our business and the businesses of our licensees to significant penalties (civil or criminal) and other sanctions that could adversely affect our business. In addition, in the event we are unable to operate and expand our AquaRefining process and operations as safe and environmentally responsible, we and our licensees may face opposition from local governments, residents or public interest groups to the installation and operation of our facilities.

The development of new AquaRefining technology by us or our partners or licensees, and the dissemination of our AquaRefining process will depend on our ability to acquire necessary permits and approvals, of which there can be no assurance. As noted above, our AquaRefining processes will have to obtain environmental permits or approvals to operate, including those associated with air emissions, water discharges, and waste management and storage. In addition, we expect that any use of AquaRefining operations at our partner's facilities will require additional permitting and approvals. Failure to secure (or significant delays in securing) the necessary permits and approvals could prevent us and our partners and licensees from pursuing additional AquaRefining expansion, and otherwise adversely affect our business, financial results and growth prospects. Further, the loss of any necessary permit or approval could result in the closure of an AquaRefining facility and the loss of our investment associated with such facility.

Our business involves the handling of hazardous materials and we may become subject to significant fines and other liabilities in the event we mishandle those materials. The nature of our operations involves risks, including the potential for exposure to hazardous materials, that could result in personal injury and property damage claims from third parties, including employees and neighbors, which claims could result in significant costs or other environmental liability. Our operations also pose a risk of releases of hazardous substances, such as lead or acids, into the environment, which can result in liabilities for the removal or remediation of such hazardous substances from the properties at which they have been released, liabilities which can be imposed regardless of fault, and our business could be held liable for the entire cost of cleanup even if we were only partially responsible. We are also subject to the possibility that we may receive notices of potential liability in connection with materials that were sent to third-party recycling, treatment, and/or disposal facilities under the Federal Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, or CERCLA, and comparable state statutes, which impose liability for investigation and remediation of contamination without regard to fault or the legality of the conduct that contributed to the contamination, and for damages to natural resources. Liability under CERCLA is retroactive, and, under certain circumstances, liability for the entire cost of a cleanup can be imposed on any responsible party. Any such liability could result in judgments or settlements that restrict our operations in a manner that materially adversely effects our operations and could result in fines, penalties or awards that could materially impair our financial condition and even threaten our continued operation as a going concern.

We will be subject to foreign government regulation and environmental, health and safety concerns that may adversely affect our business. As our business expands outside of the United States, our operations will be subject to the environmental, health and safety laws of the countries where we do business, including permitting and compliance requirements that address the similar risks as do the laws in the United States, as well as international legal requirements such as those applicable to the transportation of hazardous materials. Depending on the country or region, these laws could be as stringent as those in the U.S., or they could be less stringent or not as strictly enforced. In some countries in which we are interested in expanding our business, such as Mexico and China, the relevant environmental regulatory and enforcement frameworks are in flux and subject to change. Compliance with these requirements will cause our business to incur costs, and failure to comply with these requirements could adversely affect our business.

In the event we are unable to present and operate our AquaRefining process and operations as safe and environmentally responsible, we may face opposition from local governments, residents or public interest groups to the installation and operation of our facilities.

Risks Related to Owning Our Common Stock

The market price of our shares may be subject to fluctuation and volatility. You could lose all or part of your investment. The market price of our common stock is subject to wide fluctuations in response to various factors, some of which are beyond our control. Since January 1, 2023, the reported high and low sales prices of our common stock have ranged from $0.76 to $1.69 through November 3, 2023. The market price of our shares on the NASDAQ Capital Market may fluctuate as a result of a number of factors, some of which are beyond our control, including, but not limited to:

- actual or anticipated variations in our and our competitors' results of operations and financial condition;
- changes in earnings estimates or recommendations by securities analysts, if our shares are covered by analysts;
- development of technological innovations or new competitive products by others;
- regulatory developments and the decisions of regulatory authorities as to the approval or rejection of new or modified products;
- our sale or proposed sale, or the sale by our significant stockholders, of our shares or other securities in the future;
- changes in key personnel;
- success or failure of our research and development projects or those of our competitors;
- the trading volume of our shares; and
- general economic and market conditions and other factors, including factors unrelated to our operating performance.

