



2024 Annual Report



Dear Shareholders,

As we reflect on 2024, I do so with tremendous pride and appreciation. This past year was a pivotal one for Arq. It was a year in which we not only delivered on our operational and financial goals, but also laid the groundwork for what we believe will be transformational long-term growth.

Our journey over the past twelve months has been one of discipline, execution and progress. We have reshaped Arq into a business with a strong foundation, a clear strategy and a compelling path forward. Our mission to become the safest, lowest cost, most profitable company in the industry remains rooted in creating shareholder value through innovation and leveraging our unique capabilities to solve urgent industrial and environmental challenges.

2024: A Year of Transformation

The results speak for themselves. For the full year 2024, we delivered a 10% increase in revenue to nearly \$109 million and expanded gross margins by over 400 basis points to over 36%. These enhancements were driven by improvements in pricing, product mix, and operational efficiencies. We also achieved over \$7 million in Adjusted EBITDA¹, a positive swing of almost \$10 million from the previous year. Together, these results represent a significant milestone. They also reflect the ongoing sustainability of our foundational Powdered Activated Carbon (PAC) business turnaround.

Our PAC business is now a stable, profitable operation – one that is cash flow generative and fully self-sustaining. Importantly, it has been fundamentally repositioned. When I joined Arq in 2023, nearly one quarter of our PAC volume generated losses. Today, every contract is profitable. We achieved this through disciplined execution, the elimination of loss-making contracts, and ongoing commercial and operational improvements.

Through the end of 2024, we completed contract renegotiations representing nearly 25% of our PAC portfolio, improved manufacturing throughput, and expanded our reach into end-markets like water, cement, and other industrial segments, while reducing our reliance on the power generation sector. Our mantra has been "every penny counts," and the results show what focused execution can deliver. Behind these numbers is a team effort – tight coordination between operations, commercial, and finance to ensure every decision aligns with long-term value creation.

We also delivered meaningful SG&A reductions, down in excess of 15% year over year, through cost control, improved systems, and enhanced accountability. This wasn't just about cutting costs – it was about enhancing operating leverage and building a more agile, resilient company. We operate with greater visibility and discipline than ever before, and we continue to identify areas for further efficiency gains.

While pleased with the turnaround in our foundational PAC business, we are not resting. I feel there is still room to further optimize the PAC business. As such, we continue to work hard to further improve our performance and more importantly, results.

1 - Adjusted EBITDA is a non-GAAP financial measure. Please refer to the paragraph titled "Note on Non-GAAP Financial Measures" for the definitions of non-GAAP financial measures and reconciliations to GAAP measures included in annual report.



Executing on Our Growth Strategy

2024 was the year we advanced our Granular Activated Carbon (GAC) strategy from concept to near-commercialization. At Red River in January of 2025, we completed construction and entered commissioning of our new GAC facility. While commissioning has taken longer than expected and is now projected to be completed prior to the end of the second quarter, we have produced small quantities of on-spec product and commissioning continues towards full commercialization. We still expect to reach full 25 million-pound nameplate capacity in the second half of 2025 and are already exploring opportunities to expand that capacity.

While we experienced construction-related challenges, including an overage in capital costs, we took ownership and responded decisively. By transitioning development activity in-house, we improved oversight, enhanced project controls, and are now better positioned to execute future phases more efficiently. These lessons are already informing our Phase II planning, where we believe we can deliver significantly enhanced capital efficiencies.

We have secured contracts for approximately 16 million pounds of Red River's capacity and remain confident in fully contracting the balance. Importantly, we are being selective – preserving some capacity to target more diversified, higher-margin industrial and renewable energy applications, including renewable natural gas (RNG) purification. Testing in these areas has been promising and we see real potential to build competitive differentiation. Feedback from prospective customers suggests our unique feedstock derived GAC product offers performance and reliability advantages. It is our goal to capitalize on that. It is worth noting that many of the customers with whom we already have existing contracts, or with whom we are in contract discussions have significantly greater future volume requirements. This provides confidence with regards to contracting demand for Phase II and beyond.

In parallel, we've been strengthening our commercial capabilities and market analytics to ensure we're matching production with high-value demand. The GAC market remains dynamic, and our ability to remain nimble while scaling gives us a distinct advantage over less integrated or slower-moving peers.





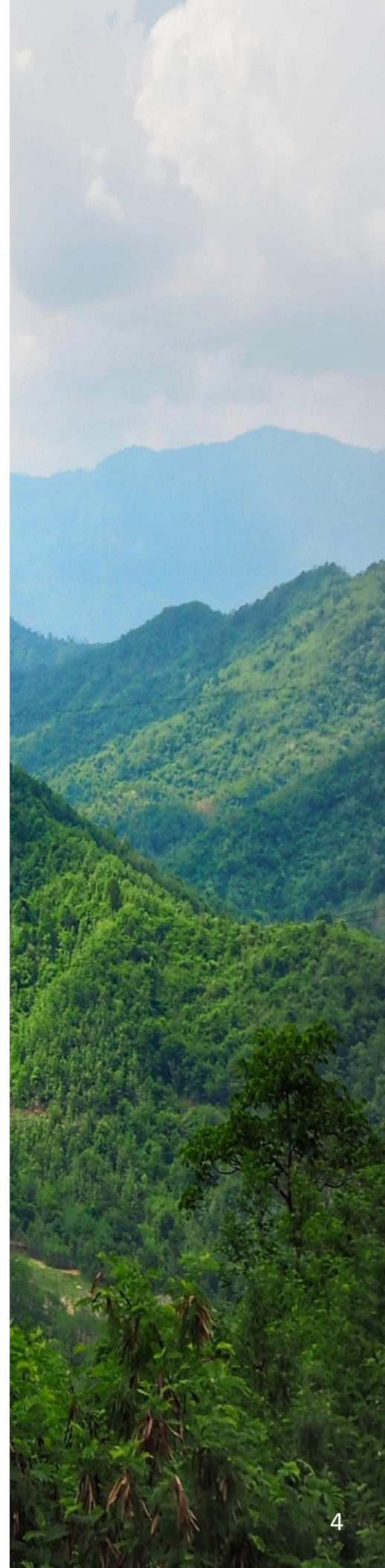
Positioned for Long-Term Success

Arq's transformation into an environmental technology company continues. Our ability to convert coal waste into high-performance, low-cost carbon products provides a unique and sustainable advantage. Our fully integrated, U.S.-based supply chain further strengthens our position in a market facing growing demand and limited domestic capacity. We're not just selling a product – we're delivering performance, reliability, and environmental responsibility.

PFAS regulation remains a major tailwind, with municipalities and industrial users moving aggressively to secure supply. We believe this is not just a trend, but a long-term demand dynamic. We are also seeing attractive growth opportunities emerge in non-water end-markets. The combination of regulatory drivers and broad market interest continues to validate the strategic rationale behind our GAC expansion. We are seeing first-hand how customers are prioritizing early access to secure product availability ahead of expected shortages.

On the capital front, 2024 was a milestone year. We raised approximately \$42 million in net equity proceeds and completed a successful refinancing, replacing our legacy \$10 million term loan with a lower-cost, more flexible \$30 million revolving facility. This materially lowered our cost of capital, enhanced liquidity, and added financial flexibility as we pursue future growth. We ended the year with \$22.2 million in total cash.

Importantly, we believe we have set a foundation that will allow us to fund future growth, including potential expansions, through a combination of cash flow, available credit, and strategic financing. Our improved capital structure gives us optionality, and our investor base has grown significantly more institutional in nature.





Looking Ahead to 2025

As we enter 2025, the following are among our key priorities and action items:

- Complete commissioning of the GAC line at Red River
- Ramp Red River to full nameplate GAC capacity with high quality, repeatable output
- Complete contracting for GAC volumes while targeting margin-accretive applications
- Continue optimizing PAC operations
- Target cost improvements at Corbin
- Lay groundwork for Red River Phase 2 expansion, including site prep and financing
- Advance product diversification efforts, including RNG purification and asphalt
- Maintain cost discipline and expand investor engagement and research coverage

We also plan to introduce formal financial guidance later this year once we have clearer visibility on GAC metrics. We believe this will help further align expectations and demonstrate the strength of our evolving business model. We've heard from our investors that transparency and clarity matter, and we're committed to delivering both.

Aligned with this desire to enhance our evolving business model, I am delighted to have welcomed Jay Voncannon to our team as Chief Financial Officer earlier this month. Jay brings over 35 years of financial leadership experience, most recently as CFO at CoorsTek, where he successfully guided the company through significant expansion and profitability improvements. Prior to that, he spent more than two decades as a senior finance executive at Koch Industries. Jay will oversee all aspects of our financial strategy and operations and I am confident that his extensive experience and strategic insight will be instrumental as we continue to transform and scale our business.

Looking beyond 2025, we see the potential for multiple growth vectors. Phase II of Red River is just the beginning. We remain extremely excited about the potential commercial applications for our asphalt product. We believe our platform can support multiple GAC modules, new product lines, and broader industrial applications, all grounded in the same value proposition of sustainable, high-performance carbon solutions.



To Our Partners, Employees, and Shareholders

- **To our customers and partners:** thank you for your continued collaboration. Your support is instrumental as we bring new products and capabilities to market.
- **To our employees:** your ownership, accountability, and commitment have powered this turnaround. The cultural change underway at Arq is one of our greatest assets. We are faster, sharper, and more aligned than ever.
- **And to our shareholders:** thank you for your belief in our mission. We are aligned, and we are building something important. Many of you joined us when our path was still uncertain. Today, that path is clearer. And while challenges remain, our foundation is strong, our strategy is working, and our commitment to long-term value creation is unwavering.

We head into 2025 with momentum, confidence, and clarity. The fundamentals are strong. The opportunity is significant. And our team is ready.

Warm regards,

A handwritten signature in black ink that reads "Robert Rasmus".

Bob Rasmus

President, Chief Executive Officer & Director, Arq





Note on Non-GAAP Financial Measures

To supplement our financial information presented in accordance with U.S. Generally Accepted Accounting Principles ("U.S. GAAP"), we provide certain supplemental financial measures, including EBITDA and Adjusted EBITDA, which are measurements that are not calculated in accordance with U.S. GAAP. EBITDA is defined as earnings before interest, taxes, depreciation and amortization, and Adjusted EBITDA is defined as EBITDA reduced by the non-cash impact of equity earnings from equity method investments and other non-cash gains, increased by cash distributions from equity method investments, other non-cash losses and non-recurring costs and fees. EBITDA and Adjusted EBITDA should be considered in addition to, and not as a substitute for, net income (loss) in accordance with U.S. GAAP as a measure of performance. See below for a reconciliation from net income (loss), the nearest U.S. GAAP financial measure, to EBITDA and Adjusted EBITDA.

We believe that the EBITDA and Adjusted EBITDA measures are less susceptible to variances that affect our operating performance. We include these non-GAAP measures because management uses them in the evaluation of our operating performance, and believe they help to facilitate comparison of operating results between periods. We believe the non-GAAP measures provide useful information to both management and users of the financial statements by excluding certain expenses, gains, and losses which can vary widely across different industries or among companies within the same industry and may not be indicative of core operating results and business outlook.

EBITDA and Adjusted EBITDA:

The following table reconciles net income (loss), our most directly comparable as-reported financial measure calculated in accordance with U.S. GAAP, to EBITDA and Adjusted EBITDA (Adjusted EBITDA loss).

Arq, Inc. and Subsidiaries

Reconciliation of Net income (loss) to EBITDA and Adjusted EBITDA (Adjusted EBITDA loss) (Unaudited)

(in thousands)	Years Ended December 31,	
	2024	2023
Net income (loss)	\$ (5,109)	\$ (12,249)
Depreciation, amortization, depletion and accretion	8,594	10,543
Amortization of Upfront Customer Consideration	508	508
Interest expense, net	2,154	1,168
Income tax (benefit) expense	(164)	153
EBITDA	5,983	123
Cash distributions from equity method investees	127	1,623
Equity earnings	(127)	(1,623)
Loss on extinguishment of debt	1,422	—
(Gain) loss on sale of assets	64	(2,695)
Gain on change in estimate, asset retirement obligation	—	(37)
Financing costs	275	—
Adjusted EBITDA (Adjusted EBITDA loss)	\$ 7,744	\$ (2,609)



Forward-Looking Statements

This Annual Report contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, that involve risks and uncertainties. In particular, statements about our beliefs, plans, objectives, expectations, assumptions, future events or future performance contained in this Annual Report are forward-looking statements. In some cases, forward-looking statements can be identified by words or phrases such as "anticipates," "believes," "expects," "intends," "plans," "estimates," "may," "predicts," the negative expressions of such words, or similar expressions, and such forward-looking statements include, but are not limited to, statements or expectations regarding the ongoing sustainability of our foundational PAC business, commissioning and future production volumes at our Red River GAC facility, anticipated future capital efficiencies, our ability to contract remaining GAC capacity, future volume requirements of our existing and future customers, anticipated increases in demand and reduction of supply for GAC products, our ability to fund future growth, our goals and priorities for 2025, our plans to begin providing formal financial guidance in the future, potential future growth vectors, and the ability of our platform to support multiple GAC modules, new product lines, and broader industrial applications.

The forward-looking statements included in this Annual Report involve risks and uncertainties. Actual events or results could differ materially from those discussed in the forward-looking statements as a result of various factors including, but not limited to, the timing and scope of new and pending regulations and any legal challenges to or extensions of compliance dates of them; the U.S. government's failure to promulgate new regulations or enforce existing regulations that benefit our business; changes in laws and regulations, accounting rules, prices, economic conditions and market demand; availability, cost of and demand for alternative energy sources and other technologies and their impact on coal-fired power generation in the U.S.; technical, start up and operational difficulties; competition within the industries in which the Company operates; risks associated with our debt financing; our inability to effectively and efficiently commercialize new products, including our GAC products; our inability to effectively manage commissioning and startup of the Red River GAC facility; disruptions at any of our facilities, including by natural disasters or extreme weather; risks related to our information technology systems, including the risk of cyberattacks on our networks; failure to protect our intellectual property from infringement or claims that we have infringed on the intellectual property of others; our inability to obtain future financing or financing on terms that are favorable to us; our inability to ramp up our operations to effectively address recent and expected growth in our business; loss of key personnel; ongoing effects of inflation and macroeconomic uncertainty, including from the new U.S. presidential administration, increased domestic and international tariffs, lingering effects of the pandemic and armed conflicts around the world, and such uncertainty's effect on market demand and input costs; availability of materials and equipment for our business; intellectual property infringement claims from third parties; pending litigation; factors relating to our business strategy and goals; our ability to maintain relationships with customers, suppliers and others with whom we do business and meet supply requirements; our results of operations and business generally; risks related to diverting management's attention from our ongoing business operations; costs related to the ongoing manufacturing of our products, including our GAC products; opportunities for additional sales of our activated carbon products and end-market diversification; the rate of coal-fired power generation in the U.S.; the timing and cost of any future capital expenditures and the resultant impact to our liquidity and cash flows; and the other risk factors described in our filings with the SEC, including those described in Item 1A. Risk Factors of our Annual Report on Form 10-K for the year ended December 31, 2024. You are cautioned not to place undue reliance on the forward-looking statements made in this Annual Report and to consult filings we have made and will make with the SEC for additional discussion concerning risks and uncertainties that may apply to our business and the ownership of our securities. The forward-looking statements contained in this Annual Report are presented as of the date hereof, and we disclaim any duty to update such statements unless required by law.

United States
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the fiscal year ended December 31, 2024

or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
Commission File Number: 001-37822

ARQ, INC.

(Name of registrant as specified in its charter)

Delaware
(State of incorporation)

27-5472457
(IRS Employer Identification No.)

8051 E. Maplewood Ave, Suite 210, Greenwood Village, CO, 80111
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code: (720) 598-3500

Securities registered under Section 12(b) of the Act:

Class	Trading Symbol	Name of each exchange on which registered
Common stock, par value \$0.001 per share	ARQ	Nasdaq Global Market

Securities registered under Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. ☐ Yes ☒ No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. ☐ Yes ☒ No

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 and posted pursuant to Rule 405 of Regulation S-T 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 or a smaller reporting company. See definition of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☐
Non-accelerated filer ☐

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 has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

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

The aggregate market value of the voting stock held by non-affiliates of the registrant was approximately \$167.4 million based on the last reported bid price of the Common Stock on the Nasdaq Global Market on June 30, 2024. The number of shares outstanding of the registrant's Common Stock, par value \$0.001 per share, as of March 3, 2025 was 42,014,263.

Documents Incorporated By Reference

Portions of Part III of this Form 10-K are incorporated by reference from the Registrant's definitive proxy statement to be filed with the Securities and Exchange Commission no later than 120 days after the end of the Registrant's fiscal year.

ARQ, INC.
ANNUAL REPORT ON FORM 10-K
FOR THE FISCAL YEAR ENDED DECEMBER 31, 2024

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PART I

Item 1. Business

General

Arq, Inc., together with its consolidated subsidiaries ("Arq", the "Company," "we," "us", or "our") is an environmental technology company principally engaged in the sale of consumable air, water, and soil treatment solutions, primarily based on activated carbon ("AC"). Our proprietary AC products enable customers to reduce air, water, and soil contaminants, including mercury, per - and polyfluoroalkyl substances ("PFAS") and other pollutants, to meet the challenges of existing and pending air quality and water regulations. We manufacture and sell AC and other chemicals used to capture and remove impurities, contaminants and pollutants for the coal-fired power generation, industrial, water treatment, and water and soil remediation markets, which we collectively refer to as the advanced purification technologies ("APT") market.

Our primary products are comprised of AC, which is produced from a variety of carbonaceous raw materials. Our AC products include both powdered activated carbon ("PAC") and granular activated carbon ("GAC"), among others. Additionally, we own the Five Forks Mine, a lignite coal mine that currently supplies the primary raw material for the manufacturing of our products.

Our predecessor, ADA-ES, Inc. ("ADA"), a Colorado corporation, was incorporated in 1997. Pursuant to an Agreement and Plan of Merger, effective July 1, 2013, the Company (formerly known as Advanced Emissions Solutions, Inc. ("ADES")), a Delaware company incorporated in 2011, succeeded ADA as the publicly held corporation and ADA became a wholly-owned subsidiary of the Company. In 2018, we acquired ADA Carbon Solutions, LLC to expand our product offerings in the mercury control industry and enter into other applicable APT markets. In February 2023, we acquired 100% of the equity interests, assets and liabilities of the subsidiaries of Arq Limited, an environmental technology company incorporated under the laws of Jersey (the "Arq Acquisition" or the "Transaction," and hereafter the Arq Limited subsidiaries referred to as "Legacy Arq") to secure access to additional U.S. based bituminous coal feedstock, a manufacturing facility located in Corbin, Kentucky (the "Corbin Facility") and certain patented processes to manufacture new advanced GAC products for sale into the APT and other markets. In February 2024, as part of a larger rebranding, the Company changed its name to Arq, Inc., and on February 1, 2024, our common stock commenced trading on the Nasdaq Global Market under the ticker symbol, "ARQ."

This Annual Report on Form 10-K is referred to herein as the "Form 10-K" or the "Report."

Products and Markets

AC is a specialized sorbent material that is used widely in a host of industrial and consumer applications to remove impurities, pollutants and contaminants from gas, water, soil and other product or waste streams. AC is produced by activating carbonaceous raw materials, including wood, coal, nut shells, resins and petroleum pitch. Properties such as surface area, pore volume, surface chemical functionalities and particle size and form can be specifically engineered to selectively target various contaminants to meet end-use application requirements. Our AC products are manufactured in several different forms that are important for the end-use application, including PAC, GAC, and colloidal carbon product ("CCP").

Key markets for AC products include treatment of drinking and waste waters, industrial and renewable gas purification and odor removal, automotive gasoline emission control, soil and ground water remediation, food and beverage process and product purification and removal of pollutants from emissions produced by coal-fired electrical generation and other industrial processes. Demand for AC products has been, and is expected to continue to be driven by environmental regulations pertaining to water, soil, and air quality, especially in the developed and more industrialized areas of the world, and increased consumer attention towards environmental, health and safety issues. Additionally, we believe enhanced environmental and health advisory issues will continue to drive demand for AC in rapidly developing countries. We continuously pursue opportunities to expand and diversify our customer base into markets for our purification products including industrial applications, water treatment plants and other end markets. In addition, we see significant opportunities emerging in the soil, sediment and groundwater treatment markets. Increased attention has been drawn to the monitoring and treatment of heavy metals, organic and inorganic compounds, including PFAS substances, in groundwater to improve overall ground and drinking water quality across North America. AC, in various forms, has and will continue to play a key role in these remediation efforts.

Our current products (also referred to as "consumables") are used to purify contaminated liquid, soil, and gas streams from a variety of industrial sources including wastewater treatment plants, coal-fired power plants and other end markets. Most of the North American coal-fired power generators and other industrial customers installed equipment to control air pollutants, such as

mercury, prior to or since the implementation of the Mercury and Air Toxics Standards ("MATS") by the U.S. Environmental Protection Agency ("EPA"). However, many power generators need consumable products to complement the operation of installed equipment on a recurring basis to more effectively capture mercury and other contaminants. AC has been adopted as the most widely used technology to capture mercury due to product efficiency and effectiveness, and currently accounts for the majority of the mercury control consumables in the North American market. We offer AC and other chemical products and work with customers as they develop and implement a compliance control strategy that utilizes the consumables solutions that fit their unique operating and pollution control configuration.

Coal-fired power plants continue to be a significant, though declining, source of electricity generation in the United States ("U.S."). Demand for our AC products related to coal-fired electricity generation is highly dependent on the availability and cost of alternative energy sources, such as natural gas, solar and wind energy. We continue to pursue markets for our purification products outside of coal-fired power generation, including industrial applications, (such as waste-to-energy and cement making), water treatment and other markets.

For the purification of water, our AC products have been used in the treatment of drinking water, wastewater, contaminated soil and groundwater to adsorb compounds causing unpleasant taste and odor and other toxic contaminants. Both industrial and municipal wastewater treatment plants have deployed the use of our AC products in their treatment processes. Groundwater contamination has become a matter of increasing concern to federal and state governments as well as to the public, especially over recent years. The U.S. AC market may see significant growth from water purification markets, especially as implementation dates for new regulations issued by the EPA in April 2024 are nearing, with full compliance currently required by April 2029. In addition, certain states and certain municipal water treatment systems across the U.S. require pre-approval for the use of GAC products in their public water systems. Approval processes can vary in length from a number of days to multiple months. We have commenced the pre-approval process with a number of relevant state and municipal agencies. Please note, U.S. regulations are subject to continuing change, as further discussed in "Legislation and Environmental Regulations" included in Item 1 of this Report.

The existing technologies for treatment of groundwater, including removal of contaminated soil for external treatment or landfill, pumping groundwater above the surface for treatment and/or installing treatment trenches or barriers often utilize PAC and GAC products. An emerging technology generating increasing interest by site engineering firms and owners is injecting highly engineered ACs into the subsoil, also described as "in situ" treatment, to intercept the contamination plume or to treat the groundwater. In response to this market opportunity, in late 2021, we developed a new CCP platform, FluxSorb RC, which is a treatment option in certain contaminated soil and groundwater remediation treatment sites.

Legacy Arq Products and Markets

With the acquisition of Legacy Arq in February 2023, we now control reserves of high-quality recovered bituminous coal fines and own a manufacturing facility, both located in Corbin Kentucky (the "Corbin Facility"). Our facility remediates these reserves, using a patented manufacturing process to convert the recovered bituminous coal fines into a purified, microfine carbon powder known as Arq powder™ ("Arq Powder") for high value applications, such as for a raw material to produce GAC products. We expect to begin using Arq Powder as a feedstock to produce high-quality GAC products by the end of the first quarter of 2025 for sale into the APT and other markets. We anticipate that our GAC products made using these highly purified recovered bituminous coal fines will have a materially lower carbon footprint than other coal-based competitor alternatives.

We believe Arq Powder has additional potential to enable us to access new markets and applications. We intend to secure customer interest in Arq Powder as an additive into other markets, such as components for asphalt. These products utilizing Arq Powder are expected to have a lower carbon footprint compared to similar products utilizing conventional materials and have demonstrated other beneficial performance attributes during lab-scale customer testing. These applications are currently in various stages of proof of concept testing or preliminary customer testing.

Sales and Customers

We sell consumables primarily through our internal sales group and generally enter into customer contracts ranging from one to five years in duration. We generally recognize revenue as orders are fulfilled. Revenue from our top three customers comprised approximately 36% of our revenue for the year ended December 31, 2024, and the loss of any of these customers would have a material adverse effect on our operating results.

Seasonality

The timing of the sale of our consumable products is dependent upon several factors. Power generation is weather dependent, with electricity and steam production varying in response to heating and cooling demands. As a result, our revenue is generally higher in our first and third fiscal quarters during the warmer and colder months of the year. Abnormally high and low temperatures during the summer and winter months, respectively, may significantly increase coal consumption for electricity generation and cause increased impurities within various municipalities' water sources, and thus increase the demand for our products. Additionally, power generating units routinely schedule maintenance outages in the spring and/or fall depending on the operation of their boilers. During the period in which an outage may occur, which may range from one week to over a month, our product sales may decrease.

Also, our revenue and sales volumes are highly dependent upon the level of coal consumption at coal-fired power plants, which in turn is significantly affected by the prices of competing power generation sources, such as natural gas and renewables. During periods of low natural gas prices, natural gas provides a competitive alternative to coal-fired power generation and therefore, coal consumption for power generation may be reduced, which in turn reduces the demand for our products. In contrast, during periods of higher prices for competing power generation sources, coal consumption generally increases and thus demand for our products also increases.

In water purification, the sale of our products depends on demand from municipal water treatment facilities that use these products. Depending on weather conditions and other environmental factors, the summer months historically have the highest demand for our PAC products in water treatment. One of the major uses for PAC is for the treatment of taste and odor impurities caused by increased degradation of organic contaminants and natural materials in water that occurs predominately during the summer months. Additionally, the rainy season generally results in more demand for PAC products to water municipalities due to rain run-offs and contaminant dilution.

Competition

Our primary competitors in the AC consumables industry include Norit Americas, Inc., which is owned by One Equity Partners, and Calgon Carbon, which is owned by Kuraray Co., Ltd.

Sources and Availability of Raw Materials

Currently, the principal raw material we use in the manufacturing of AC is lignite coal, which is readily available through our 100% ownership of a lignite coal mine (the "Five Forks Mine") located in Saline, Louisiana. All production from the Five Forks Mine is used in our manufacturing process. The Five Forks Mine is operated for us by a subsidiary of the North American Coal Company. We may also periodically purchase various ACs to supplement our inventory levels or to produce various products to serve certain AC markets. We purchase these various ACs through supply agreements or spot purchases with the producers.