These factors and any corresponding price fluctuations may materially and adversely affect the market price of our shares and result in substantial losses being incurred by our investors. In the past, following periods of market volatility, public company stockholders have often instituted securities class action litigation. If we were involved in securities litigation, it could impose a substantial cost upon us and divert the resources and attention of our management from our business.

If securities or industry analysts do not continue to publish research or publish inaccurate or unfavorable research about our business, our stock price and trading volume could decline. The trading market for our common stock depends in part on the research and reports that securities or industry analysts publish about us or our business. If industry analysts cease coverage of us, the trading price for our common stock would be negatively affected. If one or more of the analysts who cover us downgrade our common stock or publish inaccurate or unfavorable research about our business, our common stock price would likely decline. If one or more of these analysts cease coverage of us or fail to publish reports on us regularly, demand for our common stock could decrease, which might cause our common stock price and trading volume to decline. In addition, independent industry analysts may provide reviews of our AquaRefining technology, as well as competitive technologies, and perception of our offerings in the marketplace may be significantly influenced by these reviews. We have no control over what these industry analysts report, and because industry analysts may influence current and potential customers, our brand could be harmed if they do not provide a positive review of our products and platform capabilities or view us as a market leader.

We may be at an increased risk of securities class action litigation. Historically, securities class action litigation has often been brought against a company following a decline in the market price of its securities. This risk is especially relevant for us because early-stage companies have experienced significant stock price volatility in recent years. If we were to be sued, it could result in substantial costs and a diversion of management's attention and resources, which could harm our business. In 2017, a securities class action lawsuit and shareholder derivative lawsuit were filed against us. In 2021, we were able to settle both actions through our issuance of $500,000 of our common shares and our adoption of limited corporate governance reforms, however we incurred significant legal costs in defending both actions and our management was required to devote significant time in managing the defense of the actions.

We maintain director and officer insurance that we regard as reasonably adequate to protect us from potential claims. We are responsible for meeting certain deductibles under the policies and, in any event, we cannot assure you that the insurance coverage will adequately protect us from claims made. Further, the costs of insurance may increase and the availability of coverage may decrease. As a result, we may not be able to maintain our current levels of insurance at a reasonable cost, or at all, which might make it more difficult to attract qualified candidates to serve as executive officers or directors.

Future sales of substantial amounts of our common stock, or the possibility that such sales could occur, could adversely affect the market price of our common stock. We cannot predict the effect, if any, that future issuances or sales of our securities or the availability of our securities for future issuance or sale, will have on the market price of our common stock. Issuances or sales of substantial amounts of our securities, or the perception that such issuances or sales might occur, could negatively impact the market price of our common stock and the terms upon which we may obtain additional equity financing in the future.

We have not paid dividends in the past and have no plans to pay dividends. We plan to reinvest all of our earnings, to the extent we have earnings, in order to pursue our business plan and cover operating costs and to otherwise become and remain competitive. We do not plan to pay any cash dividends with respect to our securities in the foreseeable future. We cannot assure you that we would, at any time, generate sufficient surplus cash that would be available for distribution to the holders of our common stock as a dividend. Therefore, you should not expect to receive cash dividends on our common stock.

Our charter documents and Delaware law may inhibit a takeover that stockholders consider favorable. Provisions of our certificate of incorporation and bylaws and applicable provisions of Delaware law may delay or discourage transactions involving an actual or potential change in control or change in our management, including transactions in which stockholders might otherwise receive a premium for their shares, or transactions that our stockholders might otherwise deem to be in their best interests. The provisions in our certificate of incorporation and bylaws:

- limit who may call stockholder meetings;
- do not provide for cumulative voting rights;
- establish an advance notice procedure for stockholders' proposals to be brought before an annual meeting, including proposed nominations of persons for election to our board of directors, and
- provide that all vacancies may be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum.

In addition, Section 203 of the Delaware General Corporation Law may limit our ability to engage in any business combination with a person who beneficially owns 15% or more of our outstanding voting stock unless certain conditions are satisfied. This restriction lasts for a period of three years following the share acquisition. These provisions may have the effect of entrenching our management team and may deprive you of the opportunity to sell your shares to potential acquirers at a premium over prevailing prices. This potential inability to obtain a control premium could reduce the price of our common stock.