With the acquisition of Legacy Arq in 2023, we secured a second feedstock, Arq Powder, which is made from high-quality recovered bituminous coal fines, for use in manufacturing of GAC products. Through internal testing, we have demonstrated that Arq Powder can be shaped and successfully activated using industrially available equipment and technology with our proprietary know-how. Arq Powder has unique properties, including low levels of impurities and small average particle size, which when used as a feedstock to produce certain carbon products may provide for advantages compared to lignite coal, other bituminous coals, or oil-based feedstocks in terms of cost and performance. In the U.S., the availability of feedstock for GAC manufacturing is limited, as it is either supplied by specialty mined coal or coconut husks, which need to be imported. Between the Corbin Facility and the Five Forks Mine, we have a fully integrated supply chain in multiple feedstocks - bituminous coal fines (Corbin Facility) and lignite coal (Five Forks Mine) to produce both GAC and PAC products.

We purchase various additives utilized in the production of our AC products. The manufacturing of AC is dependent upon these various additives, which are subject to price fluctuations and supply constraints. In addition, the number of suppliers who provide the necessary additives needed to manufacture our AC products is limited. We purchase these additives through supply agreements or spot purchases with the producers. Supply agreements with these producers are generally renewed on an annual basis.

We also purchase additives that are included in certain chemical products for resale to our customers through contracts with suppliers. The manufacturing of these chemical products is dependent upon certain discrete additives, which are subject to price fluctuations and supply constraints. In addition, the number of suppliers who provide the necessary additives needed to manufacture our chemical products are limited. We purchase these chemical products through spot purchases with the producers.

Due to the seasonality of our business, which is primarily driven by our high concentration of customers in the coal-fired power generation and municipal water treatment markets, our sales and inventory levels may vary throughout the year.

Facilities

We own and operate a manufacturing plant (the "Red River Plant"), located in Coushatta, Louisiana. We also operate a production and distribution facility located on land we lease in Coushatta. In addition, we own and operate the Corbin Facility, where we process bituminous coal fines and apply patented technology to produce Arq Powder. In January 2024, we executed a contract with a third-party contractor for the construction of a GAC facility at the Red River Plant, (the "GAC Facility") and immediately commenced construction operations. In September 2024, we terminated the contract with the third-party contractor and moved the construction and project management functions for the GAC Facility internally. Mechanical completion of our GAC Facility was completed in January 2025. We expect to commence initial production of our proprietary GAC product at the GAC Facility by the end of the first quarter of 2025. For the year ended December 31, 2024, construction costs for the GAC Facility were approximately \$80 million.

We completed commissioning at our Corbin Facility in January 2025. Total construction and commissioning costs at the Corbin Facility were approximately \$7 million for the year ended December 31, 2024.

Research and Development Activities

We conduct research and product development activities for further enhancement of our consumables. For the years ended December 31, 2024 and 2023, we incurred research and development costs of \$4.1 million and \$3.3 million, respectively.

Legislation and Environmental Regulations

We are subject to various legislative enactments and regulations relating to the protection of the environment, health and safety, including the Occupational Safety and Health Act ("OSHA") and comparable state laws. While we cooperate with governmental authorities and take commercially practicable measures to meet regulatory requirements and avoid or limit environmental effects, some risks are inherent in our business. Among the risks are costs associated with operating manufacturing plants and mining operations, fines and penalties if we are found to be in violation of laws and regulations (and/or our operating permits), as well as modifications, disruptions or discontinuation of certain operations. Additionally, our products and services are used for the reduction of certain pollutants and other contaminants and legislation and regulations that limit the amount of pollutants and other contaminants permitted in air, water and soil may increase or decrease the need for our products.

We regularly monitor and review our operations, procedures and policies for compliance with these and other laws and regulations. Compliance with these laws and regulations often requires the dedication of time and effort of employees, as well as financial resources. We believe our operations are in substantial compliance with these laws and regulations and that there are no violations that would have a material effect on our business. Despite these compliance efforts, there can be no assurance that material violations will not occur in the future. During the fiscal year ended December 31, 2024, compliance with the regulations applicable to our operations did not have a material effect on our capital expenditures, earnings, or competitive position, and the cost of compliance with these laws and regulations is not expected to have a material adverse effect on our business in the future. Below is a summary of the primary legislation and regulation that currently affects our business and the market for our current products. See "Item 1A. Risk Factors" below for further information on the uncertainty surrounding current U.S. regulatory landscape.

Federal National Primary Drinking Water Regulation and other PFAS Regulations

In October 2021, the EPA released its PFAS Strategic Roadmap, laying out its approach to addressing PFAS and other pollutants, which set a timeline by which the EPA planned to take certain actions through 2024, including establishing a national primary drinking water regulation for certain PFAS and taking Effluent Limitations Guidelines actions to regulate certain PFAS discharges from industrial categories. On March 14, 2023, the EPA proposed a National Primary Drinking Water Regulation ("NPDWR") for six specific PFAS substances. On April 10, 2024, the EPA announced the final NPDWR, which established legally enforceable maximum contaminant levels ("MCL") for six PFAS substances, including a MCL for Perfluorooctane Acid ("PFOA") and Perfluorooctane Sulfonate ("PFOS") of 4.0 parts per trillion. Under the NPDWR, drinking water utilities have three years from the publication of the final rule, or until April 2027, to comply with monitoring requirements and have five years from the publication of the final rule, or until April 2029, to implement solutions that reduce the applicable PFAS substances below the MCLs. We anticipate that these new regulations will increase demand in the U.S. for PFAS water treatment products and services, including our GAC products.

On May 8, 2024, the EPA finalized new regulations that treat PFOS and PFOA as hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"). The new rules allow the EPA to hold polluters financially responsible for contaminated sites and will also lead to these PFAS chemicals being listed as "hazardous materials" under the Hazardous Materials Transportation Act, which will require materials containing these chemicals to be transported using special protocols. Although final rules have not been issued, in February 2024 the EPA proposed changes to the Resource Conservation and Recovery Act ("RCRA") regulations by adding nine PFAS chemical compounds to its list of hazardous constituents. Combined with the new CERCLA regulations, a final RCRA regulation of PFAS may increase the costs of the handling, transport, and disposal of PFAS-containing materials including water treatment waste.

Federal MATS Affecting Electric Utility Steam Generating Units

The EPA's final "MATS Rule" went into effect in April 2012. The EPA structured the MATS Rule as a Maximum Achievable Control Technology-based ("MACT-based") hazardous pollutant regulation applicable to coal and oil-fired Electric Utility Steam Generating Units ("EGUs"). The MATS Rule sets a limit that we believe requires the capture of 80-90% plus of the mercury in the coal burned in electric power generation boilers as measured at the exhaust stack outlet for most plants. The MACT-based standards are also known as National Emission Standards for Hazardous Air Pollutants ("NESHAP"). Plants generally had four years to comply with the MATS Rule, and implementation of the MATS Rule is now largely completed. We estimate that 59% of the coal-fired units that were operating in December 2012 when the MATS Rule was finalized have been permanently shut down, leaving approximately 405 units in operation in the U.S. as of December 31, 2024.

In May 2020, the EPA reconsidered and found that it was not "appropriate and necessary" to regulate Hazardous Air Pollutants ("HAPs") emissions from coal- and oil-fired EGUs. However, the EPA expressly stated that the reconsideration neither removed coal- and oil-fired EGUs from the list of sources that must comply with the MATS Rule, nor rescinded the MATS Rule, which has remained continuously in effect. On February 15, 2023, the EPA issued a final rule revoking the May 2020 reconsideration and affirming that it is "appropriate and necessary" to regulate HAP emissions from coal- and oil-fired EGUs. On April 3, 2023, the EPA issued a proposed update to MATS that, amongst other potential modifications, proposed a reduction to the mercury emission limits for lignite coal-fired EGUs. The EPA adopted the final rule on April 25, 2024.

State Mercury and Air Toxics Regulations Affecting EGUs

In addition, certain states have their own mercury rules that are similar to or more stringent than the MATS Rule. Coal-fired electricity generating units in the U.S. are subject to consent decrees that require the control of acid gases and particulate matter, in addition to mercury emissions.

Other Legislation and Regulation

Our manufacturing plants are subject to federal, state and local laws and regulations relating to discharge of substances into the environment and to the transportation, handling and disposal of such substances. The primary federal statutes that apply to our activities in the U.S. are the Clean Air Act and the Clean Water Act. We make capital investments and expenditures to comply with environmental laws and regulations and to promote employee safety. To date, such expenditures have not had a significant adverse effect on our consolidated results of operations, financial position or cash flows.

International Regulations

There are various international regulations related to mercury control. For example, in Canada, the Canada-Wide Standard ("CWS") was initially implemented in 2010, with increasingly stringent limits through 2020 and varying mercury emissions caps for each province. In May 2017, the EU ratified the Minamata Convention on Mercury, triggering mercury control regulations with implementation starting in 2021. Specific emissions limits for dust, nitrogen oxides (NO_x), sulfur dioxide (SO₂), mercury and particulate matter (PM) are currently being developed, guided by the best available technologies reference ("BREF") document for limiting stack emissions and liquid effluents from industrial processes. The BREF conclusions for large coal-fired electricity generating units were adopted by the European Commission in July 2017.

In October 2022, the European Commission proposed new directives for better and more cost-effective treatment of urban wastewater, which included among other things new standards on micropollutants and new monitoring requirements for microplastics. In January 2024, there was a provisional agreement that revised the October 2022 proposed directives. The revised directive was adopted by the European Parliament and the Council on November 5, 2024, and is enforceable on European Union Member States, subject to the revised directive's implementation period, which requires European Union Member State compliance by mid-2027.

Mining Environmental and Reclamation Matters

Federal, state and local authorities regulate the U.S. coal mining industry with respect to matters such as employee health and safety and the environment, including the protection of air quality, water quality, wetlands, special status species of plants and animals, land uses, cultural and historic properties and other environmental resources identified during the permitting process. Reclamation is required during production and after mining has been completed. Materials used and generated by mining operations must also be managed according to applicable regulations and law.

The Surface Mining Control and Reclamation Act of 1977 ("SMCRA"), establishes mining, environmental protection, reclamation and closure standards for all aspects of surface mining. Mining operators must obtain SMCRA permits and permit renewals from the Office of Surface Mining (the "OSM") or from the applicable state agency if the state agency has obtained regulatory primacy. A state agency may achieve primacy if the state regulatory agency develops a mining regulatory program that is no less stringent than the federal mining regulatory program under SMCRA. The Five Forks Mine operates in Louisiana, which has achieved primacy and issues permits in lieu of the OSM.

Mine operators are often required by federal and/or state laws, including SMCRA, to assure, usually through the use of surety bonds, payment of certain long-term obligations including mine closure or reclamation costs, federal and state workers' compensation costs, coal leases and other miscellaneous obligations. Although surety bonds are usually non-cancelable during their term, many of these bonds are renewable on an annual basis and collateral requirements may change. As of December 31, 2024, we posted surety bonds of approximately \$7.5 million and \$3.0 million for reclamation of the Five Forks Mine and the Corbin Facility, respectively.

Our mining operations and properties are subject to regulation by the Federal Mine Safety and Health Administration ("MSHA") under the Federal Mine Safety and Health Act of 1977, as amended (the "Mine Act"). Pursuant to Section 1503(a) of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, as amended (the "Dodd-Frank Act"), issuers are required to disclose specified health and safety violations, orders and citations, related assessments and legal actions, and mining-related fatalities in periodic reports. MSHA inspects our mines on a regular basis and may issue various citations and orders if it believes a violation has occurred under the Mine Act.

Intellectual Property

As of December 31, 2024, we held 84 U.S. patents and 10 international patents that were issued or allowed, 15 additional U.S. provisional patents or applications that were pending, and 36 international patent applications that were either pending or filed relating to different aspects of our technology. During the year ended December 31, 2024, we were granted 3 new patents. Our existing patents generally have terms of 20 years from the effective date of filing, with our next patents expiring in 2025.

During the year ended December 31, 2024, 19 U.S. and 41 international patents and applications from our patent portfolio were abandoned or allowed to expire, as we determined that they no longer represent future markets or economic opportunities for us.

As of December 31, 2024, we owned over 50 trademark registrations and applications globally.

Human Capital Resources

We believe our success as an organization is enabled by the extensive expertise of our teams. As of December 31, 2024, we employed 203 people, of which 200 were employed full-time, across our four facilities and strive to maintain a robust company culture. Through our policies, activities, and core values, we believe that we are driving positive change for our employees and the local communities in which we operate.

Talent Acquisition and Retention

We seek to employ talented and knowledgeable people who share in our passion, vision, and mission to enable a cleaner and safer planet. We provide opportunities for our people to collaborate with all levels of the business, including senior management, and make meaningful contributions to our direction and success. We also invest in the growth of our employees to ensure ambition is recognized and people can reach their potential. We have a strong commitment to pay for performance at all levels. We offer competitive compensation to attract and retain the best people.

We offer a comprehensive benefits package for all eligible employees, including medical insurance, dental insurance, vision insurance, 401(k), paid time off, and paid maternity and paternity leave.

Learning, Development and Employee Engagement

We offer a range of skills-based and compliance training programs, including environmental courses on topics including hazardous waste, water treatment, and environmental awareness, and a large number of safety courses. These programs are owned and organized by each department and are focused on the development requirements of the specific roles held by our employees. In addition, we provide regular performance and development meetings to encourage employees and managers to frequently discuss growth opportunities and provide a forum for honest feedback on performance and concerns.

Employee Health and Safety

We continuously work to be the "safest activated carbon manufacturer," recognizing it as a critical factor in our ongoing success. Our Environmental Health and Safety ("EHS") Team manages our safety programs, policies, systems, and the emergency action plans in place for each of our facilities.

Our approach is underpinned by compliance with the regulations of OSHA and MSHA at the applicable facilities. We have an established health and safety management system that is modeled after OHSAS 18001. This approach includes a program of health and safety training, which is mandatory for all employees alongside additional job and location-specific training for relevant employees, including, when applicable, annual MSHA training approved by the MSHA Secretary to meet MSHA's mandatory requirements and functions. These trainings and programs empower our employees to be collectively responsible for everyone's safety.

Recent Developments

Revolving Credit Facility

On December 27, 2024 (the "Closing Date"), we and certain of our subsidiaries entered into a Credit, Security and Guaranty Agreement (the "Revolving Credit Agreement") with MidCap Funding IV Trust, in its capacity as agent, the lenders from time to time party thereto, and any entities that become party thereto as Guarantors.

The Revolving Credit Agreement provides for a secured revolving credit facility (the "Revolving Credit Facility") under which we may borrow up to \$30,000,000 at any one time, the availability of which is determined based on a borrowing base equal to percentages of certain eligible accounts receivable and inventory carrying balances, less applicable reserves established under the Revolving Credit Agreement, in accordance with a formula set forth in the Revolving Credit Agreement.

The Revolving Credit Facility has a maturity date of December 27, 2029. Borrowings under the Revolving Credit Agreement bear interest at the Standard Overnight Financing Rate ("SOFR") plus an applicable margin of 4.50% per annum, subject to a SOFR floor of 2.50% per annum.

September 2024 Equity Offering

On September 20, 2024, we entered into an underwriting agreement (the "Underwriting Agreement") with Canaccord Genuity LLC, as the representative of the underwriters named therein (the "Underwriters"), relating to the issuance and sale (the "Offering") of 4,770,000 shares (the "Firm Shares") of the Company's common stock, par value \$0.001 per share, at a price to the public of \$5.25 per share. Under the terms of the Underwriting Agreement, the Underwriters agreed to purchase the Firm Shares from the Company at a price of \$4.935 per share. We also granted the Underwriters an option exercisable for 30 days from the date of the Underwriting Agreement to purchase up to an additional 715,500 shares of common stock, on the same terms and conditions (the "Option Shares," and, together with the Firm Shares, the "Offered Shares"), which was subsequently exercised by the Underwriters.

Net proceeds from the Offering were approximately \$26.7 million, after deducting underwriting discounts and commissions and estimated offering expenses. The Firm Shares and Option Shares were offered and sold pursuant to a prospectus supplement dated September 20, 2024 and an accompanying base prospectus that form a part of our registration statement on Form S-3 (File No. 333-281762) filed with the SEC on August 23, 2024, which became effective on September 4, 2024.

May 2024 Private Placement

On May 15, 2024, we entered into a securities purchase agreement with certain accredited investors for the private placement of an aggregate of 2,142,858 shares of common stock, at a purchase price of \$7.00 per share (the "Private Placement"). The aggregate gross proceeds for the Private Placement were approximately \$15 million, before deducting offering expenses, and the Private Placement closed on May 16, 2024. The Private Placement was exempt from the registration requirements of the Securities Act of 1933, as amended (the "Securities Act") pursuant to the exemption for transactions by an issuer not involving

any public offering under Section 4(a)(2) of the Securities Act and Rule 506 of Regulation D of the Securities Act and in reliance on similar exemptions under applicable state laws.

Arq Acquisition

On February 1, 2023 (the "Acquisition Date"), we entered into a Securities Purchase Agreement (the "Purchase Agreement") with Arq Ltd., pursuant to which we acquired all of the direct and indirect equity interests, assets and liabilities of Legacy Arq in exchange for consideration (the "Purchase Consideration") totaling \$31.2 million and consisting of (i) 3,814,864 shares of our common stock, valued at \$12.4 million and (ii) 5,294,462 shares of our Series A Convertible Preferred Stock, par value \$0.001 per share (the "Series A Preferred Stock"), valued at \$18.8 million. On June 13, 2023, our stockholders approved the conversion of all of the outstanding shares of the Series A Preferred Stock and the corresponding issuance of 5,362,926 shares of common stock.

PIPE Investment and Loan Agreement

On February 1, 2023, and in connection with the Arq Acquisition, we entered into subscription agreements with certain persons (the "Subscribers"), which included existing shareholders of Arq Ltd., three of which were appointed to our board of directors (the "Board"), pursuant to which the Subscribers subscribed for and purchased 3,842,315 shares of common stock for an aggregate purchase price of approximately \$15.4 million and at a price per share of \$4.00 (the "PIPE Investment"). The securities issued to the Subscribers under the Subscription Agreements were issued pursuant to an exemption from registration under Section 4(a)(2) of the Securities Act, Rule 506 of Regulation D, which is promulgated thereunder, and Regulations S of the Securities Act. The Company and its affiliates relied on this exemption from registration based in part on representations made by each of the Subscribers under the Subscription Agreements.

Pursuant to the terms of the Purchase Agreement, we entered into a Registration Rights Agreement (the "Registration Rights Agreement") with Arq Ltd. and the Subscribers to the Subscription Agreements described above. On January 25, 2024, we filed a registration statement on Form S-3/A with the Securities and Exchange Commission ("SEC") to register all shares of common stock issued in the Purchase Agreement, all shares of common stock issued in the PIPE Investments, and all shares of common stock issued from the conversion of all shares of the Series A Preferred Stock subject to the Registration Rights Agreement and 325,457 underlying shares of common stock issuable upon the exercise of the Warrant (as defined below) issued as consideration in the CFG Loan (as defined below). The registration was declared effective by the SEC on January 31, 2024.

Also on February 1, 2023, and in connection with the Arq Acquisition, we, as borrower, certain of our subsidiaries, as guarantors, and CF Global Credit, as administrative agent and lender, entered into a \$10.0 million term loan (the "CFG Loan") upon execution of a Term Loan and Security Agreement (the "Loan Agreement"). The CFG Loan had a term of 48 months and bore interest at a rate equal to either (a) Adjusted Term SOFR (subject to a 1.00% floor and a 2.00% cap) plus a margin of 9.00% paid in cash and 5.00% paid in kind or (b) Base Rate plus a margin of 8.00% paid in cash and 5.00% paid in kind, which interest on the CFG Loan in each case was payable (or capitalized, in the case of in kind interest) quarterly in arrears. On December 27, 2024, in connection with the Closing of the Revolving Credit Facility described above, we repaid in full all amounts outstanding and due under the CFG Loan and terminated the Loan Agreement.

In addition, in connection with the Loan Agreement and as consideration for the CFG Loan, we issued to CF Global a warrant (the "Warrant") to purchase 325,457 shares of common stock. The Warrant had an exercise price of \$0.01 per share, subject to adjustment as set forth in the Warrant, was exercisable immediately, contained a cashless exercise provision and was set to expire on February 1, 2030. On March 29, 2024, the Warrant was exercised in full.

Available Information

Our periodic and current reports are filed with the SEC pursuant to Section 13(a) of the Securities Exchange Act of 1934, as amended (the "Exchange Act") and are available free of charge within 24 hours after they are filed with, or furnished to, the SEC at the Company's website at www.arq.com. Alternatively, these reports can be accessed at the SEC's website at www.sec.gov. The information contained on our website shall not be deemed incorporated by reference in any filing under the Securities Act or the Exchange Act.

Forward-Looking Statements Found in this Report

This Report contains forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act that involve risks and uncertainties. In particular statements about our beliefs, plans, objectives, expectations, assumptions, future events or future performance contained in this report, including certain statements found in this Part I and

under the heading in Part II, Item 7 below, are forward-looking statements. In some cases, forward-looking statements can be identified by words or phrases such as "anticipates," "believes," "expects," "intends," "plans," "estimates," "may," "predicts," the negative expressions of such words, or similar expressions, and such forward-looking statements include, but are not limited to, statements or expectations regarding:

- (a) the anticipating timing of the completion of commissioning of the GAC Facility, ramp-up to full nameplate capacity at our Red River Plant, and commercial production of our GAC products;
- (b) the anticipated effects from fluctuations in the pricing of our AC products;
- (c) expected supply and demand for our AC products and services, including our GAC products;
- (d) the seasonal impact on our customers and their demand for our products;
- (e) the ability to continue to successfully integrate Legacy Arq's business and recognize the benefits and synergies from the Arq Acquisition;
- (f) the ability to continue to develop and utilize Legacy Arq's products and technology and the anticipated timing for bringing such products to market;
- (g) our ability to access new markets for our GAC and other products;
- (h) any future plant capacity expansions or site development projects and our ability to finance any such projects;
- (i) the effectiveness of our technologies and the benefits they provide;
- (j) the timing of awards of, and work and related testing under, our contracts and agreements and their value;
- (k) probability of any loss occurring with respect to certain guarantees made by Tinnium Group;
- (l) the timing and amounts of or changes in future revenue, funding for our business and projects, margins, expenses, earnings, tax rates, cash flows, royalty payment obligations, working capital, liquidity and other financial and accounting measures;
- (m) the performance of obligations secured by our surety bonds;
- (n) the amount and timing of future capital expenditures needed to fund our business plan;
- (o) the impact of capital expenditure overruns on our business;
- (p) awards of patents designed to protect our proprietary technologies both in the U.S. and other countries;
- (q) the adoption and scope of regulations to control certain chemicals in drinking water and other environmental concerns and the impact of such regulations on our customers' and our businesses, including any increase or decrease in sales of our AC products resulting from such regulations;
- (r) the impact of adverse global macroeconomic conditions, including rising interest rates, recession fears and inflationary pressures, and geopolitical events or conflicts;
- (s) opportunities to effectively provide solutions to our current and future customers to comply with regulations, improve efficiency, lower costs and maintain reliability; and
- (t) the impact of prices of competing power generation sources such as natural gas and renewable energy on demand for our products.

Our expectations are based on certain assumptions, including without limitation, that:

- (a) coal will continue to be a significant source of fuel for electrical generation in the U.S.;
- (b) we will continue as a key supplier of consumables to the coal-fired power generation industry as it seeks to implement reduction of mercury emissions;
- (c) we will successfully complete commissioning of our GAC Facility and our GAC products will be accepted by the APT market;

- (d) we will be able to obtain adequate capital and personnel resources to meet our operating needs and to fund anticipated growth and our indemnity obligations;
- (e) significant customers will continue to purchase consumables from us;
- (f) we will be able to establish and retain key business relationships with current and other companies;
- (g) orders we anticipate receiving will be received;
- (h) we will be able to formulate new consumables that will be useful to, and accepted by, the markets;
- (i) we will be able to effectively compete against others;
- (j) we will be able to meet any technical requirements of projects we undertake; and
- (k) existing environmental regulations stay in place and are adequately enforced.

The forward-looking statements included in this Report involve risks and uncertainties. Actual events or results could differ materially from those discussed in the forward-looking statements as a result of various factors including, but not limited to, the timing and scope of new and pending regulations and any legal challenges to or extensions of compliance dates of them; the U.S. government's failure to promulgate new regulations or enforce existing regulations that benefit our business; changes in laws and regulations, accounting rules, prices, economic conditions and market demand; availability, cost of and demand for alternative energy sources and other technologies and their impact on coal-fired power generation in the U.S.; technical, start up and operational difficulties; competition within the industries in which the Company operates; risks associated with our debt financing; our inability to effectively and efficiently commercialize new products, including our GAC products; our inability to effectively manage commissioning and startup of the GAC Facility at our Red River Plant; disruptions at any of our facilities, including by natural disasters or extreme weather; risks related to our information technology systems, including the risk of cyberattacks on our networks; failure to protect our intellectual property from infringement or claims that we have infringed on the intellectual property of others; our inability to obtain future financing or financing on terms that are favorable to us; our inability to ramp up our operations to effectively address recent and expected growth in our business; loss of key personnel; ongoing effects of the inflation and macroeconomic uncertainty, including from the new U.S. presidential administration, increased domestic and international tariffs, lingering effects of the pandemic and armed conflicts around the world, and such uncertainty's effect on market demand and input costs; availability of materials and equipment for our business; intellectual property infringement claims from third parties; pending litigation; factors relating to our business strategy, goals and expectations concerning the Arq Acquisition; our ability to maintain relationships with customers, suppliers and others with whom the Company does business and meet supply requirements; our results of operations and business generally; risks related to diverting management's attention from our ongoing business operations; costs related to the ongoing manufacturing of our products, including our GAC products; opportunities for additional sales of our AC products and end-market diversification; the rate of coal-fired power generation in the U.S.; the timing and cost of any future capital expenditures and the resultant impact to our liquidity and cash flows; and the other risk factors described in our filings with the SEC, including those described in Item 1A. Risk Factors of this Report. You are cautioned not to place undue reliance on the forward-looking statements made in this Report and to consult filings we have made and will make with the SEC for additional discussion concerning risks and uncertainties that may apply to our business and the ownership of our securities. The forward-looking statements contained in this Report are presented as of the date hereof, and we disclaim any duty to update such statements unless required by law.