Our bylaws designate the Court of Chancery of the State of Delaware as the sole and exclusive forum for certain litigation that may be initiated by our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with the Company. Our bylaws provide that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders, (iii) any action asserting a claim against us or any our directors, officers or other employees arising pursuant to any provision of the Delaware General Corporation Law or our certificate of incorporation or bylaws, or (iv) any action asserting a claim against us or any our directors, officers or other employees governed by the internal affairs doctrine. This forum selection provision in our bylaws may limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or any of our directors, officers or other employees.

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Item 6. Exhibits

Exhibit No.	Description	Method of Filing
3.1	First Amended and Restated Certificate of Incorporation of the Registrant	Incorporated by reference from the Registrant’s Registration Statement on Form S-1 filed on June 9, 2015.
3.2	Third Amended and Restated Bylaws of the Registrant	Incorporated by reference from the Registrant’s Current Report on Form 8-K filed on January 21, 2022.
3.3	Certificate of Amendment to First Amended and Restated Certificate of Incorporation of the Registrant	Incorporated by reference from the Registrant’s Registration Statement on Form S-1 filed on June 25, 2015.
3.4	Certificate of Amendment to the First Amended and Restated Certificate of Incorporation	Incorporated by reference from the Registrant’s Quarterly Report on Form 10-Q filed on May 9, 2019
3.5	Certificate of Amendment to the First Amended and Restated Certificate of Incorporation	Incorporated by reference from the Registrant’s Quarterly Report on Form 10-Q filed on July 21, 2022
31.1	Certifications Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	Filed electronically herewith
31.2	Certifications Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	Filed electronically herewith
32.1	Certification of Principal Executive Officer and Principal Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (18 U.S.C. Section 1350).	Filed electronically herewith
101.INS	Inline XBRL Instance Document	Filed electronically herewith
101.SCH	Inline XBRL Taxonomy Extension Schema Document	Filed electronically herewith
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document	Filed electronically herewith
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document	Filed electronically herewith
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document	Filed electronically herewith
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document	Filed electronically herewith
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101).	

SIGNATURES

In accordance with the requirements of the Exchange Act, the registrant caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

AQUA METALS, INC.

Date:	November 8, 2023	By:	/s/ *Stephen Cotton* Stephen Cotton, President, Chief Executive Officer and Director (Principal Executive Officer)
Date:	November 8, 2023	By:	/s/ Judd Merrill Judd Merrill, Chief Financial Officer (Principal Financial Officer)

EXHIBIT 31.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER

Section 302 Certification

I, Stephen Cotton, certify that:

1) I have reviewed this quarterly report on Form 10-Q of Aqua Metals, Inc.;

2) Based on my knowledge, this quarterly report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3) Based on my knowledge, the financial statements and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4) The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures as of the end of the period covered by this report based on such evaluation; and

d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's fiscal quarter presented in this report that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5) The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial data information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 8, 2023

By: /s/ *Stephen Cotton*
Stephen Cotton, President and CEO
(Principal Executive Officer)

EXHIBIT 31.2

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER

Section 302 Certification

I, Judd Merrill, certify that:

1) I have reviewed this quarterly report on Form 10-Q of Aqua Metals, Inc.;

2) Based on my knowledge, this quarterly report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3) Based on my knowledge, the financial statements and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4) The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles

c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures as of the end of the period covered by this report based on such evaluation; and

d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's fiscal quarter presented in this report that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5) The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial data information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 8, 2023

By: /s/ Judd Merrill
Judd Merrill, CFO (Principal Financial Officer)

EXHIBIT 32.1

CERTIFICATION PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of Aqua Metals, Inc. (the "Company") on Form 10-Q for the quarterly period ended September 30, 2023, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), we, Stephen Cotton, President and CEO, and Judd Merrill, CFO, of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

By:	/s/ *Stephen Cotton*	Dated:	November 8, 2023
	Stephen Cotton		
Title:	President and CEO (Principal Executive Officer)		
By:	/s/ Judd Merrill	Dated:	November 8, 2023
	Judd Merrill		
Title:	CFO (Principal Financial Officer)		

This certification is made solely for the purposes of 18 U.S.C. Section 1350, subject to the knowledge standard contained therein, and not for any other purpose.