Item 1A. Risk Factors

The following risks relate to us as of the date this Report is filed with the SEC. This list of risks is not intended to be exhaustive, but reflects what we believe are the material risks inherent in our business and the ownership of our securities as of the specified dates. A statement to the effect that the occurrence of a specified event may have a negative impact on our business, results of operations, profitability, financial condition, or the like, is intended to reflect the fact that such an event, if it occurs, would be likely to have a negative impact on your investment in Arq, but should not imply the likelihood of the occurrence of such specified event. The order in which the following risk factors are presented is not intended as an indication of the relative seriousness of any given risk.

Risks Related to Our Business

We may be unable to meet our projected commissioning timelines, costs and production ramp up for our capital upgrades at our Red River Plant, or we may experience difficulties in generating and maintaining demand for products manufactured there.

Our ability to increase production of GAC on a sustained basis is dependent on the construction, commissioning, and ramp of upgrades at our Red River Plant. We have achieved mechanical completion of construction at our Red River Plant. However, the commissioning, commencement and ramp of production at this facility are subject to a number of uncertainties inherent in all new manufacturing operations. These include ongoing liquidity requirements for funding the expansion of the facility, ongoing compliance with regulatory requirements, environmental and operational licenses and approvals for additional expansion, supply chain constraints, hiring, training and retention of qualified employees and the pace of bringing production equipment and processes online with the capability to manufacture high-quality GAC products at scale. In September 2024, we terminated an existing contract we had previously entered into with a third-party contractor for the construction of the GAC Facility at our Red River Plant after a number of construction delays and cost overruns became apparent. We then moved the construction and project management functions for the GAC Facility internally in order to limit any further construction delays.

However, if we experience any further issues or delays in meeting our projected timelines, costs, or production capacity for the upgrades at our Red River Plant, or generating and maintaining demand for the products we manufacture there, our business, prospects, operating results and financial condition may be harmed. We anticipate financing the completion and ramp-up of the GAC Facility with cash on hand, cash generation, ongoing cost reduction initiatives, and through borrowings on our Revolving Credit Facility. Mechanical completion of construction of the GAC Facility was completed in January 2025. We expect to complete commissioning activities and commence production at the GAC Facility by the end of the first quarter of 2025. If we experience any further delays or unexpected additional costs such as those described above, the project timeline for our Red River Plant expansion may be delayed beyond the end of the first quarter of 2025.

Manufacturing Legacy Arq's products and GAC products requires significant capital.

Legacy Arq was a development stage entity that, prior to the Arq Acquisition, had not generated any revenue. Legacy Arq historically had operating losses and required multiple financing rounds to fund its business plan. We are currently spending significant capital to execute our business plan to manufacture Legacy Arq's products as a feedstock for GAC products. We have issued common stock in multiple equity offerings and entered into our Revolving Credit Facility to assist with funding these capital requirements, in addition to utilizing cash on hand. We are targeting the end of the first quarter of 2025 for our first commercial production of Legacy Arq products and for our first commercial production of GAC products at our Red River Plant. To meet these production timing goals and to fund ongoing production of our GAC products, we may need to raise additional capital. We may not be successful in obtaining the required financing or, if financing is available to us, such financing may not be on terms that are favorable to us. The failure to maintain adequate liquidity to enable the Company to produce Legacy Arq products and GAC products by the end of the first quarter of 2025 on a going forward basis could result in a delay in executing our business plan, which could have a material adverse effect on our business, operating results and financial condition.

Current and future indebtedness could adversely affect our financial condition and impair our ability to operate our business.

As of December 31, 2024, we had approximately \$13.8 million outstanding and \$16.2 million available under our Revolving Credit Facility. In addition, upon completion of the Arq Acquisition, we assumed a term loan (the "CTB Loan") held by Legacy Arq with a financial institution ("CTB") in the principal amount of \$10.0 million. We may incur additional indebtedness. Our

Revolving Credit Facility contains a floating interest rate. Our levels of indebtedness and higher interest rates could impact us as follows:

- require us to dedicate a substantial portion of our cash flow from operations to service indebtedness, thereby reducing the availability of cash flow to fund acquisitions or working capital;
- limit our flexibility in planning for, or reacting to, changes in our business;
- restrict us from exploiting business opportunities;
- make us more vulnerable to a downturn in our business or the economy;
- place us at a competitive disadvantage compared to our competitors with less indebtedness;
- require the consent of our existing lenders to incur additional indebtedness;
- limit our ability to borrow additional funds for acquisitions, working capital, or debt-service requirements;
- increase our cost of capital, including as a result of higher interest rates;
- decrease our future earnings; or
- increase our exposure to the credit risks of bank group lenders or those institutions with which we maintain deposits.

Our Revolving Credit Agreement and CTB Loan contain financial and other restrictive covenants. For example, the Revolving Credit Agreement includes financial covenants that require us to maintain a maximum leverage ratio and a minimum liquidity level (as these terms are defined in the Revolving Credit Agreement). These covenants could limit our ability to engage in activities that are in our long-term best interests. Our failure to comply with these covenants would result in an event of default that, if not waived, could result in the acceleration of all outstanding indebtedness. Our Revolving Credit Facility and CTB Loan have maturity dates of December 27, 2029 and January 27, 2036, respectively. In the future, we may be unable to obtain new financing or refinancing on acceptable terms. See Note 5 "Debt Obligations" to the Consolidated Financial Statements included in Item 8 of this Report for further information.

The Arq Acquisition has required significant technological changes in manufacturing that may adversely affect the market acceptance of Legacy Arq's products.

Upon completion and commencement of commercial production at our GAC Facility we will be producing GAC products that we have not yet sold commercially. Legacy Arq's manufacturing technology has been extensively tested at scale, but continuous operations represent risks including an inability to achieve the scale-up efficiencies that have been assumed in our business plan. In turn, this could impact throughput or yields at our Corbin Facility, which could lead to lower production and higher operating costs. There is also risk of delays that are product-specific. For example, we may not receive required state or municipal approval for our new GAC products in a timely manner, adequate customer acceptance of our new GAC products or achieve acceptable performance given the specification differentiation between some of Legacy Arq's products and the industry's existing conventional products. These risks could have a material adverse effect on our business, operating results and financial condition.

There could be no future demand for Legacy Arq's products.

Our initial use for Arq Powder is as a feedstock for AC, and although we believe current conditions are favorable as a result of excess demand versus supply, there can be no guarantee that this will continue. Drivers of demand include factors beyond our control such as population growth, regulatory requirements and gross domestic product growth, amongst others. Any major global downturn could also materially negatively impact this demand. New AC supply is driven by new manufacturing sites being built, and we have little visibility on what additional manufacturing capacity other manufacturers may add in the future.

Our business plan and commercial success also assumes selling Arq Powder into new markets, including as an additive into the asphalt market. Although testing data and feedback from potential customers have been generally positive to date, there can be no assurance that these products will be commercially viable. As we attempt to develop and grow Arq Powder utilization worldwide, our success will depend on our ability to gain market acceptance and to correctly forecast demand in these new markets. There is no assurance that we will be able to increase our business to meet targets globally, or that projections on which such targets are based will prove accurate, or that the pace of growth or coverage will meet customer expectations.

Our future financial results will suffer if we do not effectively manage our expanded operations following the Arq Acquisition.

Following the Arq Acquisition, the size of our business has increased. Our future results depend, in part, upon our ability to manage this expanded business, which poses substantial challenges for management, including challenges related to the management and monitoring of new operations and associated increased costs and complexity. There can be no assurance that we will be successful or that we will realize the expected operating efficiencies, cost savings, revenue enhancements and other benefits currently anticipated from the Arq Acquisition.

Disruptions at any of our facilities could negatively impact our ability to meet customer supply requirements due to damage to or insufficient production capacity of the Red River Plant and may have a material adverse effect on our business, results of operations and financial condition.

We own and operate the Red River Plant, which is our sole manufacturing plant for producing and selling AC products to our customers, and own and operate the Corbin Facility, which is our sole production facility for manufacturing Arq Powder. Our current and future ability to meet customer expectations, manage inventory, complete sales and achieve our objectives for operating efficiencies depends on the full-time operation of the Red River Plant, and the execution of our business plan depends on the integration of the Corbin Facility as the primary source of feedstock for the GAC Facility's commissioning and ramp-up of commercial production. We cannot replicate our manufacturing methods at another plant due to the limited availability of similar manufacturing plants, the additional costs incurred in supplying raw materials such as lignite to another plant, and the risk of revealing our confidential and proprietary technologies and manufacturing processes.

If we experience a disruption at these facilities, due to natural disasters, extreme weather, other unanticipated problems such as labor difficulties, pandemics (including the COVID-19 pandemic), equipment failure, cyberattacks or other cybersecurity incidents, capacity expansion difficulties or unscheduled maintenance, we would suffer a loss of inventory to supply customers, likely incur additional costs to deliver products to our customers, and disrupt the ordinary course of our business. In addition, if contractual demand exceeds manufacturing capacity, we would jeopardize our ability to fulfill obligations under our contracts, which could, in turn, result in reduced sales, profitability, contract penalties or terminations and damage to our customer relationships and could have a material adverse effect on our business. While we have insured our facilities against damage or destruction as well as for losses from business interruptions, there can be no assurance that any insurance coverage will be sufficient to cover any such losses.

Further, a prolonged disruption in our operations at the Red River Plant due to downtime or having to meet customer requirements that exceed our maximum manufacturing capacity would require us to seek alternative customer supply arrangements, which may not be on attractive terms to us or could lead to delays in distribution of products to our customers, either of which could have a material adverse effect on our business, results of operations and financial condition.

There can be no assurance that the Arq Acquisition will result in additional value for our stockholders.

There can be no assurance that the Arq Acquisition will provide greater value to our stockholders than that reflected in the current price of our common stock. As a result of the Arq Acquisition, perceived uncertainties related to our future may result in the loss of potential business opportunities and volatility in the market price of our common stock, which may make it more difficult for us to attract and retain qualified personnel and business partners.

In connection with the Arq Acquisition, we may be required to take write-downs or write-offs, restructuring and impairment or other charges that could negatively affect our business, assets, liabilities, prospects, outlook, financial condition and results of operations.

Although we conducted extensive due diligence in connection with the Arq Acquisition, unexpected risks may arise and previously known risks may materialize in a manner not consistent with our preliminary risk analysis. Further, as a result of the Arq Acquisition, we may be required to take write-offs or write-downs, restructuring and impairment or other charges that could negatively affect our business, assets, liabilities, prospects, outlook, financial condition and results of operations.

The failure to continue to successfully integrate the Legacy Arq businesses in the expected timeframe could adversely affect our future business and financial performance.

The combination of two independent companies is a complex, costly and time-consuming process. As a result, we have devoted and continue to devote significant management attention and resources to integrate Legacy Arq's operations, including in connection with the completion of our GAC Facility. We may not be successful in integrating the operations of Legacy Arq or

otherwise realizing the anticipated benefits of the Arq Acquisition. In addition, the continued integration of Legacy Arq may result in material unanticipated problems, expenses, liabilities, competitive responses, loss of customer relationships and diversion of management's attention, and may cause our stock price to decline. The difficulties of combining the operations of the two companies include, among others:

- managing a larger company;
- coordinating geographically separate organizations;
- the potential diversion of management's focus and resources from other strategic opportunities and from operational matters;
- performance shortfalls as a result of the diversion of management's attention caused by integrating the combined companies' operations;
- aligning and executing a new business strategy;
- retaining existing customers and attracting new customers;
- maintaining employee morale and retaining key members of management and other employees;
- the disruption of, or the loss of momentum in, each company's ongoing business or inconsistencies in standards, controls, systems, procedures and policies;
- the possibility of faulty assumptions underlying expectations regarding the integration process;
- consolidating corporate and administrative infrastructures and eliminating duplicative operations;
- coordinating sales, distribution and marketing efforts;
- maintaining research and development technology momentum and leading customer technical collaboration progress;
- significant changes to current market conditions that may adversely affect the business plan;
- integrating IT, communications and other systems;
- changes in applicable laws and regulations;
- managing tax costs or inefficiencies associated with integrating Legacy Arq's operations;
- unforeseen expenses or delays associated with the Arq Acquisition, including the completion of the GAC Facility;
- creating a logistics network to reliably allow use of Arq Powder as a feedstock in the GAC Facility; and
- taking actions that may be required in connection with obtaining regulatory approvals.

Many of these factors are outside of our control and any one of them could result in increased costs, decreased revenue and diversion of management's time and energy, which could materially impact our business, financial condition and results of operations. In addition, even if the operations of Legacy Arq are integrated successfully, we may not realize the full benefits from the Arq Acquisition, including the synergies, cost savings or growth opportunities that we expect. These benefits may not be achieved within the anticipated timeframe, or at all.

Specifically, the realization of the full benefits from the Arq Acquisition is dependent on our ability to construct expansions to existing facilities and to integrate Arq Powder on the projected timeline and within the projected budget. If these anticipated capital expenditures are delayed, whether as a result of unanticipated challenges in permitting, construction or economic conditions, the cost of such activities may increase and the timing of projected revenue may be impacted. Further, the costs of such construction activities have and may continue to significantly exceed the budgeted costs. The costs of construction or other anticipated capital expenditures are subject to the effects of the current inflationary environment and we may not be able to successfully offset the effects of inflation. See "Item 1A. Risk Factors - *We may be unable to meet our projected construction timelines, costs and production ramp up for our capital upgrades at our Red River Plant, or we may experience difficulties in generating and maintaining demand for products manufactured there.*" above for further information.

The synergies attributable to the Arq Acquisition may vary from expectations.

We may fail to realize the anticipated benefits and synergies expected from the Arq Acquisition. Our success will depend, in significant part, on our ability to successfully integrate the Legacy Arq business and realize the anticipated strategic benefits and synergies. We continue to believe that the combination of the two businesses will allow us to enter into more diversified, higher margin markets with our products. However, achieving these goals requires, among other things, realization of the targeted cost synergies expected from the Arq Acquisition. These anticipated benefits and actual operating, technological, strategic and revenue opportunities may not be realized fully or at all, or may take longer to realize than expected. If we are not able to achieve these objectives and realize the anticipated benefits and synergies expected from the Arq Acquisition within the anticipated timeframe or at all, our business, financial condition and operating results may be adversely impacted.

Strategic relationships upon which we rely on are subject to change, which may diminish our ability to conduct our operations.

Our ability to successfully produce Legacy Arq's products and expand their utilization as intended depends on developing and maintaining close working relationships with industry participants. In addition, the dynamics of maintaining these relationships with strategic partners may require us to incur expenses or undertake activities we would not otherwise be inclined to do. If these strategic relationships are not established or maintained, our business prospects may be limited, which could negatively impact our business and results of operations.

If we fail to maintain an effective system of internal controls, we may not be able to accurately report our financial results or prevent fraud. As a result, stockholders could lose confidence in our financial reporting, which would harm our business and the trading price of our common stock.

Effective internal controls are necessary for us to provide reliable financial reports, prevent fraud and operate successfully as a public company. If we cannot provide reliable financial reports or prevent fraud, our reputation and operating results would be harmed. We cannot be certain that our efforts to maintain an effective system of internal controls will be successful, will be able to maintain adequate controls over our financial processes and reporting in the future, or will be able to comply with our obligations under Section 404 of the Sarbanes-Oxley Act of 2002. As we continue to integrate Legacy Arq's operations, any failure to maintain effective internal controls, or difficulties encountered in implementing or improving internal controls, could harm our operating results or cause us to fail to meet our reporting obligations. Ineffective internal controls could additionally lead to increased costs to remediate any failures and could cause investors to lose confidence in our reported financial information, which would likely have a negative effect on the trading price of our common stock.

The financial effects of Tinum Group providing indemnification under performance guarantees of its refined coal ("RC") facilities are largely unknown and could adversely affect our financial condition.

Tinum Group, LLC ("Tinum Group"), of which we hold a 42.5% ownership interest, indemnifies certain utilities and lessees of RC facilities for particular risks associated with the operations and tax treatment of those facilities. We have provided limited, joint and several guarantees of Tinum Group's obligations under those leases. To date, we have not been required to make any payments under such guarantees and are not aware of any actual or threatened requests or claims for payment under such guarantees. Nevertheless, if any such obligations are triggered in the future, any substantial payments made under such guarantees could have a material adverse effect on our financial condition, results of operations and cash flows.

A pandemic, epidemic or outbreak of an infectious disease such as COVID-19 may materially adversely affect our business.

The global or national outbreak of an infectious disease, such as COVID-19, may cause disruptions to our business and operational plans, which may include (i) shortages of employees, (ii) inefficiencies, delays and additional costs in our manufacturing, sales and customer service efforts, (iii) recommendations of, or restrictions imposed by, government and health authorities, including quarantines, to address an infectious disease, such as the COVID-19 pandemic, and (iv) restrictions that we impose, including facility shutdowns, to ensure the safety of employees and others. The COVID-19 pandemic had a significant impact around the world, prompting governments and businesses to take unprecedented measures in response. While it is not possible to predict the outbreak of any new infectious disease, the disruptions that may result from such an outbreak may have a material adverse effect on our business, financial condition and results of operations.

Demand for our products and services depends significantly on environmental laws and regulations related to emissions. Uncertainty as to the future of such laws and regulations, changes to such laws and regulations or granting of extensions of compliance deadlines has had, and will likely continue to have, a material effect on our business.

A significant market driver for our existing products and services and those planned in the future are existing and expected environmental laws and regulations, particularly those addressing the reduction of mercury and other emissions from coal-fired electricity generating units and regulation of PFAS and other pollutants. For example, we expect consumables revenue to increase in the coming years as a result of EPA regulations of PFAS substances in drinking water finalized in April 2024. If, as a result of the new U.S. presidential administration or developments in administrative law jurisprudence, such laws and regulations are delayed, not enacted, repealed, amended to be less strict, or include prolonged phase-in periods, or are not enforced, our business would be adversely affected by declining demand for such products and services. For example:

1. The implementation of environmental regulations regarding certain pollution control and permitting requirements has been delayed from time to time due to various lawsuits. In addition, the U.S. Supreme Court's overturning of the *Chevron* Doctrine in 2024 may result in further litigation challenging the validity of current or proposed environmental regulations. The uncertainty created by litigation and reconsideration of rule-making by the EPA or other regulatory agencies may negatively impact our business, results of operations and financial condition and will likely continue to do so.
2. To the extent federal, state and local legislation mandating that electric power generating companies serving a state or region purchase a minimum amount of power from renewable energy sources such as wind, hydroelectric, solar and geothermal, and such amount lessens demand for electricity from coal-fired plants, the demand for our products and services would likely decrease.
3. In January and February 2025, the new U.S. presidential administration issued a series of executive orders ("EOs") that, among other things, (i) withdraws the U.S. from the Paris Agreement, adopted at the 21st Conference of the Parties of the United Nations Framework Convention on Climate Change; (ii) calls upon the EPA to submit a report on the continuing applicability of its endangerment finding for greenhouse gases under the Clean Air Act and issue guidance on the "social cost of carbon" to consider whether such metric should be eliminated, and (iii) directs federal executive departments and agencies to initiate a regulatory freeze for certain rules that have not taken effect, pending review by the newly appointed agency head.

Federal, state and international laws or regulations addressing emissions from coal-fired electricity generating units, climate change or other actions to limit emissions, including public opposition to new coal-fired electricity generating units, has caused and could continue to cause electricity generators to transition from coal to other fuel and power sources, such as natural gas, nuclear, wind, hydroelectric and solar. The potential financial impact on us of future laws or regulations or public pressure will depend upon the degree to which electricity generators diminish their reliance on coal as a fuel source. That, in turn, will depend on a number of factors, including the specific requirements imposed by any such laws or regulations, the periods over which those laws or regulations are or will be phased in, the amount of public opposition and the state and cost of commercial development of related technologies and processes. In addition, public utility commissions may not allow utilities to charge consumers for, and pass on the cost of, emissions control technologies without federal or state mandates.

Our development operations at our facilities are subject to environmental permitting and regulations that can make operations expensive, or prohibit them altogether. For example, at our Corbin Facility, we use high-quality recovered bituminous coal fines as a feedstock to produce Arq Powder, and the majority of sites we target for development and extraction of such fines contain potential environmental liabilities. Additionally, new CERCLA regulations and further regulations of PFAS substances may increase the costs of handling, transport, and disposal of PFAS-containing materials, including water treatment waste, such as spent GAC. Therefore, we may be subject to potential risks and liabilities associated with pollution of the environment and the disposal of waste products that could occur as a result of these development and production activities. Further, we cannot reasonably predict the impact that any such future laws or regulations or public opposition may have on our results of operations, financial condition or cash flows.

With the Arq Acquisition, we are subject to additional significant governmental regulations, which may negatively impact our operations and costs of conducting business.

The Corbin Facility's operations are governed by extensive laws and regulations, including:

- laws and regulations related to exports, taxes and fees;

- labor standards and regulations related to the MSHA; and
- environmental standards and regulations related to waste disposal, toxic substances, land use and environmental protection, including environmental protection regulations related to water and air.

Existing and possible future laws, regulations and permits governing operations and activities of energy waste companies, or more stringent implementation, could have a material adverse impact on our business and cause increases in capital expenditures or require abandonment or delays in our products. Any future regulations regarding CO₂ emissions of coal reclamation and product manufacturing could also impact our future business.

Action by the EPA related to MATS that decreases demand for our mercury removal products could have a material adverse effect on our business.

Our operating performance is largely dependent upon demand for mercury removal-related products, which is largely affected by the amount of coal-based power generation used in the U.S. and the continued regulation of utilities under the EPA's MATS Rule. In May 2020, the EPA reconsidered and withdrew its 2016 "supplemental finding" associated with the cost benefit analysis of the MATS Rule. In this action, the EPA found that it was not "appropriate and necessary" to regulate Hazardous Air Pollutants ("HAP") emissions from coal- and oil-fired Electric Utility Steam Generating Units ("EGUs"). However, the EPA expressly stated that the reconsideration neither removed coal- and oil-fired EGUs from the list of sources that must comply with the MATS Rule, nor rescinded the MATS Rule, which has remained continuously in effect. On February 9, 2022, the EPA published a new proposed rule revoking the May 2020 withdrawal of the 2016 supplemental finding and affirming that it is "appropriate and necessary" to regulate HAP emissions from coal- and oil-fired EGUs. On February 15, 2023, the EPA issued a final rule revoking the May 2020 reconsideration and affirming that it is "appropriate and necessary" to regulate HAP emissions from coal- and oil-fired EGUs. On April 3, 2023, the EPA issued a proposed update to MATS that amongst other potential modifications, proposed a reduction to the mercury emission limits for lignite coal-fired EGUs. The EPA adopted the final rule on April 25, 2024. However, there can be no assurance that the final rule will stand unchallenged, given the change in U.S. presidential administration, related EOs and developments in administrative law jurisprudence. Any action taken by the EPA related to MATS that decreases demand for our products for mercury removal will have a negative effect on our financial results.

The failure of tariffs or duties placed on U.S. imports of Chinese AC to adequately address the impact of low-priced imports from China could have a material adverse effect on the competitiveness and financial performance of our business.

Our business faces competition in the U.S. from low-priced imports of AC products. If the volumes of these low-priced imports increase, especially if they are sold at less than fair value, our sales of competing products could decline, which could have an adverse effect on our earnings. In addition, sales of these low-priced imports may negatively impact our pricing. To limit these activities, regulators in the U.S. have enacted an anti-dumping duty order on steam AC products from China. In November 2023, the order was extended for an additional five years. The amount of anti-dumping duties collected on imports of steam AC from China is reviewed annually by the U.S. Department of Commerce. To the extent the anti-dumping margins do not adequately address the degree to which imports are unfairly traded, the anti-dumping order may be less effective in reducing the volume of these low-priced AC imports in the U.S., which could negatively affect demand and/or pricing for our products.

The market for consumables and other products that provide pollutant reduction is highly competitive, and some of our competitors are significantly larger and more established than we are, which could adversely impede our growth opportunities and financial results.

We operate in a highly competitive marketplace. Our ability to compete successfully depends in part upon our ability to maintain a production cost advantage, competitive technological capabilities and to continue to identify, develop and commercialize new and innovative products for existing and future customers. We may face increased competition from existing or newly developed products offered by industry competitors or other companies whose products offer a similar functionality as our products and could be substituted for our products, which may negatively affect demand for our products. In addition, market competition could negatively impact our ability to maintain or raise prices or maintain or grow our market position. Additionally, our competitors are significantly larger and/or more established companies in the market for consumables and other products that provide mercury emissions reduction, water treatment and air purification.

Reduction of coal consumption by North American electricity power generators could result in less demand for our products and services. If utilities significantly reduce the number of coal-fired electricity generating units or the amount of coal burned without a corresponding increase in the services required at the remaining units, this could reduce our revenue and materially and adversely affect our business, financial condition and results of operations.

The amount of coal consumed for North American electricity power generation is affected by, among other things, (1) the location, availability, quality and price of alternative energy sources for power generation, such as natural gas, fuel oil, nuclear, hydroelectric, wind, biomass and solar power; and (2) technological developments, including those related to competing alternative energy sources.

Natural gas-fueled generation and renewable energy generation have displaced and may continue to displace coal-fueled generation, particularly from older, less efficient coal-powered generators. We expect that a significant amount of the new power generation necessary to meet increasing demand for electricity generation will be fueled by these sources. The price of natural gas has remained relatively competitive for power generation and the use of natural gas is perceived as having a lower environmental impact than burning coal. Natural gas-fired plants are cheaper to construct, and permits to construct these plants are easier to obtain, and ongoing costs of natural gas-fired plants associated with meeting environmental compliance are lower. Possible advances in technologies and incentives, such as tax credits that enhance the economics of renewable energy sources, could make those sources more competitive than coal. Any reduction in the amount of coal consumed by domestic electricity power generators, whether as a result of new power plants utilizing alternative energy sources or as a result of technological advances, could reduce the demand for our current products and services, thereby reducing our revenue and materially and adversely affecting our business and results of operations.

Additionally, long-term changes in environmental regulation that threaten or preclude the use of coal or other fossil fuels as a primary fuel source for electricity production may result in the reduction or closure of a significant number of coal-fired electric generating units, and may adversely affect our business, financial condition and results of operations.

The loss of, or significant reduction in, revenue from our largest customers could adversely affect our business, financial condition or results of operations.

For 2024, we derived approximately 45% of our total revenue from our five largest customers. Our top three customers accounted for approximately 36% of our total revenue for 2024. While we attempt to mitigate such risk by entering into long-term contracts with minimum purchase obligations, if any of our five largest customers were to significantly reduce the quantities of consumables they purchase from us or cease purchasing from us altogether, it may adversely affect our business, financial condition and results of operations.

We depend on the services of our executives and other key employees, and the loss of one or more of these individuals could harm our business.

We believe that our success depends on retaining qualified executives and other key employees, especially in light of the specialized nature of our business. These individuals have significant industry and Company-specific experience. If we are unsuccessful at retaining or attracting qualified personnel, our business could be disrupted and our reputation could be harmed, adversely affecting our ability to achieve our business objectives.

Uncertain geopolitical conditions could adversely affect our business.

Uncertain geopolitical conditions, including in connection with the new U.S. presidential administration, the conflicts in the Middle East, the invasion of Ukraine, sanctions against Russia, increased domestic and international tariffs and other potential impacts on the world economy and currencies may cause disruptions in our business. These include logistics delays or shortages in producing and shipping certain of our raw materials, increases in energy prices that could increase costs of certain of our raw materials, increases in transportation costs from overall higher gasoline prices, higher prices due to tariffs, and cyber-attacks targeted at U.S. power infrastructure that could impact demand for our products.

Disruptions of supply chains may affect volatility in price and availability of raw materials.

The continuation of geopolitical conflicts in 2024 has continued to disrupt supply chains, resulting in cost increases for commodities, goods and services in many parts of the world. Disruptions of supply chains and higher costs may continue into 2025 and beyond. The economic effects from these events over longer terms could negatively impact our business and results of operations.

The manufacturing and processing of our consumable products requires significant amounts of raw materials. The price and availability of those raw materials can be impacted by factors beyond our control. Our consumable products, exclusive of lignite coal, use a variety of additives. Significant movements or volatility in the costs of additives could have an adverse effect on our working capital or results of operations. Additionally, we purchase certain raw materials from selected key suppliers. While we have inventory of such raw materials, if any of these suppliers are unable to meet their obligations with us on a timely basis or at an acceptable price, we may be forced to incur higher costs to obtain the necessary raw materials or be unable to obtain the materials.

We may attempt to offset the increase in raw material costs or challenges in the supply of raw materials with price increases allowed in our contractual relationships, or through cost reduction efforts. If we are unable to fully offset the increased cost of raw materials through price increases, it could significantly impact our business, financial condition and results of operations.

We may experience a shortage of reliable and adequate transport capacity and any material increase in transportation costs could have a material adverse effect on our results of operations.

We plan to transport our Arq Powder based feedstock produced at the Corbin Facility to the Red River Plant by rail and truck. Additionally, we use rail and truck transport to deliver our products to our customers. We may experience roadway or railway transportation disruptions that could have a material adverse effect on our operations or financial condition. There can be no assurance that we will be able to secure sufficient truck or railway transport capacity to transport raw materials from the Corbin Facility to the Red River Plant or our finished commercial products to our customers. Further, in the event of railway transport shortages, there can be no assurance that road transportation will be able to satisfy the shortfall. Potential transportation classifications of raw materials or spent product may require permitting, and special care and handling to transport such materials, including the transportation of spent PFAS filtration media. In addition, any material increase in transportation costs could have a negative effect on the competitiveness of our future products, which may in turn have a material adverse effect on our business and results of operations.

We face operational risks inherent in mining operations, and our mining operations have the potential to cause safety issues, including those that could result in significant personal injury.

We own the Five Forks Mine, a lignite coal mine located in Louisiana, which is operated for us by a third party. Mining operations by their nature involve a high level of uncertainty and are often affected by risks and hazards outside of our control. At the Five Forks Mine, the risks are primarily operational risks associated with the maintenance and operation of the heavy equipment required to dig and haul the lignite and risks relating to producing lower than expected lignite quality or unfavorable recovery rates. Additionally, the cost of inputs in our mining operation, most notably fuel cost, can create operational risks. The failure to adequately manage these risks could result in significant personal injury, loss of life, damage to mineral properties, production facilities or mining equipment, damage to the environment, delays in or reduced production and potential legal liabilities.

Our operations and products are subject to extensive safety, health and environmental requirements that could increase our costs and/or impair our ability to manufacture and sell certain products.

Our ongoing operations are subject to extensive federal, state and local laws, regulations, rules and ordinances relating to safety, health and environmental matters, many of which provide for substantial monetary fines and potential criminal sanctions for violations. These include requirements to obtain and comply with various environmental-related permits for constructing any new facilities (or modifications to existing facilities) and operating all of our existing facilities. Costs of complying with regulations could increase, as concerns related to greenhouse gases and climate change continue to emerge.

The enactment of new environmental laws and regulations and/or the more aggressive interpretation of existing requirements could require us to incur significant costs for compliance or capital improvements or limit our current or planned operations, any of which could have a material adverse effect on our earnings or cash flow. We may attempt to offset the effects of these compliance costs through price increases, productivity improvements and cost reduction efforts. Our success in offsetting any such increased regulatory costs is largely influenced by competitive and economic conditions and could vary significantly depending on the market segment served. Such increases may not be accepted by our customers, may not be sufficient to compensate for increased regulatory costs or may decrease demand for our products and our volume of sales.

We may not be successful in achieving our growth expectations related to new products in our existing or new markets.

Our ability to bring new products to the market will depend on various factors, including, but not limited to, solving potential technical or manufacturing difficulties, competition and market acceptance, which may hinder the timeliness and cost to bring

such products to production. In addition, our anticipated production capacity for any new product, including our GAC products, may be limited if we experience material delays in commissioning or other areas as we ramp-up commercial production. Further, there can be no assurance that costs incurred to develop new products will result in an increase in revenue. These factors or delays could affect our future operating results.

Natural disasters or extreme weather could affect our operations and financial results.

We operate facilities, including the Red River Plant, Five Forks Mine and the Corbin Facility, that are exposed to natural hazards, such as floods, windstorms and hurricanes. Extreme weather events present physical risks that may become more frequent as a result of factors related to climate change. Such events could disrupt our supply of raw materials or otherwise affect production, transportation and delivery of our products or affect demand for our products.

In addition, extreme and unusually cold or hot temperatures throughout the U.S. could result in abnormally high loads on geographic electrical grids that could result in the failure of coal-fired power plants to produce electricity. If these plants were off-line for a significant period of time, the demand for our products could be less, which would impact our operations and financial results. Conversely, abnormally high loads on geographic electrical grids, resulting in increased demand of coal-fired power plants to produce electricity, could impact our ability to meet customer contracts and demands.

We are subject to risks related to environmental, social or governance (“ESG”) matters, including our ability to set and meet reasonable goals related to climate change and sustainability efforts, may negatively affect our business and operations.

Regulatory developments and stakeholder expectations relating to ESG matters are rapidly changing. Concern over climate change has increased focus on the sustainability of practices and products in the markets we serve, and changes to laws and regulations regarding climate change mitigation may result in increased costs and disruption to operations. Moreover, stakeholder expectations are not uniform, and both opponents and proponents of various ESG matters have increasingly engaged in a range of activism and action to advocate for their positions. Navigating varying expectations of policymakers and other stakeholders has inherent costs, and any failure to successfully navigate such expectations may expose us to negative publicity, shareholder activism, and litigation or other engagement from stakeholders with opposing views, as well as the potential for civil investigations and enforcement by federal governmental authorities. If we are unable to recognize and respond to such developments, or if our existing practices and procedures are not adequate to meet changing regulatory requirements, market standards or investor expectations, some of which may be conflicting, we may miss corporate opportunities, become subject to regulatory scrutiny, litigation or third-party claims, or incur costs to revise operations to meet new or revised standards. Moreover, any harm to our reputation could impact employee engagement and retention and the willingness of customers and our partners to do business with us, which could have a material adverse effect on our business, results of operations and cash flows.

In 2024, we published our first corporate responsibility and sustainability tear sheet and inaugural ESG Report to address the impact of our operations on climate change and discuss material social, governance and environmental issues. Any failure or perceived failure to act responsibly with respect to such matters may negatively impact our operations and/or financial condition. While we monitor a broad range of ESG issues, there can be no assurance that we will manage such issues successfully, or that we will successfully meet the expectations of our stakeholders, consumers and employees.

Information technology vulnerabilities and cyberattacks on our networks could have a material adverse impact on our business.

We rely on information technology ("IT") to manage and conduct business, both internally and externally, with our customers, suppliers and other third parties. Internet transactions involve the transmission and storage of data including customer and supplier business information. Therefore, maintaining the security of computers and other electronic devices, computer networks and data storage resources is a critical issue for us and our customers and suppliers because security breaches could result in reduced or lost ability to carry on our business and loss of, and/or unauthorized access to, confidential information.

We have limited personnel and other resources to address information technology reliability and security of our computer networks, and to respond to known security incidents to minimize potential adverse impact. Experienced hackers, cybercriminals and perpetrators of threats may be able to penetrate our network security and misappropriate or compromise our confidential information or that of third parties, create system disruptions or cause shutdowns. These perpetrators of cyberattacks also may be able to develop and deploy viruses, worms, malware and other malicious software programs that attack our information and networks or otherwise exploit any security vulnerabilities of our information and networks.

Techniques used to obtain unauthorized access to or sabotage systems change frequently and often are not recognized until after they are launched against a target, and we may be unable to anticipate these techniques or to implement adequate preventative measures. A breach of our IT systems and security measures or those of our third party partners as a result of third party action, malware, employee error, malfeasance or otherwise could materially adversely impact our business and results of operations and expose us to customer, supplier and other third party liabilities.

Risks Related to Intellectual Property

Failure to protect our intellectual property or infringement of our intellectual property by a third party could have an adverse impact on our financial condition.

We rely on a combination of patent, copyright and trademark laws, trade secrets, confidentiality procedures and contractual provisions to protect our proprietary rights. Such means of protecting our proprietary rights may not be adequate because they provide only limited protection or such protection may be prohibitively expensive to enforce. We also enter into confidentiality and non-disclosure agreements with our employees, consultants and many of our customers and vendors, and generally control access to and distribution of our proprietary information. Notwithstanding these measures, a third party could copy or otherwise obtain and use our proprietary information without authorization. We cannot provide assurance that the steps we have taken will prevent misappropriation of our technology and intellectual property, which could negatively impact our business and financial condition. In addition, such actions taken by third parties could divert the attention of our management from the operation of our business.

We may be subject to intellectual property infringement claims from third parties that are costly to defend and that may limit our ability to use the disputed technologies.

If our technologies are alleged to infringe the intellectual property rights of others, we may be forced to mount a defense to such claims, which may be expensive and time consuming. During the pendency of litigation, we could be prevented from marketing and selling existing products or services and from pursuing research, development or commercialization of new or complimentary products or services. Further, we may be required to obtain licenses to third party intellectual property or be forced to develop or obtain alternative technologies. Our failure to obtain a license to a technology that we may require, or the need to develop or obtain alternative technologies, could significantly and negatively affect our business.

Indemnification of third-party licensees of our technologies against intellectual property infringement claims concerning our licensed technology and our products could be financially significant to us.

We have agreed to indemnify licensees of our technologies (including Tinnium Group) and purchasers of our products, and we may enter into additional agreements with others under which we agree to indemnify and hold them harmless from losses they may incur as a result of the alleged infringement of third-party rights caused by the use of our technologies and products. Infringement claims, which may be expensive and time-consuming to defend, could have a material adverse effect on our business, operating results and financial condition, even if we are successful in defending ourselves (and the indemnified parties) against them.

Our future success depends in part on our ongoing identification and development of intellectual property and our ability to invest in and deploy new products, services and technologies into the marketplace efficiently and cost effectively.

The process of identifying customer needs and developing and enhancing products, services and solutions for our customer markets is complex, costly and uncertain. Any failure by us to identify and anticipate changing needs, emerging trends and new regulations could significantly harm our future market share and results of operations.

Risk related to tax matters

Our ability to utilize our tax assets to offset future income tax liability could be limited from an "ownership change."

In general, under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, ("IRC") a corporation that undergoes an "ownership change" is subject to limitations on its ability to utilize its pre-change net operating losses ("NOLs") and tax credits to offset future taxable income. In general, an ownership change occurs if the aggregate stock ownership of certain stockholders (generally 5% stockholders (as defined in IRC Section 382), applying certain look-through rules) increases by more than 50 percentage points during the testing period (generally a three-year lookback period). An entity that experiences an ownership change generally is subject to an annual limitation on its pre-ownership change tax asset carryforwards. The annual limitation is increased each year to the extent that there is an unused limitation in a prior year.

We acquired certain tax assets (the "Legacy Arq Tax Assets") in the Arq Acquisition, totaling approximately \$12.5 million. The Legacy Arq Tax Assets are comprised of NOL carryforwards, of which \$8.8 million were incurred in the U.S. Further, as of December 31, 2024, we had approximately \$86.1 million of general business credit carryforwards (the "Tax Credits"), totaling approximately 75% of consolidated tax assets. Under the IRC and regulations promulgated by the U.S. Treasury Department and the IRS, we may carry forward or otherwise utilize our NOLs and Tax Credits (collectively, "Tax Assets") in certain circumstances to offset current and future federal income tax liabilities, subject to certain requirements and restrictions. However, our ability to use our Tax Assets to offset future federal income tax liability is limited if Legacy Arq or Arq, or both, experience an "ownership change" as discussed above. To the extent that the Tax Assets do not otherwise become limited, we believe that we will have available a significant amount of Tax Assets in future years, and therefore the Tax Assets could be a substantial asset to us.

In connection with the Arq Acquisition and PIPE Investment, the May 2024 Private Placement and the September 2024 Offering, we issued additional shares of our common stock. With respect to the Arq Acquisition and PIPE Investment, we performed an IRC Section 382 analysis as of the Acquisition Date and determined that we had not experienced an "ownership change" as of that date. If we were to experience an "ownership change," it is possible that a significant portion of our Tax Assets could expire before we would be able to use them to offset future federal income tax liability.

Prior to the Acquisition Date, Legacy Arq completed numerous equity offerings that resulted in ownership changes. We have not completed a formal IRC Section 382 analysis of Legacy Arq equity changes from its inception through the Acquisition Date, however, we believe that one or more "ownership changes" occurred during this time period as defined under Sections 382 and 383 and that a portion or all the Legacy Arq Tax Assets may be subject to an annual limitation.

To mitigate the risk of an "ownership change," on May 5, 2017, our Board approved the Tax Asset Protection Plan (the "TAPP") and declared a dividend of one preferred share purchase right (each, a "Right") for each outstanding share of our common stock. The TAPP was adopted in an effort to protect stockholder value by attempting to diminish the risk that our ability to use the existing Tax Credits to reduce potential future federal income tax obligations may become substantially limited (the "Protection Plan"). During the years 2018 through 2024, we executed amendments to the TAPP (the "TAPP Amendments"), which amended the definition of "Final Expiration Date" under the TAPP to extend the duration of the TAPP and makes associated changes in connection therewith. The most recent TAPP Amendment was approved at our 2024 annual meeting of stockholders and extended the Final Expiration Date to the close of business on December 31, 2025.

The TAPP, as amended, is intended to act as a deterrent to any person acquiring beneficial ownership of 4.99% or more of our outstanding common stock without the approval of the Board. Stockholders who beneficially owned 4.99% or more of our outstanding common stock upon execution of the Protection Plan will not trigger the Protection Plan so long as they do not acquire beneficial ownership of additional shares of our common stock. The Board may, in its sole discretion, also exempt any person from triggering the Protection Plan.

In connection with the Arq Acquisition and PIPE Investment, the May 2024 Private Placement and the September 2024 Offering, we granted waivers under the TAPP for certain stockholders to allow such stockholders to acquire the shares offered in the respective offerings and acquire more shares of our stock in the future, provided that such acquisition is not expected to, and does not, effect an "ownership change" under IRC Sections 382 and 383. Despite the TAPP, our projections of what will effect an ownership change could be wrong, and with a waiver in place for certain stockholders, there is a risk that we experience an ownership change for purposes of IRC Sections 382 and 383 because of future acquisitions of our common stock, which would limit the use of our existing Tax Assets.

Risks Related to Our Common Stock

Our stock price is subject to volatility.

The market price of our common stock has experienced substantial price volatility in the past and may continue to do so. The market price of our common stock may continue to be affected by numerous factors, including:

- market perception of the Arq Acquisition;
- actual or anticipated fluctuations in our operating results and financial condition;
- changes in laws or regulations and court rulings and trends in our industry;
- announcements of sales awards;

- changes in supply and demand of our products and raw materials;
- adoption of new tax regulations or accounting standards affecting our industry;
- changes in financial estimates by securities analysts;
- trends in social responsibility and investment guidelines;
- whether we are able and elect to pay cash dividends;
- the continuation of repurchasing shares of common stock under our stock repurchase programs; and
- the degree of trading liquidity in our common stock and general market conditions.

From January 1, 2024 to December 31, 2024, the closing price of our common stock ranged from \$2.59 to \$8.02 per share. Stock price volatility over a given period may cause the average price at which we repurchase shares of our common stock under our existing stock repurchase program to exceed the stock's price at a given point in time. We believe our stock price should reflect expectations of future growth and profitability. Future dividends are subject to declaration by the Board, and under our current stock repurchase program, we are not obligated to acquire any specific number of shares. If we fail to meet expectations related to future growth, profitability, dividends, stock repurchases or other market expectations, our stock price may decline significantly, which could have a material adverse impact on our ability to obtain additional capital and erode investor confidence, which could further reduce the liquidity of our common stock. We do not expect to repurchase additional shares of our common stock in the near term.

Our certificate of incorporation and bylaws contain provisions that may delay or prevent an otherwise beneficial takeover attempt of us.

Certain provisions of our certificate of incorporation and bylaws could make it more difficult for a third party to acquire us, even if doing so would be beneficial to our stockholders. These include provisions that:

- Limit the business at special meetings of stockholders to the purpose stated in a notice of the meeting;
- Authorize the issuance of "blank check" preferred stock, which is preferred stock with voting or other rights or preferences that could impede a takeover attempt and that the Board can create and issue without prior stockholder approval;
- Establish advance notice requirements for submitting nominations for election to the Board and for proposing matters that can be acted upon by stockholders at a meeting; and
- Require the affirmative vote of the "disinterested" holders of a majority of our common stock to approve certain business combinations involving an "interested stockholder" or its affiliates, unless either minimum price criteria or procedural requirements are met, or the transaction is approved by a majority of our "continuing directors" (known as "fair price provisions").

These provisions, alone or in combination with each other, may discourage transactions involving actual or potential changes of control, including transactions that otherwise could involve payment of a premium over prevailing market prices to holders of our common stock, or could limit the ability of our stockholders to approve transactions that they may deem to be in their best interest.

An increased focus on environmental, social and governance factors by institutional investors may negatively impact our access to capital and the liquidity of our stock price.

Some institutional investors have recently adopted ESG investing guidelines that may prevent them from increasing or taking new stakes with companies with exposure to fossil fuels. Additional institutional investors may adopt similar ESG investment guidelines. This could limit both the demand for owning our common stock and/or our access to capital. If such capital is desired, we cannot assure you that we will be able to obtain any additional equity or debt financing on terms that are acceptable to us. Given these emerging trends, liquidity in our common stock and our stock price may be negatively impacted.

We require additional funding for our growth plans, and such funding may require us to issue additional shares of our common stock resulting in a dilution of your investment.

We estimate our funding requirements in order to implement our growth plans. If the actual funding required to implement growth initiatives should exceed funding estimates significantly, or our funds generated from our operations from such growth

initiatives prove insufficient for such purposes, we may need to raise additional funds to meet these funding requirements. For example, as previously disclosed, capital expenditures related to the GAC Facility in the fourth quarter of 2024 were above what was originally budgeted, bringing fiscal year 2024 capital expenditures to approximately \$80 million.

Any additional funds required may be raised by issuing equity or debt securities or by borrowing from banks or other resources. We cannot assure you that we will be able to obtain any additional financing on terms that are acceptable to us, or at all. If we fail to obtain additional financing on terms that are acceptable to us, we may not be able to implement such plans fully. Such financing, even if obtained, may be accompanied by conditions that limit our ability to pay dividends or require us to seek lenders' consent for payment of dividends, or restrict our ability to operate our business by requiring lender's consent for certain corporate actions. Further, if we raise additional funds through the issuance of new shares of our common stock, any existing stockholders who are unable or unwilling to participate in such an additional round of fund raising may suffer dilution of their investment.

Certain Legacy Arq shareholders and participants in the PIPE Investment hold a significant portion of the voting power of our common stock.

Certain Legacy Arq shareholders and participants in the PIPE Investment hold a significant percentage of our outstanding common stock, and such persons, acting individually or together, could have the ability to exert a substantial influence on actions requiring a stockholder vote. The influence of these significant stockholders may be used in a manner that other stockholders may not support. Any such concentration of ownership may have the effect of delaying certain corporate actions, and may consequently impact the ability of other stockholders to influence the management and policies of the Company.

Item 1B. Unresolved Staff Comments

None.

Item 1C. Cybersecurity

Definitions

- *Cybersecurity incident* means an unauthorized occurrence, or a series of related unauthorized occurrences, on or conducted through the Company's information systems that jeopardizes the confidentiality, integrity, or availability of the Company's information systems or any information residing therein.
- *Cybersecurity threat* means any potential unauthorized occurrence on or conducted through the Company's information systems that may result in adverse effects on the confidentiality, integrity, or availability of the Company's information systems or any information residing therein.
- *Information systems* means electronic information resources, owned, or used by the Company, including physical or virtual infrastructure controlled by such information resources, or components thereof, organized for the collection, processing, maintenance, use, sharing, dissemination, or disposition of the Company's information to maintain or support the registrant's operations.

Risk Management and Strategy

We have established policies and processes for assessing, identifying, and managing material risk from cybersecurity threats, and have integrated these processes into our overall risk management processes. We routinely assess material risks from cybersecurity threats, including any potential unauthorized occurrence on or conducted through our information systems that may result in adverse effects on the confidentiality, integrity, or availability of our information systems or any information residing therein.

We engage third parties in connection with our risk assessment processes. We require each third-party service provider to adhere to our internal security policies and certify that it has the ability to implement and maintain appropriate security measures, consistent with all applicable laws, to implement and maintain reasonable security measures in connection with their work with us, and to promptly report any suspected breach of its security measures that may affect our systems. These service providers are primarily overseen by our Vice President of Information Technology ("VP of IT") and assist us in monitoring and testing our safeguards, including execution of external penetration testing and ongoing real time vulnerability assessments through our extended detection and response processes to identify cybersecurity threats. We conduct risk assessments in the event of a material change in our business processes that may affect information systems that are vulnerable to such

cybersecurity threats through our normal change control processes. These risk assessments include identification of reasonably foreseeable internal and external risks, the likelihood and potential damage that could result from such risks, and the sufficiency of existing policies, procedures, systems, and safeguards in place to manage such risks.

Following these risk assessments, we re-design, implement, and maintain reasonable safeguards to minimize identified risks; reasonably address any identified gaps in existing safeguards; and regularly monitor the effectiveness of our safeguards. We devote resources and personnel, including our VP of IT, who reports to our Chief Accounting Officer, to manage the risk assessment and mitigation process.

As part of our overall risk management program, we monitor and test our safeguards and train our employees on the importance of these safeguards. We maintain a formal information security awareness training program for all employees that includes training on matters such as phishing, email security best practices and data protection. Employees also receive random phishing tests at regular intervals to further assess and mitigate overall risk.

We maintain a cybersecurity incident response plan to help ensure a timely, consistent and compliant response to actual or attempted cybersecurity incidents impacting the Company. The response plan includes (1) detection, (2) analysis, which may include timely notice to our management and audit committee chair, (3) containment, (4) eradication, (5) recovery and (6) post-incident review. Annually, we execute a tabletop exercise to test our incident response plan documentation and process execution. We also maintain cybersecurity insurance to manage potential liabilities resulting from specific cybersecurity incidents. It is important to note that although we maintain cybersecurity insurance, there can be no guarantee that our insurance coverage limits will protect us against any future claims or that such insurance proceeds will be paid to us in a timely manner.

To date there have been no cybersecurity incidents that have materially affected the Company or its operations. Despite security measures we have implemented, there is always the risk that certain cybersecurity incidents could materially disrupt operational systems limiting our ability to manufacture and deliver products to customers.

Governance

Our VP of IT has more than six years of experience in cybersecurity and oversees our cybersecurity policies and processes, including those described in "Risk Management and Strategy" above. Our VP of IT is primarily responsible for assessing and managing our material risks from cybersecurity threats, including monitoring and assessing strategic risk exposure.

While management is responsible for the day-to-day management of cybersecurity policies and procedures, the audit committee of our Board is tasked with oversight of our risk management process, which includes risks from cybersecurity threats.

Our VP of IT provides quarterly briefings to the audit committee regarding our company's cybersecurity risks and activities, including any recent cybersecurity incidents and related responses, emerging threats and updates, cybersecurity systems testing, activities of third parties, and the like. Our audit committee and VP of IT provide regular updates to the Board on such reports. In the event of an actual cybersecurity threat or incident, management and the audit committee are notified in accordance with the Company's cybersecurity response plan detailed above.

Item 2. Properties

Office and Facilities

We own or lease land and facilities in the following States:

Colorado - We lease approximately 24,000 square feet for our corporate headquarters and primary research and development laboratory, located in Greenwood Village, Colorado.

Louisiana - We own the Red River Plant, which is located on approximately 61 acres in Coushatta, Louisiana. We also lease approximately 141,000 square feet in various locations in Louisiana that are used for production, distribution and storage.

Kentucky - We lease approximately 470 acres in Corbin, Kentucky where we operate the Corbin Facility.

Mining

As of December 31, 2024, we owned or controlled, primarily through long-term leases, approximately 1,975 acres of land for surface coal mining located in Natchitoches Parish, Louisiana ("Five Forks"). The majority of the Five Forks land is leased for mineral rights and right-of-use purposes that expire at varying dates over the next 30 years and contain options to renew. The remaining land is owned by us.

We also have approximately 380 permitted acres of land at the Corbin Facility from which we recover a bituminous coal fine feedstock, which is leased through August 31, 2030 and contains options to renew for successive five year terms until all merchantable fines are removed from the premises.

Based on the materiality and the vertically-integrated company guidelines contained in Regulation S-K of the Securities Act and the Exchange Act, we have concluded that no additional disclosures related to our mining operations are required under this Item.

Item 3. Legal Proceedings

From time to time, we are involved in various litigation matters arising in the ordinary course of our business. Information with respect to this item may be found in Note 7 "Commitments and Contingencies" to the Consolidated Financial Statements included in Item 8 of this Report.

Item 4. Mine Safety Disclosures

The statement concerning mine safety violations or other regulatory matters required by Section 1503(a) of the Dodd-Frank Act and Item 104 of Regulation S-K is included in Exhibit 95 to this Report.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Market for Our Common Stock

Effective February 1, 2024, our common stock is quoted on the Nasdaq Global Market under the symbol "ARQ." Prior to that, our common stock was quoted on the Nasdaq Global Market under the symbol "ADES." There is no assurance that an active trading market will provide adequate liquidity for our existing stockholders or for persons who may acquire our common stock in the future.

Dividends

Our most recent dividend payment was in March 2020. We do not intend to declare or pay cash dividends in the foreseeable future.

Holders

The Company had 805 holders of record of our common stock as of March 3, 2025. The number of holders of record of our common stock is based upon the actual number of holders registered on the books of the Company as of such date and does not include holders of shares that are held in street name by brokers or other nominees.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

Share Repurchases

We maintain a program to repurchase up to \$20.0 million of shares of our common stock under a stock repurchase program (the "Stock Repurchase Program") through open market transactions at prevailing market prices, of which \$7.0 million remained available at December 31, 2024. No purchases were made during the three months ended December 31, 2024. It is unlikely for the foreseeable future that we will resume repurchasing shares of our common stock under the Stock Repurchase Program.

Tax Withholding

The following table contains information about common shares that we withheld from delivering to employees during the fourth quarter of 2024 to satisfy their respective tax obligations related to stock-based awards.

Period	Total Number of Common Shares Purchased	Average Price Paid per Common Share	Total Number of Common Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number (or Dollar Value) of Common Shares that May Yet Be Purchased Under the Plans or Programs
October 1, 2024 to October 31, 2024	—	—	N/A	N/A
November 1, 2024 to November 30, 2024	—	\$ —	N/A	N/A
December 1, 2024 to December 31, 2024	2,319	\$ 7.71	N/A	N/A

Item 6. Reserved

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

Overview

We are an environmental technology company and are principally engaged in the sale of consumable air, water, and soil treatment solutions primarily based on AC. Our proprietary AC products enable customers to reduce air, soil, and water contaminants, including mercury, PFAS and other pollutants to meet the challenges of existing and pending air quality, soil, and water regulations. We manufacture and sell AC and other chemicals used to capture and remove impurities, contaminants and pollutants for the coal-fired power generation, industrial, water treatment, and water and soil remediation markets, which we collectively refer to as the APT market.

Our primary products are comprised of AC, which is produced from a variety of carbonaceous raw materials. Our AC products include both PAC and GAC, among others. Additionally, we own the Five Forks Mine, a lignite coal mine that currently supplies the primary raw material for the manufacturing of our products.

In February 2023, we acquired 100% of the equity interests, assets and liabilities of the subsidiaries of Arq Limited, an environmental technology company incorporated under the laws of Jersey (hereafter the Arq Limited subsidiaries referred to as "Legacy Arq", and the acquisition itself referred to as the "Arq Acquisition") to secure access to additional U.S. based bituminous coal feedstock, a manufacturing facility located in Corbin, Kentucky (the "Corbin Facility") and certain patented processes as a means to manufacture new advanced GAC products for sale into the APT and other markets. Under this manufacturing process, we convert high-quality recovered bituminous coal fines into a purified, microfine carbon powder known as Arq powder™ ("Arq Powder") for high value applications, such as for a raw material to produce GAC products. We expect to begin using Arq Powder as a feedstock to produce high-quality GAC products by the end of the first quarter of 2025 for sale into the APT and other markets. We anticipate that our GAC products made using these highly purified recovered bituminous coal fines will have a materially lower carbon footprint than other coal-based competitor alternatives.

We believe Arq Powder has additional potential to enable us to access new markets and applications. We intend to secure customer interest in Arq Powder as an additive into other markets, such as components for asphalt. These products utilizing Arq Powder are expected to have a lower carbon footprint compared to similar products utilizing conventional materials and have demonstrated other beneficial performance attributes during lab-scale customer testing. These applications are currently in various stages of proof of concept testing or preliminary customer testing.

In February 2024, as part of a larger rebranding, the Company changed its name to Arq, Inc., and on February 1, 2024, our common stock commenced trading on the Nasdaq Global Market under the ticker symbol, "ARQ."

Drivers of Demand and Key Factors Affecting Profitability

Drivers of demand and current key factors affecting our profitability are sales of our AC products to the APT market. Our operating results are influenced by: (1) changes in our manufacturing production and sales volumes; (2) changes in price and product mix; (3) changes in coal-fired dispatch and electricity power generation sources; (4) changes in demand for contaminant removal within water treatment facilities; (5) changes in environmental regulations; and (6) state or municipal approval and customer acceptance for our new GAC products.

Components of Revenue, Expenses and Equity Method Investees

The following narrative briefly describes the components of revenue and expenses as presented in the Consolidated Statements of Operations. Descriptions of the revenue recognition policies are included in Note 1 to the Consolidated Financial Statements included in Item 8 of this Report.

Revenue and cost of revenue

Revenue

Our revenue is comprised of the sale of AC products and other chemical-based technology products into the APT market, as well as the sale of other AC products to our largest customer, who services other diverse markets.

Cost of revenue

Cost of revenue is comprised of all labor, fringe benefits, subcontract labor, additive and coal costs, materials, equipment, supplies, travel costs and any other costs and expenses directly related to the cost of production of consumables.

License Royalties Payable to Tinnuum Group

In December 2022, the Company and Tinnuum Group entered into an agreement (the "Tinnuum Group Royalty Agreement") whereby we pay Tinnuum Group a royalty (the "Tinnuum Group Royalty") for certain of our sales of M-Prove™ products after the expiration of the tax credit program under IRC Section 45 ("Section 45 Tax Credit Program") (beginning January 1, 2022) to certain refined coal production facilities owned and operated by Tinnuum Group (the "Refined Coal Facilities"). The Tinnuum Group Royalty is calculated based on "Net Profit" (as defined in the Tinnuum Royalty Agreement) on our sales of M-Prove™ product to certain of the Refined Coal Facilities. The Tinnuum Group Royalty Agreement is for an initial term of five years with automatic renewals of five years unless we and Tinnuum Group agree to terminate it. The Tinnuum Group Royalty is included in Consumables cost of revenue.

Other Operating Expenses

Selling, general and administrative

Selling, general and administrative costs include payroll and benefits costs, legal and professional fees, and general and administrative expenses.

Payroll and benefits costs include payroll costs, payroll-related fringe benefits and stock-based compensation expense of sales and administrative personnel, but exclude such costs related to direct labor that are included in Cost of revenue. Payroll costs, payroll-related fringe benefits, and stock-based compensation expense of research and development personnel are reported in the Research and development line item in the Consolidated Statements of Operations.

Legal and professional costs include external legal, audit and consulting expenses.

General and administrative costs include director fees and expenses, bad debt expense, rent and occupancy expense and other general costs of conducting business.

Research and development

Research and development costs include payroll expenses related to research and development personnel and other expenses incurred related to research and development activities. Research and development costs provided by third parties, net of reimbursements from cost-sharing arrangements, are charged to expense in the period incurred.

Depreciation, amortization, depletion and accretion

Depreciation and amortization expense consists of depreciation expense related to property, plant and equipment and the amortization of long-lived intangible assets. Depletion and accretion expense consists of depletion expense related to the depletion of mine development costs and the accretion of mine reclamation liabilities.

Other (Expense) Income, net

Earnings from equity method investments

Earnings from equity method investments represent our share of earnings related to equity method investments, and in 2023 and 2024, primarily from Tinnuum Group. Through December 31, 2021, we had substantial earnings from Tinnuum Group and Tinnuum Services, LLC ("Tinnuum Services"). With the expiration of the tax credit program under IRC Section 45 afforded to producers of refined coal as of December 31, 2021, both Tinnuum Group and Tinnuum Services commenced winding down their operations related to the Section 45 tax credit program. We have recognized earnings in both 2023 and 2024 related to residual cash distributions received from Tinnuum Group. Tinnuum Services ceased operations and completed its wind down in 2024.

Other (expense) income

The remaining components of other (expense) income include interest income, interest expense and other miscellaneous items.

Results of Operations

Presentation of Financial Results

For comparison purposes, the following tables set forth our results of operations for the years presented in the Consolidated Financial Statements included in Item 8 of this Report. The year-to-year comparison of financial results is not necessarily indicative of financial results that may be achieved in future years. This discussion and analysis compares 2024 results to 2023 results. For discussion and analysis that compares 2023 results to 2022 results, see Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations in Part II of our Annual Report on Form 10-K for the year ended December 31, 2023.

Year ended December 31, 2024 Compared to Year ended December 31, 2023

Total Revenue and Cost of Revenue

A summary of the components of revenue and cost of revenue for the years ended December 31, 2024 and 2023 is as follows:

<i>(Amounts in thousands except percentages)</i>	Years Ended December 31,		Change	
	2024	2023	(\$)	(%)
Revenue	\$ 108,959	\$ 99,183	\$ 9,776	10 %
Cost of revenue, exclusive of depreciation and amortization	\$ 69,515	\$ 67,323	\$ 2,192	3 %

Revenue and cost of revenue

For the years ended December 31, 2024 and 2023, revenue increased year over year primarily driven by the impact of favorable product mix of approximately \$6.9 million and improved pricing for our products of approximately \$4.9 million. These increases were partially offset by lower volumes sold, which negatively impacted revenue by \$2.2 million. Product volumes decreased among power generation customers in 2024, primarily due to lower natural gas prices compared to 2023, which contributed to decreased utilization of coal-fired generation and decreased demand for our products. Also offsetting the overall increase was a decrease in revenue recognized from the settlement of certain contracts with customers containing minimum quantity purchases ("MQ Contracts").

Consumables gross margin, exclusive of depreciation and amortization, increased for the year ended December 31, 2024 compared to 2023. The increase in gross margin was primarily driven by an increase in revenue resulting from increased pricing of our products, while the cost to manufacture our products increased between periods, partially due to increased variable production costs on lower production volumes during 2024. Our consumables gross margin was negatively impacted by a decrease in volumes sold and lower revenue recognized from MQ Contracts in 2024 compared to 2023.

We currently expect consumables revenue to increase in the coming years as a result of increased regulatory requirements finalized by the EPA in April 2024, especially with respect to PFAS substances. However, there is substantial uncertainty regarding the future of these regulations in light of the change in the U.S. presidential administration. See "Legislation and Environmental Regulations" included in Item 1 and our risk factor discussion in Item 1A of this Report for further information.

Consumables revenue continues to be affected by electricity demand, driven by seasonal weather and related power generation needs, as well as competitor prices related to alternative power generation sources such as natural gas and renewables.

Operating Expenses

A summary of the components of our operating expenses, exclusive of cost of revenue items (presented above), for the years ended December 31, 2024 and 2023 is as follows:

<i>(in thousands, except percentages)</i>	Years Ended December 31,		Change	
	2024	2023	(\$)	(%)
Operating expenses:				
Selling, general and administrative	\$ 28,695	\$ 34,069	\$ (5,374)	(16)%
Research and development	4,050	3,314	736	22 %
Depreciation, amortization, depletion and accretion	8,594	10,543	(1,949)	(18)%
Loss (gain) on sale of assets	64	(2,731)	2,795	*
	<u>\$ 41,403</u>	<u>\$ 45,195</u>	<u>\$ (3,792)</u>	(8)%

* Percent change in excess of 100% not considered meaningful.

Selling, general and administrative

A summary of the components of selling, general and administrative expenses for the years ended December 31, 2024 and 2023, exclusive of cost of revenue items (presented above), is as follows:

<i>(in thousands, except percentages)</i>	Years Ended December 31,		Change	
	2024	2023	(\$)	(%)
Payroll and benefits	\$ 9,507	\$ 13,491	\$ (3,984)	(30)%
Legal and professional fees	5,587	9,210	(3,623)	(39)%
General and administrative	13,601	11,368	2,233	20 %
Total Selling, general and administrative	<u>\$ 28,695</u>	<u>\$ 34,069</u>	<u>\$ (5,374)</u>	(16)%

Payroll and benefits

Payroll and benefits expenses decreased year over year primarily due to expenses recorded during the year ended December 31, 2023 relating to severance expense of former executives, which comprised \$1.7 million of the total payroll and benefit expense, and \$1.1 million related to severance expense of former executives of Legacy Arq. Additionally, salaries and wages and other benefit-related expenses decreased by \$1.0 million year over year primarily as a result of lower CEO compensation beginning in July 2023.

Legal and professional fees

Legal and professional fees decreased year over year primarily from decreased consulting, legal, and accounting costs incurred related to the acquisition of Legacy Arq during 2023.

General and administrative

General and administrative expenses increased year over year by approximately \$2.2 million, primarily due to increases in franchise & use tax expenses, rent and occupancy expenses, outside construction-related labor and license and fee expenses, partially offset by decreases in property and liability insurance.

Research and development

Research and development expenses increased year over year primarily due to increased research and development payroll costs and conducting product qualification testing with potential lead-adopters as part of our GAC contracting process.

Depreciation, amortization, depletion and accretion

Depreciation, amortization, depletion and accretion expense decreased by approximately \$1.9 million year over year primarily due to higher absorption of depreciation into cost of goods sold during 2024 compared to 2023, which resulted in lower expense of \$2.0 million for the year ended December 31, 2024, and decreased amortization of leasehold improvements, customer relationships and developed technology of \$0.6 million. These decreases were partially offset by an increase in depreciation expense for property, plant and equipment acquired and placed in service during 2024.

Loss (gain) on sale of assets

For the year ended December 31, 2023, we recognized a one-time gain of \$2.7 million on the sale of Marshall Mine, LLC. Loss on sale of assets was not significant for the year ended December 31, 2024.

Other (Expense) Income, net

A summary of the components of our other (expense) income, net for the years ended December 31, 2024 and 2023 is as follows:

(Amounts in thousands, except percentages)	Years Ended December 31,		Change	
	2024	2023	(\$)	(%)
Other (expense) income:				
Earnings from equity method investments	\$ 127	\$ 1,623	\$ (1,496)	(92)%
Interest expense	(3,257)	(3,014)	(243)	8 %
Loss on extinguishment of debt	(1,422)	—	(1,422)	*
Other	1,238	2,630	(1,392)	(53)%
Total other (expense) income	<u>\$ (3,314)</u>	<u>\$ 1,239</u>	<u>\$ (4,553)</u>	*

* Percent change in excess of 100% not considered meaningful.

Earnings from equity method investments

The following table presents the equity method earnings for the years ended December 31, 2024 and 2023:

(in thousands)	Years Ended December 31,		Change	
	2024	2023	(\$)	(%)
Earnings from Tinnium Group	\$ 127	\$ 1,148	\$ (1,021)	(89)%
Earnings from Tinnium Services	—	475	(475)	(100)%
Earnings from equity method investments	<u>\$ 127</u>	<u>\$ 1,623</u>	<u>\$ (1,496)</u>	(92)%

Earnings from equity method investments for the year ended December 31, 2024 represented cash distributions from Tinnium Group. Earnings from equity method investments for the year ended December 31, 2023 represented cash distributions received from both Tinnium Group and Tinnium Services. Tinnium Group continues to wind down their services into 2025. The Tinnium Group Royalty Agreement expires at the end of 2027, with an option to extend. We do not expect further distributions from Tinnium Services as Tinnium Services has completed its wind-down.

Interest expense

Interest expense increased for the year ended December 31, 2024 compared to the corresponding period in 2023 primarily due to paid in kind interest on the \$10 million term loan with CF Global (the "CFG Loan"), which accrues to the principal portion and is payable upon the termination of the CFG Loan. The CFG Loan was paid in full in December 2024, and the loan agreement was terminated.

Loss on extinguishment of debt

Loss on extinguishment of debt increased year over year due to the write-off of deferred financing costs associated and unamortized debt discount with the termination of the CFG Loan.

Other

The decrease in Other year over year is primarily driven by a decrease in interest income of \$0.7 million as a result of lower cash on hand in 2024, and was driven by increased capital expenditures during 2024.

Income tax (benefit) expense

For the year ended December 31, 2024, we reported income tax benefit of \$0.2 million and an effective tax rate of 3%. The difference between our reported income tax benefit and the expected federal benefit of \$1.1 million, as a result of pretax loss recognized for the year ended December 31, 2024, was primarily due to an increase in the valuation allowance on our deferred tax assets offset by the benefit of permanent differences related to stock-based compensation.

For the year ended December 31, 2023, we reported income tax expense of \$0.2 million and an effective rate of (1)%. The difference between our reported income tax expense and the expected federal benefit of 2.5 million, as a result of pretax loss recognized for the year ended December 31, 2024, was primarily due to the expense of permanent differences related to acquisition-related costs and an increase in the valuation allowance on our deferred tax assets.

Accounting for income taxes requires that companies assess whether a valuation allowance should be recorded against their deferred tax asset based on an assessment of the amount of the deferred tax asset that is "more likely than not" to be realized. Valuation allowances are established, when necessary, to reduce deferred tax assets to the amount that is more likely than not to be realized.

We assess a valuation allowance recorded against deferred tax assets at each reporting date. The determination of whether a valuation allowance for deferred tax assets is appropriate requires the evaluation of positive and negative evidence that can be objectively verified. Consideration must be given to all sources of taxable income available to realize the deferred tax asset, including, as applicable, the future reversal of existing temporary differences, future taxable income forecasts exclusive of the reversal of temporary differences and carryforwards, taxable income in carryback years and tax planning strategies. In estimating taxes, we assess the relative merits and risks of the appropriate tax treatment of transactions taking into account statutory, judicial, and regulatory guidance.

As of December 31, 2024, we concluded it is more likely than not we will not generate sufficient taxable income within the allowable carryforward periods to realize any of our net deferred tax assets, and fully reserved for such assets as of December 31, 2024. In reaching this conclusion, we primarily considered our pretax losses incurred over a cumulative three-year look-back period. As of December 31, 2024 and 2023, we had a valuation allowance of \$101.6 million and \$98.8 million, respectively, on our deferred tax assets.

The ability to recognize the remaining deferred tax assets that continue to be subject to a valuation allowance is evaluated on a quarterly basis to determine if there are any significant events that would affect the ability to utilize those deferred tax assets. Our estimate of future taxable income or losses is based on internal projections that consider historical performance, assumptions on future performance and external data. If events are identified that affect our ability to utilize our deferred tax assets, or if additional deferred tax assets are generated, we update our analysis to determine if an increase to a valuation allowance is required. Such an increase could have a material adverse effect on our financial condition and results of operations. Conversely, better than expected results and continued positive results and trends could result in a decrease to a valuation allowance, and any such decreases could have a material positive effect on our financial condition and results of operations.

See additional discussion in Note 12 of the Consolidated Financial Statements included in Item 8 of this Report.

Tax Assets

As of December 31, 2024, we had approximately \$86.1 million in tax credit carryforwards. In the hypothetical event of an "ownership change," as defined by IRC Sections 382, utilization of general business credits ("Tax Credits") generated prior to the change would be subject to an annual limitation imposed by IRC Section 383 for Tax Credits. In connection with the equity offerings completed at various dates during 2024, we issued additional shares of our common stock. We performed an IRC Section 382 analysis as of those dates and determined that we had not experienced an ownership change as of those dates.

Prior to the Acquisition Date, Legacy Arq completed numerous equity offerings that resulted in ownership changes. We have not completed a formal IRC Section 382 analysis of Legacy Arq equity changes from its inception through the Acquisition Date, however, we believe that one or more "ownership changes" occurred during this time period as defined under Sections 382 and 383 and that a portion or all the Legacy Arq Tax Assets may be subject to an annual limitation.

Non-GAAP Financial Measures

To supplement our financial information presented in accordance with U.S. Generally Accepted Accounting Principles ("GAAP"), we provide certain supplemental financial measures, including EBITDA and Adjusted EBITDA, which are measurements that are not calculated in accordance with GAAP. EBITDA is defined as earnings before interest, taxes, depreciation and amortization, and Adjusted EBITDA is defined as EBITDA reduced by the non-cash impact of equity earnings from equity method investment, loss on extinguishment of debt, loss (gain) on sale of assets, increased by cash distributions from equity method investments, loss on change in estimate, asset retirement obligations and charges incurred in as a result of our financing activities. EBITDA and Adjusted EBITDA should be considered in addition to, and not as a substitute for, net income in accordance with GAAP as a measure of performance. See below for a reconciliation from Net income, the nearest GAAP financial measure, to EBITDA and Adjusted EBITDA.

We believe that the EBITDA and Adjusted EBITDA measures are less susceptible to variances that affect our operating performance. We include these non-GAAP measures because management uses them in the evaluation of our operating performance, and believe such measures facilitate comparison of operating results between periods. We believe the non-GAAP measures provide useful information to both management and users of the financial statements by excluding certain expenses, gains, and losses which can vary widely across different industries or among companies within the same industry and may not be indicative of core operating results and business outlook.

EBITDA and Adjusted EBITDA

The following table reconciles net loss, our most directly comparable as-reported financial measure calculated in accordance with GAAP to EBITDA, Adjusted EBITDA and (Adjusted EBITDA Loss).

(in thousands)	Year ended December 31,	
	2024	2023
Net loss ⁽¹⁾	\$ (5,109)	\$ (12,249)
Depreciation, amortization, depletion and accretion	8,594	10,543
Amortization of Upfront Customer Consideration	508	508
Interest expense, net	2,154	1,168
Income tax (benefit) expense	(164)	153
EBITDA	5,983	123
Cash distributions from equity method investees	127	1,623
Equity earnings	(127)	(1,623)
Loss on extinguishment of debt	1,422	—
Loss (gain) on sale of assets	64	(2,695)
Gain on change in estimate, asset retirement obligation	—	(37)
Financing costs	275	—
Adjusted EBITDA (Adjusted EBITDA Loss)	\$ 7,744	\$ (2,609)

⁽¹⁾ Included in Net loss for the year ended December 31, 2023 was \$4.9 million of transaction and integration costs incurred related to the Arq Acquisition, \$4.9 million of Legacy Arq payroll and benefit costs and \$1.7 million of severance expense related to three executive employees.

Liquidity and Capital Resources

Current Capital Resources and Factors Affecting Our Liquidity

For the year ended December 31, 2024, our principal sources of liquidity consisted of:

- cash on hand, excluding restricted cash of \$8.7 million primarily pledged as collateral under a surety bond agreement;
- cash flows from operations of \$10.5 million;
- proceeds received from issuance and sale of our common stock, which totaled \$42.4 million in the current year; and
- availability of \$16.2 million under our recent \$30.0 million secured revolving credit facility (the "Revolving Credit Facility").

For the year ended December 31, 2024, our principal uses of liquidity included:

- capital expenditures, including those related to the Red River Plant expansion and commissioning of the Corbin Facility;
- our business operating expenses;
- payments on our lease obligations; and
- payments on our debt obligations, including the extinguishment of the CFG Loan principal and accrued interest in the amount of \$11.1 million.

Tinum Group and Tinum Services Distributions

The following table summarizes the cash distributions from our equity method investments for the years ended December 31, 2024 and 2023:

(in thousands)	Year ended December 31,	
	2024	2023
Tinum Group	\$ 127	\$ 1,148
Tinum Services	—	475
Distributions from equity method investees	<u>\$ 127</u>	<u>\$ 1,623</u>

Cash distributions from Tinum Group and Tinum Services for 2024 decreased by \$1.5 million compared to 2023, as both Tinum Group and Tinum Services ceased material operations as of December 31, 2021, and began wind-down of their business at that time. Tinum Group continues to wind down their services into 2025; the Tinum Group Royalty Agreement currently remains active through 2027 with options to extend. We do not expect further distributions from Tinum Services as Tinum Services has completed its wind-down.

Cash Flows

Cash and restricted cash decreased from \$54.2 million as of December 31, 2023, to \$22.2 million as of December 31, 2024, a decrease of \$31.9 million. The following table summarizes our cash flows for the years ended December 31, 2024 and 2023, respectively:

(in thousands)	Years Ended December 31,		
	2024	2023	Change
Cash provided by (used in):			
Operating activities	\$ 10,477	\$ (16,653)	\$ 27,130
Investing activities	(85,074)	(28,535)	(56,539)
Financing activities	42,679	22,909	19,770
Net change in Cash and Restricted Cash	<u>\$ (31,918)</u>	<u>\$ (22,279)</u>	<u>\$ (9,639)</u>

Cash flows from operating activities

Cash flows provided by operating activities for the year ended December 31, 2024 was \$10.5 million compared to cash flows used in operating activities of \$16.7 million for the year ended December 31, 2023. The increase in cash provided by operating activities was primarily due to the following: (1) a decrease in net loss of \$7.1 million year over year; (2) a net increase in working capital of \$17.8 million primarily as a result of significant payments made in 2023 on accounts payable and accrued expenses assumed in the Arq Acquisition, (3) a one-time \$2.7 million gain on the sale of the Marshall Mine, LLC in 2023, and (4) a decrease in Earnings from equity method investments of \$1.5 million. Partially offsetting the net increase in cash flows used in operating activities year over year was a decrease in Depreciation, amortization, depletion and accretion of \$1.9 million.

Cash flows from investing activities

Cash flows used in investing activities for the year ended December 31, 2024 was \$85.1 million compared to cash flows used in investing activities of \$28.5 million for the year ended December 31, 2023. The increase in cash used was primarily due to an increase in acquisition of property, equipment and intangibles, net, of \$57.7 million primarily related to capital expenditures for our Red River Plant expansion, \$2.2 million cash acquired as part of the Legacy Arq Acquisition in 2023, and a decrease in distributions from equity earnings in excess of cumulative earnings of \$1.5 million. Partially offsetting the net increase in cash flows used in investing activities year over year was a payment of \$2.2 million related to the disposal of Marshall Mine, LLC in 2023 and a decrease in mine development costs of \$2.5 million.

Cash flows from financing activities

Cash flows provided by financing activities for the year ended December 31, 2024 increased by \$19.8 million compared to the year ended December 31, 2023 primarily due to proceeds from the issuance and sale of our common stock in a public offering of \$26.7 million and a net increase in borrowings year over year of \$5.3 million associated with a borrowing on the Revolving Credit Facility in 2024 that exceeded proceeds from the CFG Loan in 2023. These increases were offset by decreases due to the prepayment of the principal of the CFG Loan of \$10.0 million in 2024 and a net decrease in proceeds from common stock issued and sold in private placements of \$0.5 million year over year. Additional decreases in cash flows year over year provided by financing activities were due to costs associated with extinguishment of the CFG Loan and associated financing costs for the Revolving Credit Facility, both in 2024.

Material Cash Requirements

Our ability to continue to generate sufficient cash flow required to meet ongoing operational needs and obligations depends upon several factors. These include executing on our contracts and initiatives and increasing our share of the market for APT consumables, including expanding our overall AC business into additional adjacent markets and increasing our gross margin from improving our customer and product mix.

Based on current operating levels, we expect that our cash on hand and borrowing availability on the Revolving Credit Facility as of December 31, 2024 will provide sufficient liquidity to fund operations for the next 12 months.

Capital expenditures

We are targeting the first quarter of 2025 for the completion of our Red River Plant expansion which is necessary to commence production of our new GAC products. To meet this target, we have incurred and may continue to incur substantial capital spend in excess of our originally forecasted amount for additional equipment, labor, and project costs. The Company anticipates financing the timely completion of the project funded with cash on hand, borrowing availability on the Revolving Credit Facility, and ongoing cost reduction initiatives.

During 2025, we expect our capital expenditures to primarily relate to the completion of the Red River Project. Capital expenditures planned for 2025 are dependent on many factors, including the approval of certain environmental permits, and the pace and progression of the project, which may impact the timing and amount of capital expenditures.

Surety Bonds

As of December 31, 2024, we had outstanding surety bonds with regulatory commissions totaling \$11.1 million primarily related to the Five Forks Mine and the Corbin Facility. As of December 31, 2024, and as required by our surety bond provider, we held restricted cash of \$8.5 million pledged as collateral related to performance requirements required under a reclamation contract for the Five Forks Mine and the Corbin Facility. We expect that the obligations secured by these surety bonds will be performed in the ordinary course of business and in accordance with the applicable contractual terms. To the extent that the

obligations are performed, the related surety bonds may be released and collateral requirements may be reduced. However, in the event any surety bond is called, our indemnity obligations could require us to reimburse the surety bond provider.

Long Term Requirements

For a discussion of our long-term cash requirements, see Item 8, Note 5 of this Report.

Contractual Obligations

Contractual obligations as of December 31, 2024 are as follows:

<i>(in thousands)</i>	Payment Due by Period				
	Total	Less than 1 year	1-3 years	4-5 years	After 5 years
CTB Loan	\$ 12,303	\$ 1,110	\$ 2,220	\$ 2,220	\$ 6,753
Finance lease obligations	1,392	935	457	—	—
Operating lease obligations	16,206	3,128	4,606	2,438	6,034
	<u>\$ 29,901</u>	<u>\$ 5,173</u>	<u>\$ 7,283</u>	<u>\$ 4,658</u>	<u>\$ 12,787</u>

The table above excludes our asset retirement obligation ("ARO") related to reclamation of the Five Forks Mine, as the timing and amount of payments to satisfy the ARO are uncertain and are based on numerous factors including, but not limited to, the expected closure date of the Five Forks Mine. As of December 31, 2024, our Consolidated Balance Sheet reflects a liability for ARO related to reclamation of the Five Forks Mine of \$4.5 million. The table above also excludes amounts outstanding under our Revolving Credit Facility, as the timing and amount of repayments are uncertain and are based on the nature and timing of our operating cash flows. Our outstanding borrowings under the Revolving Credit Facility were \$13.8 million as of December 31, 2024. Additionally, the table above excludes construction costs related to the Red River Plant expansion referred to under the "Capital Expenditures" caption above, as the timing and amount of payments to satisfy these obligations are conditional and based on numerous factors including, but not limited to, the pace of construction activities and the timing of mechanical completion of the Red River Plant expansion.

Critical Accounting Policies and Estimates

Our significant accounting policies are discussed in Note 1 to the Consolidated Financial Statements included in Item 8 of this Report. In presenting our financial statements in conformity with GAAP, we are required to make estimates and assumptions that affect the amounts reported therein. Several of the estimates and assumptions we are required to make relate to matters that are inherently uncertain as they pertain to future events. Our estimates are based on historical experience and other assumptions believed to be reasonable under the circumstances, and we evaluate these estimates on an ongoing basis. Actual results may differ from these estimates under different assumptions or conditions.

We believe that the accounting estimates discussed below are critical to understanding our historical and future performance, as these estimates relate to the more significant areas involving management's judgments and estimates.

Business Combinations, including asset acquisitions

We apply the acquisition method to acquisitions of both businesses and assets and allocate the purchase price to the tangible and intangible assets acquired and liabilities assumed based on their estimated fair values at the acquisition date. The purchase price allocation process requires us to make significant estimates and assumptions with respect to assets acquired and liabilities assumed. We believe the assumptions and estimates we make are reasonable, they are based in part on historical experience, market conditions and information obtained from management of the acquired company or group of assets and are inherently uncertain.

Examples of critical estimates in valuing certain of long-lived assets, including intangible assets, we have acquired or may acquire in the future include but are not limited to:

- future expected cash flows from revenue;
- the acquired company's developed technology as well as assumptions about the period of time the acquired developed technology will continue to be used in the combined company's product portfolio;
- the expected use and useful lives of the acquired assets; and

- valuation methods and discount rates used in estimating the values of the assets acquired and liabilities assumed.

Carrying value of long-lived assets and intangibles

We review and evaluate our long-lived assets and intangibles for impairment at least annually, or more frequently when events or changes in circumstances indicate that the related carrying amounts may not be recoverable. An impairment loss is measured and recorded for long-lived assets and intangibles based on the excess of their carrying amounts over their estimated fair values. Fair value is typically determined through the use of an income approach utilizing estimates of discounted pretax future cash flows or a market approach utilizing recent transaction activity for comparable assets.

Asset Retirement Obligations

Accounting for AROs requires us to make estimates of future costs unique to a specific mining operation that we will incur to complete the reclamation and remediation work required to comply with existing laws and regulations. Any such changes in future costs, the timing of reclamation activities, scope or the exclusion of certain costs not considered reclamation and remediation costs could materially impact the amounts charged to earnings for reclamation and remediation. Additionally, future changes to environmental laws and regulations could increase the scope of reclamation and remediation work required.

Reclamation costs related to AROs are allocated to expense over the life of the related mine assets and are periodically adjusted to reflect changes in the estimated present value resulting from the passage of time and revisions to the estimates of either the timing or amount of the reclamation costs. Remediation costs are accrued based on management's best estimate of the costs expected to be incurred. Such cost estimates may include ongoing care, maintenance and monitoring costs. Reclamation obligations are based on the timing of estimated spending for an existing environmental disturbance. We review, on at least an annual basis, the future expected costs and the timing of such costs for AROs.

Income Taxes

We account for income taxes under the asset and liability method, which requires judgment in determining income tax expense and the related balance sheet amounts. This includes estimating and analyzing historical and projected future operating results, the reversal of taxable temporary differences, tax planning strategies, and the ultimate outcome of uncertain income tax positions. Actual income taxes paid may vary from estimates depending on changes in income tax laws, actual results of operations, state apportionment and, if applicable, final audits of tax returns by taxing authorities. Tax assessments may arise several years after tax returns have been filed. Changes in the estimates and assumptions used for calculating income tax expense and potential differences in actual results from estimates could have a material impact on our results of operations and financial condition.

We recognize deferred tax assets to the extent that we believe these assets are more likely than not to be realized. In making such a determination, we consider all available positive and negative evidence, including future reversals of existing taxable temporary differences, projected future taxable income, tax-planning strategies and results of recent operations.

We establish a valuation allowance against our deferred tax assets when, based upon the weight of all available evidence, we believe it is more likely than not that some portion or all of the deferred tax assets will not be realized. In making this determination, we consider the relative impact of all of the available positive and negative evidence regarding future sources of taxable income and tax planning strategies. However, there could be a material impact to our effective tax rate if there is a significant change in our estimates of future taxable income. If and when our estimates change, or there is a change in the value of deferred tax assets or liabilities warranting the need to reassess the realizability of deferred tax assets, we adjust a valuation allowance through the provision for income taxes in the period in which this determination is made. Refer to Note 12 of our Consolidated Financial Statements included in Item 8 of this Report for additional information regarding our deferred tax assets and liabilities.

Recently Issued Accounting Standards

Refer to Note 1 of the Consolidated Financial Statements included in Item 8 of this Report for information regarding recently issued accounting standards.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

The information under this Item is not required to be provided by smaller reporting companies.

Item 8. Financial Statements and Supplementary Data

Arq, Inc.

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Arq, Inc.

Consolidated Financial Statements:

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Report of Independent Registered Public Accounting Firm

The Shareholders and the Board of Directors
Arq, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Arq, Inc. (and subsidiaries) (the Company) as of December 31, 2024 and 2023, the related consolidated statements of operations, changes in stockholders' equity and cash flows for each of the years then ended, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Company as of December 31, 2024 and 2023, and the consolidated results of its operations and its cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2024, based on criteria established in *Internal Control – Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 5, 2025, expressed an unqualified opinion on the Company's internal control over financial reporting.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures to respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

Critical audit matters are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that (1) relate to accounts or disclosures that are material to the financial statements; and (2) involved our especially challenging, subjective, or complex judgments. We determined that there are no critical audit matters.

/s/ Moss Adams LLP

Denver, Colorado
March 5, 2025

We have served as the Company's auditor since 2017.

Arq, Inc. and Subsidiaries
Consolidated Balance Sheets

<i>(in thousands, except share data)</i>	As of December 31,	
	2024	2023
ASSETS		
Current assets:		
Cash	\$ 13,516	\$ 45,361
Receivables, net	14,876	16,192
Inventories, net	19,314	19,693
Prepaid expenses and other current assets	4,650	5,215
Total current assets	<u>52,356</u>	<u>86,461</u>
Restricted cash, long-term	8,719	8,792
Property, plant and equipment, net of accumulated depreciation of \$26,619 and \$19,293, respectively	178,564	94,649
Other long-term assets, net	44,729	45,600
Total Assets	<u><u>\$ 284,368</u></u>	<u><u>\$ 235,502</u></u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable and accrued expenses	\$ 21,017	\$ 14,603
Revolving credit facility	13,828	—
Current portion of long-term debt obligations	1,624	2,653
Other current liabilities	8,184	5,792
Total current liabilities	<u>44,653</u>	<u>23,048</u>
Long-term debt obligations, net of current portion	9,370	18,274
Other long-term liabilities	13,069	15,780
Total Liabilities	<u>67,092</u>	<u>57,102</u>
Commitments and contingencies (Note 7)		
Stockholders' equity:		
Preferred stock: par value of \$0.001 per share, 50,000,000 shares authorized, none issued or outstanding	—	—
Common stock: par value of \$0.001 per share, 100,000,000 shares authorized, 46,639,930 and 37,791,084 shares issued, and 42,021,784 and 33,172,938 shares outstanding at December 31, 2024 and 2023, respectively	47	38
Treasury stock, at cost: 4,618,146 and 4,618,146 shares as of December 31, 2024 and 2023, respectively	(47,692)	(47,692)
Additional paid-in capital	198,487	154,511
Retained earnings	66,434	71,543
Total Stockholders' Equity	<u>217,276</u>	<u>178,400</u>
Total Liabilities and Stockholders' Equity	<u><u>\$ 284,368</u></u>	<u><u>\$ 235,502</u></u>

See Notes to the Consolidated Financial Statements.

Arq, Inc. and Subsidiaries
Consolidated Statements of Operations

<i>(in thousands, except per share data)</i>	Years Ended December 31,	
	2024	2023
Revenue	\$ 108,959	\$ 99,183
Cost of revenue, exclusive of depreciation and amortization	69,515	67,323
Operating expenses:		
Selling, general and administrative	28,695	34,069
Research and development	4,050	3,314
Depreciation, amortization, depletion and accretion	8,594	10,543
Loss (gain) on sale of assets	64	(2,731)
Total operating expenses	41,403	45,195
Operating loss	(1,959)	(13,335)
Other (expense) income:		
Earnings from equity method investments	127	1,623
Interest expense	(3,257)	(3,014)
Loss on extinguishment of debt	(1,422)	—
Other	1,238	2,630
Total other (expense) income	(3,314)	1,239
Loss before income taxes	(5,273)	(12,096)
Income tax (benefit) expense	(164)	153
Net loss	<u>\$ (5,109)</u>	<u>\$ (12,249)</u>
Loss per common share (Note 1):		
Basic	\$ (0.14)	\$ (0.42)
Diluted	\$ (0.14)	\$ (0.42)
Weighted-average number of common shares outstanding:		
Basic	36,051	29,104
Diluted	36,051	29,104

See Notes to the Consolidated Financial Statements.

Arq, Inc. and Subsidiaries
Consolidated Statements of Changes in Stockholders' Equity

	Common Stock		Treasury Stock		Additional Paid-in Capital	Retained Earnings/ (Accumulated Deficit)	Total Stockholders' Equity
<i>(in thousands, except share data)</i>	Shares	Amount	Shares	Amount			
Balances, January 1, 2023	23,788,319	\$ 24	(4,618,146)	\$ (47,692)	\$ 103,698	\$ 83,949	\$ 139,979
Issuance of common stock upon conversion of preferred stock	5,362,926	5	—	—	18,921	—	18,926
Issuance of common stock related to private placement transaction, net of offering costs	3,842,315	4	—	—	15,216	—	15,220
Issuance of common stock pursuant to Arq Acquisition, net of offering costs	3,814,864	4	—	—	12,433	—	12,437
Stock-based compensation	572,056	—	—	—	2,648	—	2,648
Issuance of common stock to related party	527,779	1	—	—	999	—	1,000
Repurchase of common shares to satisfy minimum tax withholdings	(117,175)	—	—	—	(230)	—	(230)
Issuance of warrant	—	—	—	—	826	—	826
Preferred stock dividends declared on redeemable preferred stock	—	—	—	—	—	(157)	(157)
Net loss	—	—	—	—	—	(12,249)	(12,249)
Balances, December 31, 2023	37,791,084	\$ 38	(4,618,146)	\$ (47,692)	\$ 154,511	\$ 71,543	\$ 178,400
Issuance of common stock in public offering, net of offering costs	5,485,500	5	—	—	26,649	—	26,654
Issuance of common stock related to private placement transaction, net of offering costs	2,142,858	2	—	—	14,949	—	14,951
Stock-based compensation	616,684	1	—	—	2,714	—	2,715
Issuance of common stock to related party	422,221	1	—	—	799	—	800
Exercise of warrant, net	324,955	—	—	—	—	—	—
Repurchase of common shares to satisfy minimum tax withholdings	(143,372)	—	—	—	(1,135)	—	(1,135)
Net loss	—	—	—	—	—	(5,109)	(5,109)
Balances, December 31, 2024	46,639,930	\$ 47	(4,618,146)	\$ (47,692)	\$ 198,487	\$ 66,434	\$ 217,276

See Notes to the Consolidated Financial Statements.

Arq, Inc. and Subsidiaries
Consolidated Statements of Cash Flows

<i>(in thousands)</i>	Years Ended December 31,	
	2024	2023
Cash flows from operating activities		
Net loss	\$ (5,109)	\$ (12,249)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:		
Depreciation, amortization, depletion and accretion	8,594	10,543
Stock-based compensation expense	2,715	2,648
Operating lease expense	2,004	2,757
Loss from extinguishment of debt	1,422	—
Amortization of debt discount and debt issuance costs	601	546
Loss (gain) on sale of assets	64	(2,731)
Earnings from equity method investments	(127)	(1,623)
Other non-cash items, net	37	(75)
Changes in operating assets and liabilities:		
Receivables and related party receivables	1,316	(2,264)
Prepaid expenses and other assets	1,166	4,777
Inventories, net	1,636	(2,571)
Other long-term assets, net	(2,166)	(4,762)
Accounts payable and accrued expenses	216	(12,061)
Other current liabilities	1,144	(184)
Operating lease liabilities	(1,272)	(168)
Other long-term liabilities	(1,764)	764
Net cash provided by (used in) operating activities	10,477	(16,653)
Cash flows from investing activities		
Acquisition of property, plant, equipment and intangible assets, net	(85,170)	(27,516)
Acquisition of mine development costs	(181)	(2,690)
Proceeds from sale of property and equipment	150	—
Distributions from equity method investees in excess of cumulative earnings	127	1,623
Cash and restricted cash acquired in business acquisition	—	2,225
Payment for disposal of Marshall Mine, LLC	—	(2,177)
Net cash used in investing activities	(85,074)	(28,535)

(in thousands)	Years Ended December 31,	
	2024	2023
Cash flows from financing activities		
Net proceeds from common stock issued in public offering	\$ 26,654	\$ —
Net proceeds from common stock issued in private placement transactions	14,951	15,220
Borrowings on revolving credit facility	13,828	—
Net proceeds from common stock issued to related party	800	1,000
Principal payments on notes payable	(10,544)	(473)
Repurchase of common stock to satisfy tax withholdings	(1,135)	(230)
Principal payments on finance lease obligations	(1,022)	(1,130)
Payment of debt issuance costs	(633)	—
Payment of debt extinguishment costs	(220)	—
Net proceeds from CFG Loan, related party, net of discount and issuance costs	—	8,522
Net cash provided by financing activities	42,679	22,909
Decrease in Cash and Restricted Cash	(31,918)	(22,279)
Cash and Restricted Cash, beginning of year	54,153	76,432
Cash and Restricted Cash, end of year	<u>\$ 22,235</u>	<u>\$ 54,153</u>
Supplemental disclosure of cash flow information:		
Cash paid for interest	\$ 2,017	\$ 1,727
Cash received for income taxes	\$ (452)	\$ (1,697)
Supplemental disclosure of non-cash investing and financing activities:		
Change in accrued purchases for property and equipment	\$ 6,198	\$ 914
Purchase of property and equipment through note payable	\$ 1,004	\$ —
Equity issued as consideration for acquisition of business	\$ —	\$ 31,206
Paid-in-kind dividend on Series A Preferred Stock	\$ —	\$ 157

See Notes to the Consolidated Financial Statements.

Arq, Inc. and Subsidiaries
Notes to Consolidated Financial Statements

Note 1 - Summary of Operations and Significant Accounting Policies

Nature of Operations

Arq Inc. ("Arq" or the "Company", formerly known as Advanced Emissions Solutions, Inc.) is a Delaware corporation with its principal office located in Greenwood Village, Colorado, with manufacturing, mining and logistics operations located in Louisiana and mining and manufacturing operations in Kentucky.

The Company is an environmental technology company and is principally engaged in the sale of consumable air, water, and soil treatment solutions, primarily based on activated carbon ("AC"). The Company's proprietary AC products enable customers to reduce air, water, and soil contaminants, including mercury, per and polyfluoroalkyl substances ("PFAS") and other pollutants, to meet the challenges of existing and pending air quality and water regulations. The Company manufactures and sells AC and other chemicals used to capture and remove impurities, contaminants, and pollutants for the coal-fired power generation, industrial, water treatment, and water and soil remediation markets, which we collectively refer to as the advanced purification technologies ("APT") market.

In February 2023, the Company acquired 100% of the equity interests, assets and liabilities of the subsidiaries of Arq Limited, an environmental technology company incorporated under the laws of Jersey (the "Arq Acquisition," and hereafter the Arq Limited subsidiaries referred to as "Legacy Arq") to secure access to additional U.S. based bituminous coal feedstock, a manufacturing facility located in Corbin, Kentucky (the "Corbin Facility") and certain patented processes to manufacture new advanced GAC products for sale into the APT and other markets. Under this manufacturing process, the Company expects to be able to convert recovered bituminous coal fines into a purified, microfine carbon powder known as Arq powder™ ("Arq Powder"). See further discussion of the Arq Acquisition in Note 11.

Principles of Consolidation

The Consolidated Financial Statements include accounts of wholly-owned subsidiaries and variable interest entities in which the Company is the primary beneficiary. All significant intercompany balances and transactions have been eliminated in consolidation.

All investments in partially owned entities for which the Company has the ability to exercise significant influence and holds a 20% or greater ownership interest based on the legal form of the Company's ownership percentage are accounted for using the equity method and are included in the Other long-term assets, net line item in the Consolidated Balance Sheets. As of December 31, 2024, the Company holds an equity interest of 42.5% in Tinium Group, LLC ("Tinium Group").

Cash and restricted cash

Cash consists of cash on hand and bank deposits. Restricted cash is primarily comprised of posted cash collateral required under a surety bond contract related to a lignite mine in Louisiana (the "Five Forks Mine") and the Corbin Facility.

Concentration of credit risk

As of December 31, 2024, the Company holds cash that exceed the Federal Deposit Insurance Corporation ("FDIC") limits (currently \$250 thousand) at two financial institutions. If a financial institution was unable to perform its obligations, the Company would be at risk regarding the amount of cash held in excess of the FDIC limits.

Fair value measurements

The carrying amounts of our cash, restricted cash, accounts receivable, accounts payable and other current liabilities approximate fair value as recorded due to the short-term nature of these instruments.

Receivables, net

Receivables, net are recorded at net realizable value, which includes an appropriate allowance for estimated uncollectible amounts to reflect any loss anticipated on the receivables. Increases and decreases in the allowance for doubtful accounts are established based upon changes in the credit quality of receivables and are included as a component of the Selling, general and administrative line item in the Consolidated Statements of Operations. The allowance for doubtful accounts is based on historical experience, general economic conditions and the credit quality of specific accounts and was not material as of December 31, 2024 and 2023.

Arq, Inc. and Subsidiaries
Notes to Consolidated Financial Statements

Inventories, net

The cost of inventory is determined using the average cost method. Inventories, net are stated at the lower of average cost or net realizable value and consist principally of raw materials and finished goods related to the Company's AC products. Inventories are periodically reviewed for both potential obsolescence and potential declines in anticipated selling prices. The Company makes assumptions about the future demand for and market value of the inventory and estimates the amount of any obsolete, unmarketable, slow moving or overvalued inventory.

The composition of Inventories is included in Note 2.

Intangible Assets

Intangible assets consist of patents and developed technology.

The Company has developed technologies resulting in patents being granted by the U.S. Patent and Trademark Office or other regulatory offices. Legal costs associated with securing the patent are capitalized and amortized over the legal or useful life beginning on the patent filing date.

The following table details the components of the Company's intangible assets:

		As of December 31,			
		2024		2023	
<i>(in thousands, except years)</i>	Weighted Average Remaining Amortization Period (in years)	Cost	Net of Accumulated Amortization	Cost	Net of Accumulated Amortization
Patents	10.5	1,705	575	1,600	520
Developed technology	18.1	8,307	6,994	8,307	7,379
Total		<u>\$ 10,012</u>	<u>\$ 7,569</u>	<u>\$ 9,907</u>	<u>\$ 7,899</u>

Included in the Consolidated Statements of Operations is amortization expense related to intangible assets of \$0.4 million and \$0.8 million for the years ended December 31, 2024 and 2023, respectively. The estimated future amortization expense for existing intangible assets as of December 31, 2024 is expected to be approximately \$0.4 million for the year ended December 31, 2025 and each of the four succeeding fiscal years.

Investments

The investments in entities in which the Company does not have a controlling interest (financial or operating), but where it has the ability to exercise significant influence over operating and financial policies, are accounted for using the equity method of accounting. Whether or not the Company exercises significant influence with respect to an investee depends on an evaluation of several factors including, among others, representation on the investee company's board of directors and the Company's ownership percentage. Under the equity method of accounting, an investee company's financial statements are not consolidated in the Company's Consolidated Balance Sheets and Consolidated Statements of Operations; however, the Company's share of the earnings or losses of the investee is reported in the "Earnings from equity method investments" line item in the Consolidated Statements of Operations, and the Company's carrying value in an equity method investee is reported in the "Other long-term assets, net" line in the Consolidated Balance Sheets.

The Company recognizes equity earnings from equity method investments based on its percentage ownership in the investee. The Company recognizes distributions received in excess of the carrying value of an equity method investment as equity method earnings in the period the distributions occur to the extent that the Company has not guaranteed any obligations of the investee or is not contractually required to provide additional funding to the investee. Subsequent earnings from investees where the Company has recognized earnings from distributions in excess of the carrying value of the equity method investment are recognized for the excess of cumulative earnings over previously recognized earnings from distributions. Additionally, when the Company's carrying value in an equity method investment is zero, and the Company has not guaranteed any obligations of the investee or is not required to provide additional funding to the investee, the Company will not recognize its share of any reported losses by the investee until future earnings are generated to offset previously unrecognized losses. Therefore, equity income (loss) reported in the Company's Consolidated Statements of Operations for certain equity method investees may differ from a mathematical calculation of net income or loss attributable to its equity interest based on the

Arq, Inc. and Subsidiaries
Notes to Consolidated Financial Statements

percentage ownership of the Company's equity interest and the net income or loss attributable to equity owners as shown in the investee's statements of operations.

Distributions from equity method investees are reported in the Consolidated Statements of Cash Flows as "return on investment" in Operating cash flows until such time as the carrying value in an equity method investee is reduced to zero. Thereafter, such distributions are reported as "distributions in excess of cumulative earnings" in Investing cash flows.

Investments in partially-owned subsidiaries for which the Company has less than 20% ownership are accounted for in accordance with accounting guidance applicable to equity investments that do not qualify for the equity method of accounting. The Company evaluates these types of investments for changes in fair value and, if there is change, recognizes the change in the Consolidated Statement of Operations. If no such events or changes in circumstances have occurred related to these types of investments, the fair value is estimated only if practicable to do so.

Property, Plant and Equipment

Property, plant and equipment are stated at cost less accumulated depreciation and include leasehold improvements. Depreciation on assets is computed using the straight-line method over the lesser of the estimated useful lives of the related assets or the lease term (ranging from 3 to 31 years). Maintenance and repairs that do not extend the useful life of the respective asset are charged to operating expenses as incurred. When assets are retired, or otherwise disposed of, the property accounts are relieved of costs and accumulated depreciation and any resulting gain or loss is credited or charged to income. The Company periodically evaluates the recoverability of the carrying value of property, plant and equipment for impairment. Amortization of right of use assets under finance lease is included in depreciation expense and is calculated using the straight-line method over the term of the lease.

Leases

The Company records a right of use ("ROU") asset and related liability under a contract or part of a contract when it conveys the right to control the use of an identified asset for a period of time in exchange for consideration. Control over the use of an identified asset occurs when an entity has both the right to obtain substantially all of the economic benefits from the use of an identified asset and the right to direct the use of that identified asset. The determination of whether a contract contains a lease may require significant assumptions and judgments.

For all classes of underlying assets, the Company does not separate nonlease components from lease components and accounts for each separate lease component and the nonlease components associated with that lease component as a single lease component. The Company records lease liabilities and related ROU assets for all leases that have a term of greater than one year. For short-term leases (leases with terms of less than one year), the Company expenses lease payments on a straight-line basis over the lease term.

Variable lease payments represent payments made by a lessee for the right to use an underlying asset that vary because of changes in facts or circumstances occurring after the commencement date of a lease other than the passage of time. Variable lease payments that are based on an index or rate, calculated by using the index or rate that exists on the lease commencement date, are included in the measurement of a lease liability. Certain of the Company's operating leases for office facilities contain variable lease components that are not based on an index or rate, and the Company recognizes these payments as variable lease expense in the period in which the obligation for those payments is incurred.

The Company calculates lease liabilities based on the present value of lease payments discounted by the rate implicit in the lease or, if not readily determinable, the Company's incremental borrowing rate.

Finance lease liabilities are subsequently measured by increasing the carrying amount to reflect interest expense on the finance lease liability and reducing the carrying amount of the lease liability to reflect lease payments made during the period. Interest on finance lease liabilities is determined in each period during the lease term as the amount that produces a constant periodic discount rate on the remaining balance of the lease liability. ROU assets under finance leases are amortized over the remaining lease term on a straight-line basis. Interest expense related to finance lease liabilities and amortization of ROU assets under finance leases are included in the "Interest expense" and "Depreciation, amortization, depletion and accretion" line items, respectively, in the Consolidated Statements of Operations.

Operating lease liabilities are subsequently measured at the present value of the lease payments not yet paid, discounted using the discount rate for the lease established at the inception date of the lease. ROU assets under operating leases are subsequently measured at the amounts of the related operating lease liability, adjusted for, as applicable, prepaid or accrued lease payments,

Arq, Inc. and Subsidiaries
Notes to Consolidated Financial Statements

the remaining balance of any lease incentives received, unamortized initial direct costs and impairment. Lease expense from operating leases is recognized as a single lease cost over the remaining lease term on a straight-line basis. Variable lease payments not included in operating lease liabilities are recognized as expense in the period in which the obligation for those payments is incurred. Lease expense from operating leases is included in the "Selling, general and administrative" and "Cost of revenue, exclusive of depreciation and amortization" line items in the Consolidated Statements of Operations.

Other Assets

Mine Development Costs

Mine development costs are related to the Five Forks Mine and are stated at cost less accumulated depletion and include acquisition costs, the cost of other development work and mitigation costs. Costs are amortized over the estimated life of the related mine reserves, which as of December 31, 2024 is estimated to be approximately 14 years. The Company performs an evaluation of the recoverability of the carrying value of mine development costs to determine if facts and circumstances indicate that their carrying value may be impaired and if any adjustment is warranted. Mine development costs are reported in the "Other long-term assets, net" line item in the Consolidated Balance Sheets.

Spare Parts

Spare parts include critical spares required to support plant operations. Parts and supply costs are determined using the lower of cost or estimated replacement cost. Parts are recorded as maintenance expenses or capitalized in the period in which they are consumed or put into use. Spare parts are reported in the "Other long-term assets, net" line item in the Consolidated Balance Sheets.

Revenue Recognition

The Company recognizes revenue from a contract with a customer when a performance obligation under the terms of a contract with a customer is satisfied, which is when the customer controls the promised goods or services that are transferred in satisfaction of the performance obligation. Revenue is measured as the amount of consideration that is expected to be received in exchange for transferring goods or providing services, and the transaction price is generally fixed and generally does not contain variable or noncash consideration. In addition, the Company's contracts with customers generally do not contain customer refund or return provisions or other similar obligations. Transfer of control and satisfaction of performance obligations are further discussed below.

The Company uses estimates and judgments in determining the nature and timing of satisfaction of performance obligations, the standalone selling price of performance obligations and the allocation of the transaction price to multiple performance obligations, if any.

Revenue

The Company is principally engaged in the sale of consumable products, which are primarily AC products, to a broad range of customers, including coal-fired utilities, industrial and water treatment plants, and other diverse markets. The sale of consumable products is comprised of a single performance obligation and is recognized at the point in time when control transfers and the Company's obligation has been fulfilled, which is when the product is accepted by a customer. Performance obligations for the sale of consumable products do not extend beyond one year.

Certain contracts with customers require the customers to purchase minimum quantities over the contractual period ("MQ Contracts"). Under these MQ Contracts, the Company reserves the right to bill a customer for any shortfall in the actual quantity purchases and minimum quantity purchases as of the end of the contractual period. The Company recognizes revenue on MQ Contracts generally at the end of a contractual period and at a point in time when it has determined it will enforce billing the shortfall and the shortfall can be quantified.

The Company performs shipping and handling activities through the use of third-party shippers and such activities occur prior to a customer obtaining control of goods. As such, the Company accounts for these activities as fulfillment activities and not as separate performance obligations. Shipping and handling costs incurred by the Company in delivering products to customers are billed to customers and are included in the transaction price and included in the "Revenue" line item in the Consolidated Statements of Operations. Costs for shipping and handling activities incurred by the Company are included in the "Cost of revenue, exclusive of depreciation and amortization" line item in the Consolidated Statements of Operations.

Arq, Inc. and Subsidiaries
Notes to Consolidated Financial Statements

Practical Expedients and Exemptions

The Company does not disclose the value of unsatisfied performance obligations for contracts with an original expected length of one year or less.

Sales and other taxes that are collected concurrently with revenue-producing activities are excluded from revenue.

The Company generally expenses sales commissions, if any, when incurred, as the amortization period of the asset that the Company would have recognized is one year or less. These costs are recorded in sales and marketing expenses in the "Selling, general and administrative" line item in the Consolidated Statements of Operations.

Cost of Revenue

Cost of revenue includes all labor, fringe benefits, subcontract labor, additive and coal costs, materials, equipment, supplies, travel costs and any other costs and expenses directly related to the Company's production of revenue.

License Royalties Payable to Tinum Group

In December 2022, the Company and Tinum Group entered into an agreement (the "Tinum Group Royalty Agreement") whereby the Company agreed to pay Tinum Group a royalty (the "Tinum Group Royalty") on sales of M-Prove™ to certain power plants where Tinum Group had operated refined coal facilities (the "Refined Coal Facilities") prior to the expiration of the Section 45 Tax Credit Program on December 31, 2021. Amounts due under the Tinum Group Royalty Agreement commenced on January 1, 2022. The Tinum Group Royalty is calculated based on "Net Profit" (as defined in the Tinum Royalty Agreement) on the Company's sales of M-Prove™ product to the Refined Coal Facilities. The Tinum Group Royalty Agreement is for an initial term of five years with automatic renewals of five years unless the Company and Tinum Group agree to terminate it. The Tinum Group Royalty is included in Cost of revenue in the Consolidated Statements of Operations.

Payroll and Benefits

Payroll and benefits costs include direct payroll costs, payroll related fringe benefits, stock based compensation expense and other labor costs related to sales and administrative personnel, but exclude such costs related to direct labor that are included in Cost of revenue or Research and development.

Legal and Professional

Legal and professional costs include external legal, audit and consulting expenses.

General and Administrative

General and administrative costs include director fees and expenses, rent, insurance and occupancy-related expenses, bad debt expense, impairments, research and development and other general costs of conducting business.

Research and Development

Research and development costs include payroll expenses related to research and development personnel and other expenses incurred related to research and development activities and are charged to expense in the period incurred. Research and development costs are reported within the "Research and development" line item in the Consolidated Statements of Operations. For the years ended December 31, 2024 and 2023, the Company recorded total research and development costs of \$4.1 million and \$3.3 million, respectively.

Asset Retirement Obligations

Asset retirement obligations ("ARO") are comprised of mine reclamation activities required under agreements related primarily to the Five Forks Mine and a coal fine impoundment adjacent to the Corbin Facility (the "Corbin ARO") and are recognized when incurred and recorded as liabilities at fair value. An ARO is accreted over time through periodic charges to earnings. An ARO asset is depreciated over its estimated remaining life. Accounting for AROs requires the Company to estimate future costs unique to a specific mining operation that the Company expects to incur to complete the reclamation and remediation work required to comply with existing laws and regulations. AROs are periodically adjusted to reflect changes in the estimated present value resulting from the passage of time and revisions to the estimates of either the timing or amount of the reclamation costs. On an annual basis, unless otherwise deemed necessary, the Company reviews its estimates and assumptions of its AROs.

Arq, Inc. and Subsidiaries
Notes to Consolidated Financial Statements

Income Taxes

The Company accounts for income taxes under the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements. Under this method, deferred income taxes are provided for temporary differences between the financial reporting basis and tax basis of the Company's assets and liabilities and are tax-effected using enacted tax rates in effect for the year in which the temporary differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in operations in the period that includes the enactment date.

The Company maintains valuation allowances where it is more likely than not that all or a portion of deferred tax assets will not be realized. In making such a determination, the Company considers all available positive and negative evidence, including future reversals of existing taxable temporary differences, projected future taxable income, tax-planning strategies, and results of recent operations.

The Company records uncertain tax positions on the basis of a two-step process whereby (1) the Company determines whether it is more-likely-than-not that the tax positions will be sustained on the basis of the technical merits of the position and (2) for those tax positions that meet the more-likely-than-not recognition threshold, the Company recognizes the amount of tax benefit that is more than 50 percent likely to be realized upon ultimate settlement with the related tax authority.

Stock-Based Compensation

Stock-based compensation expense is measured at the grant date based on the estimated fair value of the stock-based award and is generally expensed on a straight-line basis over the requisite service period and/or performance period of the award. Forfeitures are recognized when incurred. Stock-based compensation expense related to manufacturing employees and administrative employees is included in the "Cost of revenue, exclusive of depreciation and amortization" and "Selling, general and administrative" line items, respectively, in the Consolidated Statements of Operations. Stock-based compensation expense related to non-employee directors and consultants is included in the "Selling, general and administrative" line item in the Consolidated Statements of Operations.

Dividends

When a sufficient amount of available earnings exists at the time of a dividend declaration, dividends are charged to Retained earnings when declared. If a sufficient amount of available earnings is not available, dividends declared are charged as a reduction to Additional paid-in capital.

Earnings (Loss) Per Share

Basic earnings (loss) per share is computed using the weighted-average number of shares of common stock outstanding during the reporting period. Diluted earnings per share is computed in a manner consistent with that of basic earnings per share, while considering other potentially dilutive securities. The treasury stock method is used to determine the dilutive effect of potentially dilutive securities.

Potentially dilutive securities consist of restricted stock awards ("RSAs") and contingent performance stock units ("PSUs") (collectively, "Potential dilutive shares"). Potential dilutive shares are excluded from diluted earnings (loss) per share when their effect is anti-dilutive. When there is a net loss for a period, all Potential dilutive shares are anti-dilutive and are excluded from the calculation of diluted loss per share for that period.

Each PSU represents a contingent right to receive shares of the Company's common stock, and the number of shares may range from zero to two times the number of PSUs granted on the award date depending upon the price performance of the Company's common stock as measured against a general index and a specific peer group index over requisite performance periods. The number of Potential dilutive shares related to a PSU is based on the number of shares of the Company's common stock, if any, that would be issuable at the end of the respective reporting period, assuming that the end of the reporting period is the end of the contingency period applicable to a PSU. See Note 10 for additional information related to PSUs.

The following table sets forth the calculations of basic and diluted earnings (loss) per common share:

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<i>(in thousands, except per share amounts)</i>	Years Ended December 31,	
	2024	2023
Net loss	\$ (5,109)	\$ (12,249)
Basic weighted-average number of common shares outstanding	36,051	29,104
Add: dilutive effect of equity instruments	—	—
Diluted weighted-average shares outstanding	36,051	29,104
Loss per share - basic	\$ (0.14)	\$ (0.42)
Loss per share - diluted	\$ (0.14)	\$ (0.42)

For the years ended December 31, 2024 and 2023, 2.4 million and 1.7 million weighted-average equity instruments, respectively, were outstanding but were not included in the computation of diluted earnings per share because their effect would have been anti-dilutive.

Use of Estimates

The preparation of the Company's consolidated financial statements in conformity with accounting principles generally accepted in the United States ("GAAP") requires the Company's management to make estimates and assumptions that affect the amounts reported in these financial statements and accompanying notes. Actual results could differ from those estimates. Significant financial statement components in which the Company makes assumptions include:

- business combinations, including asset acquisitions;
- the carrying value of its long-lived assets;
- AROs; and
- income taxes, including the valuation allowance for deferred tax assets and assessment of uncertain tax positions.

Risks and Uncertainties

The Company is principally dependent on operations of its APT business, its cash on hand, and availability under its recently secured revolving credit facility (the "Revolving Credit Facility") to provide liquidity over the near and long term. The Company's revenue, sales volumes, earnings and cash flows are significantly affected by prices of competing power generation sources such as natural gas and renewable energy. During periods of low natural gas prices, natural gas provides a competitive alternative to coal-fired power generation and therefore, coal consumption may be reduced, which in turn reduces the demand for the Company's products. However, during periods of higher prices for competing power generation sources, there is generally an increase in coal consumption and thus demand for the Company's products also increases.

In addition, coal consumption and demand for the Company's products are affected by the demand for electricity, which is higher in the warmer and colder months of the year. As a result, the Company's operating results are subject to seasonal variations whereby its revenue and cost of revenue tend to be higher in its first and third fiscal quarters compared to its second and fourth fiscal quarters. Abnormal temperatures during the summer and winter months may significantly affect coal consumption and impurities within various municipalities' water sources, and thus impact the demand for the Company's products.

Another significant market driver for the Company's existing products and services and those planned in the future are existing and expected environmental laws and regulations, particularly those addressing the reduction of mercury and other emissions from coal-fired electricity generating units and regulation of PFAS and other pollutants. For example, the Company expects revenue and sales volumes to increase in the coming years as a result of U.S. Environmental Protection Agency regulations of PFAS substances in drinking water finalized in April 2024. If, as a result of the new U.S. presidential administration or developments in administrative law jurisprudence, such laws and regulations are delayed, not enacted, repealed, amended to be less strict, or include prolonged phase-in periods, or are not enforced, the Company's business would be adversely affected by declining demand for such products and services.

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Reclassifications

Certain balances have been reclassified from prior years to conform to the current year presentation. Such reclassifications had no effect on the Company's results of operations or financial position in any of the periods presented.

Segments

Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated regularly by a company's chief operating decision maker ("CODM"), or a decision-making group, in deciding how to allocate resources and in assessing financial performance. As of December 31, 2024, the Company's CODM was the Company's Chief Executive Officer, and the Company concluded that it had one reportable segment.

New Accounting Standards

Recently Adopted

In November 2023, the FASB issued ASU No. 2023-07, Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures. Upon adoption of this ASU, the company has disclosed significant segment expenses, the title and position of the CODM, and an explanation of how the reported measure of segment profit or loss is used by the CODM to assess segment performance and make resource allocation decisions. Effective December 31, 2024, the company adopted the provisions of this ASU on a retrospective basis. Refer to Note 16.

Recently Issued

In December 2023, the FASB issued Accounting Standards Update 2023-09, *Income Taxes (Topic 740): Improvements to Income Tax Disclosures*. ("ASU 2023-09"). ASU 2023-09 requires entities to disclose: (1) consistent categories and greater disaggregation of information in the rate reconciliation and (2) the disaggregation of income taxes paid by jurisdiction. This update also makes several other changes to the income tax disclosure requirements. For public entities, the amendments in ASU 2023-09 are effective for fiscal years beginning after December 15, 2024, with early adoption permitted, and is required to be applied prospectively, but retrospective application is permitted. The Company is currently evaluating the impact of ASU 2023-09 on its income tax disclosures.

Note 2 - Inventories, net

The following table summarizes the Company's inventories as of December 31, 2024 and 2023:

<i>(in thousands)</i>	As of December 31,	
	2024	2023
Product inventory	\$ 11,166	\$ 9,524
Raw material inventory	8,148	10,169
	<u>\$ 19,314</u>	<u>\$ 19,693</u>

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Note 3 - Property, Plant and Equipment

The cost basis and accumulated depreciation of property, plant and equipment at December 31, 2024 and 2023 are summarized in the table below:

<i>(in thousands)</i>	Life in Years	As of December 31,	
		2024	2023
Land and land improvements	5+ ¹	\$ 1,596	\$ 1,225
Plant and operating equipment	3-29	86,297	81,266
Furniture and fixtures	3-19	2,053	1,765
Machinery and equipment	3-12	2,124	2,478
Leasehold improvements	12-14	3,137	2,149
Construction in progress		109,976	25,059
		205,183	113,942
Less accumulated depreciation		(26,619)	(19,293)
Total property, plant and equipment, net		\$ 178,564	\$ 94,649

¹ Land Improvements have a useful life between 5 and 31 years.

Included in plant and operating equipment as of December 31, 2024 and 2023 is mining equipment financed under various lease facilities, and obligations due under these facilities are included in long-term debt in the Consolidated Balance Sheets. The total amount recorded for ROU assets as of December 31, 2024 and 2023 related to finance lease obligations was \$0.8 million and \$1.7 million, respectively, net of accumulated depreciation of \$3.2 million and \$2.7 million.

Depreciation expense for the years ended December 31, 2024 and 2023 was \$6.9 million and \$8.5 million, respectively.

Note 4 - Revenue

For the years ended December 31, 2024 and 2023, all material performance obligations related to revenue recognized were satisfied at a point in time.

Trade receivables

Trade receivables represent an unconditional right to consideration in exchange for goods or services transferred to a customer. The Company invoices its customers in accordance with the terms of the contract. Credit terms are generally net 30 - 45 days from the date of invoice. The timing between the satisfaction of performance obligations and when payment is due from the customer is generally not significant.

Other receivables

The Company exercised its right under certain MQ Contracts and recognized \$1.6 million and \$4.7 million of revenue from MQ Contracts for the years ended December 31, 2024 and 2023, respectively. Receivables from MQ contracts are included as "Other receivables" within Receivables, net on the Consolidated Balance Sheets.

The following table shows the components of the Company's Receivables, net:

<i>(in thousands)</i>	As of December 31,	
	2024	2023
Trade receivables, net	\$ 13,265	\$ 11,289
Other	1,611	4,903
Receivables, net	\$ 14,876	\$ 16,192

Contract assets

Contract assets are comprised of unbilled receivables from customers and are included in Receivables, net in the Consolidated Balance Sheets. Unbilled receivables represent a conditional right to consideration in exchange for goods or services transferred to a customer. The Company did not have material contract assets outstanding as of December 31, 2024 and 2023.

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Contract liabilities

Contract liabilities are comprised of deferred revenue, which represents an obligation to transfer goods or services to a customer for which the Company has received consideration from the customer and, if deliverable within one year or less, is included in "Other current liabilities" in the Consolidated Balance Sheets and, if deliverable outside of one year, is included in "Other long-term liabilities" in the Consolidated Balance Sheets. The Company did not have material contract liabilities outstanding as of December 31, 2024 and 2023.

Note 5 - Debt Obligations

(in thousands)	As of	
	December 31, 2024	December 31, 2023
Revolving credit agreement	\$ 13,828	\$ —
CTB Loan due January 2036	8,983	9,527
Finance lease obligations	1,269	3,465
CFG Loan due February 2027, related party	—	10,000
Other	1,004	—
	25,084	22,992
Unamortized debt discounts	(24)	(815)
Unamortized debt issuance costs	(238)	(1,250)
	24,822	20,927
Less: Current maturities	(15,452)	(2,653)
Total long-term debt obligations	\$ 9,370	\$ 18,274

Revolving Credit Agreement

In December 2024, the Company and certain of its subsidiaries entered into a credit agreement (the "Revolving Credit Agreement") with MidCap Funding IV Trust (the "Lender"), providing for a five-year \$30.0 million secured revolving credit facility (the "Revolving Credit Facility"). Pursuant to the terms of the Revolving Credit Facility, Arq may borrow up to \$30.0 million, the availability of which is determined based on a borrowing base equal to percentages of certain eligible accounts receivable and inventory carrying balances of the Company and certain of its subsidiaries, less applicable reserves established under the Revolving Credit Facility (together, the "Revolving Loan Commitment"), in accordance with a formula set forth in the Revolving Credit Facility. All borrowings under the Revolving Credit Facility are subject to the satisfaction of customary conditions, including the absence of default, the accuracy of representations and warranties in all material respects and the delivery of an updated borrowing base certificate on a periodic basis. The Company's obligations under the Revolving Credit Facility are secured by first-priority liens on substantially all of the Company's assets, including, without limitation, all inventory, equipment, accounts, intellectual property and other assets, subject to certain negotiated exceptions.

Borrowings under the Revolving Credit Facility bear interest at the Standard Overnight Financing Rate (SOFR) plus an applicable margin of 4.50% per annum, subject to a SOFR floor of 2.50% per annum. In addition to paying interest on the outstanding loans under the Revolving Credit Facility, the Company is also required to pay an unused line fee equal to 0.50% per annum in respect of unused commitments under the Revolving Credit Facility, a fee for failure to maintain a minimum balance under the Revolving Credit Facility, a collateral management fee under the Revolving Credit Facility equal to 0.25% per annum of the amount outstanding under the Revolving Credit Facility, and certain other customary fees related to the Lender's administration of the Revolving Credit Facility. If the Revolving Loan Commitment is terminated prior to its maturity date, the Company is required to make certain prepayment fees in an amount equal to (i) 2.00% of the terminated amount of the Revolving Loan Commitment in the first year following the Closing Date, (ii) 1.00% of the terminated amount of the Revolving Loan Commitment in the second year following the Closing Date, (iii) 0.50% of the terminated amount of the Revolving Loan Commitment in the third year following the Closing Date and (iv) 0.00% at any time thereafter.

The Revolving Credit Facility contains affirmative and negative covenants customarily applicable to senior secured credit facilities, including, without limitation, covenants that, among other things, require delivery of certain financial statements, projections and reports, require maintenance of property and insurance, limit or restrict the ability of the Company, subject to

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negotiated exceptions, to incur additional indebtedness and additional liens on their assets, engage in mergers or acquisitions or dispose of assets, pay dividends or make other distributions, voluntarily prepay other indebtedness, enter into transactions with affiliated persons, make investments, and change the nature of their businesses. In addition, the Revolving Credit Facility requires the Borrowers to maintain their aggregate Total Leverage Ratio at or below a maximum leverage ratio and to maintain a minimum cash balance of \$5.0 million, in each case as specified in the Revolving Credit Facility.

As of December 31, 2024, the Company's borrowings under the Revolving Credit Facility totaled 13.8 million.

CFG Loan

On February 1, 2023, the Company, as borrower, certain of its subsidiaries, as guarantors, and CF Global ("CFG"), a related party, as administrative agent and lender, entered into a term loan (the "CFG Loan") in the amount of \$10.0 million, less original issue discount ("OID") of \$0.2 million, upon execution of a Term Loan and Security Agreement (the "CFG Loan Agreement"). The Company received net cash proceeds of \$8.5 million after deducting the OID and debt issuance costs of \$1.3 million. One of the Company's directors is a principal with CFG.

The CFG Loan Agreement also required the issuance of a warrant (the "Warrant") to CFG to purchase 325,457 shares of the Company's common stock at an exercise price of \$0.01 per share. The Warrant had a term of 7 years and contained a cashless exercise provision. On March 29, 2024, CFG exercised the warrant in full and the Company issued CFG 324,955 shares of its common stock, net of shares representing the exercise price of the warrant.

The Company allocated the cash proceeds of the CFG Loan to both the CFG Loan and the Warrant based on their relative fair values. The amount allocated to the Warrant was recorded as a debt discount and is amortized to interest expense over the term of the CFG Loan. The standalone fair value of the CFG Loan was based on a comparison of borrowings and associated credit ratings consistent with those of the Company. As the Warrant was exercisable for \$0.01 per share, the fair value was deemed to be equal to the fair value of the underlying shares, and accordingly, the fair value of the Warrant was determined as the number of shares issuable from the exercise of the Warrant (based on 1.0% of post-transaction fully diluted share capital, as defined in the Purchase Agreement) multiplied by the closing share price of the Company's common stock on the Acquisition Date.

On December 27, 2024, the Company elected to prepay its outstanding balance under the CFG Loan and terminate the CFG Loan Agreement. The Company made a final payment of \$11.5 million to CF Global, which included payment of outstanding principal and accrued interest of \$11.1 million, a prepayment premium of approximately \$0.2 million, as determined by the prepayment provision of the CFG Loan Agreement, and was equal to 2.0% of the carrying balance of the CFG Loan, and other fees and expenses amounting to approximately \$0.2 million. In connection with the termination of the CFG Loan Agreement, the Company recognized a loss of \$1.4 million, which is presented within the Loss on extinguishment of debt line item in the Consolidated Statement of Operations for the year ended December 31, 2024.

CTB Loan

Upon completion of the Arq Acquisition, the Company assumed a term loan (the "CTB Loan") held by certain Arq subsidiaries as set out in the CTB Loan (the "Arq Subsidiaries") with a financial institution ("CTB") in the principal amount of \$10.0 million. The Company recorded the CTB Loan on the Acquisition Date at its estimated fair value of \$9.7 million, with the difference of \$0.3 million between the estimated fair value and the principal amount recorded as a debt discount and recognized as interest expense over the term of the CTB Loan.

The CTB Loan was originally entered into on January 27, 2021 and is comprised of two promissory notes (the "Notes"): (1) "Note A" in the principal amount of \$8.0 million, which is guaranteed by the U.S. Department of Agriculture; and (2) "Note B" in the principal amount of \$2.0 million. The Notes mature on January 27, 2036 and bear interest at 6.0% per annum through January 2026 and at the prime rate plus 2.75% thereafter. The Company is required to make combined interest and principal payments monthly in the fixed amount of \$0.1 million. Interest is computed and payable on the outstanding principal as of the end of the prior month and the balance of the fixed monthly payment amount is applied to the outstanding principal. The Notes carry a prepayment penalty of 3.0% of the outstanding principal if paid prior to January 27, 2024, 2.0% of the outstanding principal if paid prior to January 27, 2025 and 1.0% of the outstanding principal if paid prior to January 27, 2026. Thereafter, the Notes may be prepaid without penalty.

On June 2, 2023 (the "Amendment Date"), certain of the Arq Subsidiaries, which included Corbin Project LLC, Arq Projects Holding Company LLC, Arq St. Rose LLC, Arq Corbin LLC and Arq Corbin Land LLC (collectively, the "Borrowers") and CTB entered into a loan modification agreement (the "CTB Loan Modification Agreement") to the CTB Loan, as amended by that certain letter agreement by and among CTB and Borrowers dated January 21, 2022, and as otherwise amended, modified

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and/or extended by the parties from time to time (collectively, the "CTB Loan Agreement"). As consideration for CTB entering into the CTB Loan Modification Agreement, the Borrowers agreed to pay a fee of \$50,000 plus additional fees incurred by CTB and were required to deposit an additional \$0.7 million into a deposit account (the "Interest Reserve Account" as defined in the CTB Loan Agreement), where the Interest Reserve Account is held as collateral by CTB. The Borrowers may withdraw funds from the Interest Reserve Account beginning one year from the Amendment Date, subject to restrictions as stated in the CTB Loan Modification Agreement.

The CTB Loan Modification Agreement clarified and modified certain terms under the CTB Loan Agreement. The principal clarifications and modifications are as follows:

- The Borrowers are not entitled to any further disbursements of proceeds under those promissory notes described in the CTB Loan Modification Agreement;
- CTB agreed to waive certain required financial covenants as of December 31, 2023; and
- CTB is authorized to amend and/or amend and restate its then-current security instruments to include additional collateral represented by the Borrowers' acquisition of any equipment or other fixed and/or operating assets in which CTB does not then hold a lien or security interest.

The CTB Loan is secured by substantially all assets of the Borrowers and includes among others, the following covenants with respect to the Borrowers, which are tested annually (Capitalized terms are defined in the CTB Loan Agreement): (a) Total Indebtedness to Net Worth greater than 4 to 1; (b) Balance Sheet Equity greater than or equal to 20% of the book value of all assets of the Borrowers; (c) (i) net income plus interest, taxes, depreciation and amortization divided by (ii) interest expense plus current maturities on long-term debt greater than or equal to 1.25 to 1. CTB agreed to waive certain required financial covenants as of December 31, 2024.

The carrying values of both the Revolving Credit Facility and the CTB Loan approximate their fair values as both instruments bear interest at rates indexed to market rates for similar instruments.

Note 6 - Leases

The Company's operating and finance lease ROU assets and liabilities as of December 31, 2024 and 2023 consisted of the following items (in thousands):

<i>(in thousands)</i>	As of	
	December 31, 2024	December 31, 2023
Operating Leases		
Operating lease right-of-use assets, net of accumulated amortization ⁽¹⁾	\$ 9,312	\$ 10,592
Operating lease obligations, current	\$ 2,081	\$ 1,944
Long-term operating lease obligations	7,460	8,870
Total operating lease obligation	\$ 9,541	\$ 10,814
Finance Leases		
Finance lease right-of-use assets, net of accumulated amortization ⁽²⁾	\$ 824	\$ 1,694
Finance lease obligations, current	\$ 855	\$ 2,131
Long-term finance lease obligations	414	1,334
Total finance lease obligations	\$ 1,269	\$ 3,465

⁽¹⁾ Operating lease assets are reported net of accumulated amortization of \$4.5 million and \$5.1 million as of December 31, 2024 and 2023, respectively.

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⁽²⁾ Finance lease assets are reported net of accumulated amortization of \$3.2 million and \$2.7 million as of December 31, 2024 and 2023, respectively.

Finance leases

ROU assets under finance leases are reported in the "Property, plant and equipment" line item, and finance lease liabilities are included in the "Current portion of long-term debt" and "Long-term debt, net of current portion" line items in the Consolidated Balance Sheets as of December 31, 2024 and 2023.

Interest expense related to finance lease liabilities and amortization of ROU assets under finance leases are included in the "Interest expense" and "Depreciation, amortization, depletion and accretion" line items respectively, in the Consolidated Statement of Operations for the years ended December 31, 2024 and 2023.

Operating leases

ROU assets under operating leases are included in the "Other long-term assets" line item, and operating lease liabilities are included in "Other liabilities" and "Other long-term liabilities" line items, respectively, in the Consolidated Balance Sheets as of December 31, 2024 and 2023.

Lease expense for operating leases for the year ended December 31, 2024 was \$5.3 million, of which \$3.8 million is included in the "Cost of revenue, exclusive of depreciation and amortization" line item and \$1.5 million is included in the "Selling, general and administrative" line item in the Consolidated Statement of Operations for the year ended December 31, 2024. Lease expense for operating leases for the year ended December 31, 2023 was \$5.9 million, of which \$4.5 million is included in the "Cost of revenue, exclusive of depreciation and amortization" line item and \$1.4 million is included in the "Selling, general and administrative" line item in the Consolidated Statement of Operations for the year ended December 31, 2023.

Lease financial information as of and for the years ended December 31, 2024 and 2023 is provided in the following table:

<i>(in thousands)</i>	Year ended December 31,	
	2024	2023
Finance lease cost:		
Amortization of right-of-use assets	\$ 489	\$ 714
Interest on lease liabilities	194	258
Operating lease cost	3,229	4,035
Short-term lease cost	1,636	1,642
Variable lease cost ⁽¹⁾	417	231
Total lease cost	\$ 5,965	\$ 6,880
Other Information:		
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows from finance leases	\$ 194	\$ 258
Operating cash flows from operating leases	\$ 1,996	\$ 2,887
Financing cash flows from finance leases	\$ 1,022	\$ 1,130
Right-of-use assets obtained in exchange for new operating lease liabilities	\$ 724	\$ 2,719
Weighted-average remaining lease term - finance leases	1.6 years	1.8 years
Weighted-average remaining lease term - operating leases	7.3 years	7.6 years
Weighted-average discount rate - finance leases	6.2 %	5.9 %
Weighted-average discount rate - operating leases	12.2 %	11.3 %

⁽¹⁾ Primarily includes common area maintenance, property taxes and insurance payable to lessors.

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The following table summarizes the Company's future lease payments under finance and operating leases as of December 31, 2024:

<i>(in thousands)</i>	Operating Lease Commitments	Finance Lease Commitments	Total Lease Commitments
2025	\$ 3,128	\$ 935	\$ 4,063
2026	3,016	372	3,388
2027	1,590	85	1,675
2028	1,221	—	1,221
2029	1,217	—	1,217
Thereafter	6,034	—	6,034
Total lease payments	16,206	1,392	17,598
Less: Imputed interest	(6,665)	(123)	(6,788)
Present value of lease payments	<u>\$ 9,541</u>	<u>\$ 1,269</u>	<u>\$ 10,810</u>

Note 7 - Commitments and Contingencies

Surety Bonds and Restricted Cash

As the owner of the Five Forks Mine, the Company is required to post a surety bond with a regulatory commission related to performance requirements associated with the Five Forks Mine. As of December 31, 2024, the amount of this surety bond was \$7.5 million.

The Company leases land adjacent to the Corbin Facility and is required to post surety bonds with a regulatory commission for reclamation. As of December 31, 2024, the amount of these surety bonds was \$3.0 million.

The Company holds permits for an abandoned mine in West Virginia ("Mine 4") and is required to post a surety bond with a regulatory commission for reclamation. As of December 31, 2024, the amount of this surety bond was \$0.7 million.

As of December 31, 2024 and 2023, the Company posted cash collateral of \$8.5 million and \$8.5 million, respectively, as required by the Company's surety bond providers, which is reported as long-term restricted cash in the Consolidated Balance Sheets. As of December 31, 2024, the Company holds a deposit of \$0.4 million with a third party for collateral as required under a bonding arrangement for Mine 4. This deposit is included in "Other long-term assets, net" in the Consolidated Balance Sheet as of December 31, 2024.

The Company has a customer supply agreement, which was renewed January 1, 2024, that requires the Company to post a performance bond in an amount equal to the annual contract value of \$3.7 million.

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Tinum Group

The Company also has certain limited obligations contingent upon future events in connection with the activities of Tinum Group. The Company, along with certain other owners of Tinum Group, have provided another Tinum Group owner with limited guarantees (the "Tinum Group Party Guarantees") related to certain losses it may suffer as a result of inaccuracies or breach of representations and covenants. The Company also is a party to a contribution agreement under which any party called upon to pay on a Tinum Group Party Guaranty is entitled to receive contribution from the other party equal to 50% of the amount paid. No liability or expense provision has been recorded by the Company related to this contingent obligation as the Company believes that it is not probable that a loss will occur with respect to Tinum Group Party Guarantees.

In December 2022, the Company, certain of the other owners of Tinum Group (collectively, the "Tinum Group Owners") and Tinum Group executed the Distribution and Repayment Agreement (the "Repayment Agreement"). Under the terms of the Repayment Agreement, the Tinum Group Owners received cash distributions (the "Distributions") equal to their percentage ownership and also agreed to be contractually liable for certain contingent liabilities of Tinum Group (the "Tinum Group Obligation") in amounts equal to their percentage ownership. In December 2022, the Company received its percentage share of the Distributions in the amount of \$2.0 million and became contractually liable for \$1.7 million of the Tinum Group Obligation. The Company recorded a liability related to the contractual obligation in the amount of \$1.7 million, which is presented in the "Other current liabilities" line item in the Consolidated Balance Sheet as of December 31, 2024. In the event that the Tinum Group Obligation is discharged in its entirety or settled for an amount that is less than the total Tinum Group Obligation, the Company will recognize future equity earnings for the difference in its contractual obligation amount and its pro rata share of the actual payment made by Tinum Group, if any, for the Tinum Group Obligation.

Legal Proceedings

The Company is from time to time subject to various pending or threatened legal actions and proceedings, including those that arise in the ordinary course of its business. Such matters are subject to many uncertainties and outcomes, the financial impacts of which are not predictable with assurance and that may not be known for extended periods of time. The Company records a liability in its consolidated financial statements for costs related to claims, settlements, and judgments where management has assessed that a loss is probable and an amount can be reasonably estimated.

On February 7, 2025, the Company announced that it had commenced legal proceedings against the firm engaged for design of the GAC Facility. The Company believes that the design firm was, among other things, negligent and breached its contract with the Company and as a direct result, the Company suffered material damages including a material increase in costs and time delays associated with the project versus original forecasts. The Company is now seeking to recover damages resulting from such negligence and contractual breaches.

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Note 8 - Supplemental Financial Information

Supplemental Balance Sheet Information

The following table summarizes the components of "Prepaid expenses and other current assets" and "Other long-term assets, net" as presented in the Consolidated Balance Sheets:

<i>(in thousands)</i>	As of December 31,	
	2024	2023
Prepaid expenses and other current assets:		
Prepaid expenses	\$ 2,021	\$ 2,430
Prepaid lender fees, net ⁽¹⁾	982	—
Prepaid income taxes and income tax refunds	233	349
Other	1,414	2,436
	\$ 4,650	\$ 5,215
Other long-term assets, net:		
Spare parts, net	\$ 11,178	\$ 9,147
Right of use assets, operating leases, net	9,312	10,592
Intangible assets, net	7,569	7,899
Mine development costs, net	7,010	7,377
Upfront Customer Consideration ⁽²⁾	5,459	5,967
Mine reclamation asset, net	1,620	1,955
Other	2,581	2,663
	\$ 44,729	\$ 45,600

⁽¹⁾ Represents legal and administrative costs incurred to obtain the Revolving Credit Agreement. This asset is being amortized on a straight-line basis over the five-year contractual period of the Revolving Credit Agreement.

⁽²⁾ Represents remaining balance on consideration paid to a customer under a long-term supply contract executed in 2020. This asset is being amortized as a reduction to revenue on a straight-line basis over the expected 15-year contractual period of the contract.

Spare parts include critical spares required to support plant operations. Parts and supply costs are determined using the lower of cost or estimated replacement cost. Parts are recorded as maintenance expenses or capitalized in the period in which they are consumed or put into use.

Mine development costs include acquisition costs, the cost of other development work and mitigation costs related to the Five Forks Mine and are depleted over the estimated life of the related mine reserves, which is estimated to be approximately 14 years as of December 31, 2024. The Company performs an evaluation of the recoverability of the carrying value of mine development costs to determine if facts and circumstances indicate that their carrying value may be impaired and if any adjustment is warranted. Mine reclamation asset represents the ARO asset related to the Five Forks Mine and is depreciated over its estimated life.

Highview Investment

Other includes a long-term investment (the "Highview Investment") in Highview Enterprises Limited ("Highview"), a London, England based developmental stage company specializing in power storage. The Company accounts for the Highview Investment as an investment recorded at cost, less impairment, plus or minus observable changes in price for identical or similar investments of the same issuer. Fair value measurements, if any, represent Level 2 measurements. The Highview Investment is evaluated for indicators of impairment such as an event or change in circumstances that may have a significant adverse effect on the fair value of the investment.

There were no changes to the carrying value of the Highview Investment for the years ended December 31, 2024 and 2023 as there were no indicators of impairment or observable price changes for equity issued by Highview. Since inception of Highview Investment, the Company has recognized \$2.2 million of cumulative impairment losses.

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The following table details the components of "Other current liabilities" and "Other long-term liabilities" as presented in the Consolidated Balance Sheets:

<i>(in thousands)</i>	As of December 31,	
	2024	2023
Other current liabilities:		
Sales, use and other taxes payable	\$ 2,325	\$ 948
Current portion of operating lease obligations	2,081	1,944
Current portion of mine reclamation liability	1,037	182
Other current liabilities ⁽¹⁾	2,741	2,718
	<u>\$ 8,184</u>	<u>\$ 5,792</u>
Other long-term liabilities:		
Operating lease obligations, long-term	\$ 7,460	\$ 8,870
Mine reclamation liabilities	5,242	5,981
Other	367	929
	<u>\$ 13,069</u>	<u>\$ 15,780</u>

⁽¹⁾ Included in Other current liabilities as of December 31, 2024 and 2023 is \$1.7 million related to the Repayment Agreement as defined in Note 7.

The Mine reclamation liabilities represent AROs. Changes in the AROs were as follows:

<i>(in thousands)</i>	As of December 31,	
	2024	2023
Asset retirement obligations, beginning of year	\$ 6,163	\$ 8,533
Asset retirement obligations assumed ⁽¹⁾	—	1,500
Accretion	666	582
Liabilities settled ⁽²⁾	(77)	(4,866)
Changes due to scope and timing of reclamation	(473)	414
Asset retirement obligations, end of year	6,279	6,163
Less current portion	1,037	182
Asset retirement obligations, long-term	<u>\$ 5,242</u>	<u>\$ 5,981</u>

⁽¹⁾ Represents the Corbin Facility ARO and Mine 4 ARO in the amounts of \$0.5 million and \$1.0 million, respectively, assumed during the period ended December 31, 2023.

⁽²⁾ Included in liabilities settled during the period ended December 31, 2023 is \$4.7 million related to the removal of the ARO associated with Marshall Mine, LLC as a result of the sale of Marshall Mine, LLC in March 2023.

Supplemental Consolidated Statements of Operations Information

The following table details the components of "Interest expense" in the Consolidated Statements of Operations:

<i>(in thousands)</i>	Years Ended December 31,	
	2024	2023
Interest on CFG Loan	\$ 2,286	\$ 2,029
Interest on CTB Loan	567	545
Other	404	440
Total Interest expense	<u>\$ 3,257</u>	<u>\$ 3,014</u>

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The following table details the components of "Other" in the Consolidated Statements of Operations:

<i>(in thousands)</i>	Years Ended December 31,	
	2024	2023
Interest income	\$ 1,103	\$ 1,846
Other	135	784
Total Other income	\$ 1,238	\$ 2,630

Note 9 - Stockholders' Equity

The Company has two classes of capital stock authorized, common stock and preferred stock, which are described as follows:

Preferred Stock

The Company's Board of Directors (the "Board") is authorized to issue shares of Preferred Stock and to fix the number of shares constituting a series of Preferred Stock and, with respect to each series, to fix the number of shares and designation of such series, the voting powers, if any, the preferences and relative, participating, option or other special rights, if any, and any qualifications, limitations or restrictions thereof, of the shares of such series. As of December 31, 2024 and 2023, there were no shares of Preferred Stock designated or outstanding.

Common Stock

Holders of common stock are entitled to one vote for each share held of record on all matters submitted to a vote of the stockholders. Additionally, holders of common stock are entitled to receive dividends when and if declared by the Board, subject to any statutory or contractual restrictions on payment of dividends and to any restrictions on the payment of dividends imposed by the terms of any outstanding shares of preferred stock.

Upon dissolution, liquidation or the sale of all or substantially all of the Company's assets, after payment in full of any amounts required to be paid to creditors and to the holders of preferred stock having liquidation preferences, if any, the holders of shares of common stock will be entitled to receive the Company's remaining assets for distribution on a pro rata basis.

Equity Transactions

As discussed in Note 11:

- On February 1, 2023, and as consideration for the Arq Acquisition, the Company issued 3,814,864 shares of common stock and 5,294,462 shares of Series A Preferred Stock. Additionally, the Company completed the PIPE Investment and sold 3,842,315 shares of common stock for cash proceeds of \$15.4 million.
- On March 31, 2023, the Company declared a dividend of 68,464 Series A PIK Shares with respect to the accrued dividends on the Series A Preferred Stock, which was recorded at the estimated fair value of \$0.2 million as of March 31, 2023 and was paid on April 21, 2023.
- On June 13, 2023, pursuant to stockholder approval, all shares of Series A Preferred Stock were converted into 5,362,926 shares of common stock.

On July 14, 2023, the Board appointed Mr. Robert Rasmus to the positions of President and Chief Executive Officer effective July 17, 2023. On July 17, 2023, the Company entered into a Subscription Agreement (the "Subscription Agreement") with Mr. Rasmus and entities controlled by Mr. Rasmus, in connection with his appointment as the Company's President and Chief Executive Officer. Pursuant to the Subscription Agreement, Mr. Rasmus subscribed for and agreed to purchase 950,000 shares of common stock from the Company for an aggregate purchase price of \$1.8 million (at a price per share of approximately \$1.90). In September 2023, the Company received cash of \$1.0 million and issued 527,779 shares of common stock to Mr. Rasmus pursuant to the Subscription Agreement. In April 2024, the Company received \$0.8 million in cash and issued 422,221 shares of its common stock to Mr. Rasmus pursuant to the Subscription Agreement.

On May 15, 2024, the Company entered into a securities purchase agreement with certain accredited investors for the sale of an aggregate of 2,142,858 shares of the Company's common stock, at a selling price of \$7.00 per share (the "Private Placement"). After deducting offering costs, the Company raised net cash proceeds of \$15.0 million from the Private Placement.

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On September 20, 2024, the Company entered into an underwriting agreement (the "Underwriting Agreement") with certain underwriters, relating to the issuance and sale of 4,770,000 shares of the Company's common stock at a price to the public of \$5.25 per share, as well as an overallotment option to purchase an additional 715,500 shares within 30 days following the date of the Underwriting Agreement (the "Public Offering"). The Company issued a total of 5,485,500 shares, inclusive of 715,500 shares issued pursuant to the underwriters' fully exercised overallotment option, and received net proceeds, after deducting offering costs, of approximately \$26.7 million from the Public Offering.

Stock Repurchase Programs

In November 2018, the Board authorized the Company to purchase up to \$20.0 million of its outstanding common stock under a stock repurchase program (the "Stock Repurchase Program"). In November 2019, the Board authorized an incremental \$7.1 million to the Stock Repurchase Program and provided that it will remain in effect until all amounts are utilized or it is otherwise modified by the Board. As of December 31, 2024, the Company had \$7.0 million remaining under the Stock Repurchase Program.

Tax Asset Protection Plan

U.S. federal income tax rules, and Section 382 of the Internal Revenue Code in particular, could substantially limit the use of net operating losses and tax credits if the Company experiences an "ownership change" (as defined in the Internal Revenue Code). In general, an ownership change occurs if there is a cumulative change in the ownership of the Company by "5 percent stockholders" that exceeds 50 percentage points over a rolling three-year period.

An entity that experiences an ownership change generally will be subject to an annual limitation on its pre-ownership change tax loss and credit carryforwards equal to the equity value of the entity immediately before the ownership change, multiplied by the long-term, tax-exempt rate posted monthly by the Internal Revenue Service (subject to certain adjustments). The annual limitation would be increased each year to the extent that there is an unused limitation in a prior year.

On May 5, 2017, the Board approved the declaration of a dividend of rights to purchase Series B Junior Participating Preferred Stock for each outstanding share of common stock as part of a tax asset protection plan (the "TAPP"), which is designed to protect the Company's ability to utilize its net operating losses and tax credits. The TAPP is intended to act as a deterrent to any person acquiring beneficial ownership of 4.99% or more of the Company's outstanding common stock.

On April 12, 2024, the Board approved the Seventh Amendment to the TAPP (the "Seventh Amendment"), which amends the TAPP, as previously amended by the First, Second, Third, Fourth, Fifth and Sixth Amendments that were approved by the Board on April 6, 2018, April 5, 2019, April 9, 2020, April 9, 2021, March 15, 2022, and April 13, 2023, respectively. The Seventh Amendment amends the definition of "Final Expiration Date" under the TAPP to extend the duration of the TAPP and makes associated changes in connection therewith. Pursuant to the Seventh Amendment, the Final Expiration Date shall be the close of business on the earlier of (i) December 31, 2025 or (ii) December 31, 2024 if stockholder approval of the Seventh Amendment has not been obtained prior to such date. At the Company's 2024 Annual Meeting of Stockholders held on June 10, 2024, the Company's stockholders approved the Seventh Amendment, thus the final expiration date will be the close of business on December 31, 2025.

Note 10 - Stock-Based Compensation

On June 10, 2024, the Company's stockholders approved the 2024 Omnibus Incentive Plan (the "2024 Plan"), which permits grants of awards to employees, directors and consultants. Awards may be in the form of options (both nonqualified stock options and incentive stock options), stock appreciation rights, restricted stock, restricted stock units, performance share units, and other stock-based awards and cash-based awards as described under the 2024 Plan. As of December 31, 2024, the Company has 1,906,407 shares of its common stock authorized for issuance under the 2024 Plan.

On May 16, 2022, the Company's stockholders approved the 2022 Omnibus Incentive Plan (the "2022 Plan"), which permits grants of awards to employees, directors and consultants. Awards may be in the form of options (both nonqualified stock options and incentive stock options), stock appreciation rights, restricted stock, restricted stock units, performance share units, and other stock-based awards and cash-based awards as described under the 2022 Plan. As of December 31, 2024, the Company has zero shares of its common stock authorized for issuance under the 2022 Plan.

On June 20, 2017, the Company's stockholders approved the 2017 Omnibus Incentive Plan (the "2017 Plan"), which permits grants of awards to employees, directors and non-employees. Awards may be in the form of shares, rights to purchase restricted

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stock, bonuses of restricted stock, or other rights or benefits as described under the 2017 Plan. As of December 31, 2024, the Company has zero shares of its common stock authorized for issuance under the 2017 Plan.

Expense

RSAs - Restricted Stock Awards ("RSA's") are typically granted with vesting terms of three years. The fair value of RSAs is determined based on the closing price of the Company's common stock on the authorization date of the grant multiplied by the number of shares subject to the stock award. Compensation expense for RSAs is generally recognized over the vesting term on a straight-line basis.

PSUs - Performance share units ("PSU's") generally vest over three years and are based on the grantee's continuous service with the Company, performance measures or a combination of both. Each PSU represents a contingent right to receive shares of the Company's common stock if the Company meets certain performance measures over the requisite period.

Compensation expense is recognized for PSU awards on a straight-line basis over the vesting period based on the estimated fair value at the date of grant using a Monte Carlo simulation model. The Company's Monte Carlo simulation models include the following assumptions:

- *Risk-free interest rate* - The risk-free interest rate for PSUs granted during the period was determined by using a zero-coupon, U.S. Treasury rate for the periods that coincided with the expected terms listed above.
- *Dividends* - As the PSUs granted receive dividend equivalent units, no discount was applied for any dividends declared.
- *Expected volatility* - To calculate expected volatility, the historical volatility of the Company's common stock was used.
- *Performance period* - The Company's performance period is based on the vesting term of the Company's PSU awards.

Stock Options

Stock options vest over three years and have a contractual limit of ten years from the date of grant to exercise. The fair value of stock options granted is determined on the date of grant using the Black-Scholes option pricing model, and the related expense is recognized on a straight-line basis over the entire vesting period. The determination of the grant date fair value of stock options issued is affected by a number of variables, including the fair value of the Company's common stock, the expected common stock price volatility over the expected term of the stock option, the expected term of the stock option, risk-free interest rates, and the expected dividend yield of the Company's common stock. The Company's Black Scholes option pricing models include the following assumptions:

- *Risk-free interest rate* - The risk-free interest rate for stock options granted during the period was determined by using a zero-coupon U.S. Treasury rate for the periods that coincided with the expected term of the options.
- *Dividend yield* - An expected dividend yield of zero was included in the calculations, as the Company does not currently pay nor does it anticipate paying dividends on its common stock as of the grant date of the stock options.
- *Expected volatility* - To calculate expected volatility, the historical volatility of the Company's common stock was used.
- *Expected term* - The Company's expected term of stock options was calculated using a simplified method whereby the midpoint between the vesting date and the end of the contractual term is utilized to compute the expected term, as the Company does not have sufficient historical data for options with similar vesting and contractual terms.

No stock options were granted during the year ended December 31, 2024. The following table indicates the weighted average assumptions that were used related to the awards granted during the year ended December 31, 2023:

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	Year ended December 31, 2023
Stock options granted:	1,000,000
Risk-free interest rate	4 %
Dividend yield	— %
Volatility	62 %
Expected term (in years)	6

The Company recorded the following compensation expense related to the Stock Plans:

<i>(in thousands)</i>	Years Ended December 31,	
	2024	2023
RSA expense	\$ 1,834	\$ 1,887
PSU expense	638	650
Stock option expense	243	111
Total stock-based compensation expense	<u>\$ 2,715</u>	<u>\$ 2,648</u>

Stock-based compensation expense related to manufacturing employees and administrative employees is included in the "Cost of revenue" and "Selling, general and administrative" line items, respectively, in the Consolidated Statements of Operations. Stock-based compensation expense related to non-employee directors and consultants is included in the "Selling, general and administrative" line item in the Consolidated Statements of Operations. The Company recognizes forfeitures as they occur.

The amount of unrecognized compensation cost as of December 31, 2024, and the expected weighted-average period over which the cost will be recognized is as follows:

<i>(in thousands, except years)</i>	As of December 31, 2024	
	Unrecognized Compensation Cost	Expected Weighted- Average Period of Recognition (in years)
RSA expense	\$ 2,763	1.62
PSU expense	1,156	1.03
Stock option expense	374	1.54
Total unrecognized stock-based compensation expense	<u>\$ 4,293</u>	<u>1.45</u>

Activity

Restricted Stock

A summary of activity of RSAs for the year ended December 31, 2024 is presented in the following table:

<i>(in thousands, except for share and per share amounts)</i>	Restricted Stock	Weighted- Average Grant Date Fair Value
	Awards	RSA's
Non-vested at January 1, 2024	790,005	\$ 3.10
Granted	577,159	\$ 5.79
Vested	(577,583)	\$ 3.45
Forfeited	(57,026)	\$ 2.79
Non-vested at December 31, 2024	<u>732,555</u>	<u>\$ 4.99</u>

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The weighted-average grant date fair value of RSAs granted or modified for the years ended December 31, 2024 and 2023 was \$5.79 and \$1.91, respectively. The total grant-date fair value of RSAs vested for the years ended December 31, 2024 and 2023 was \$2.0 million and \$2.0 million, respectively. The aggregate intrinsic value of non-vested RSAs outstanding as of December 31, 2024 was \$5.5 million.

PSUs

PSUs outstanding remain unvested until either the requisite performance condition of the grant is met, or the third anniversary of their issuance date, at which time the actual number of vested shares will be determined based on the actual price performances of the Company's common stock relative to a peer group performance index.

A summary of PSU activity for the year ended December 31, 2024 is presented in the table below:

	Units	Weighted-Average Grant Date Fair Value	Aggregate Intrinsic Value (in thousands)	Weighted-Average Remaining Contractual Term (in years)
PSUs outstanding at January 1, 2024	968,918	\$ 2.06		
Granted	115,877	10.94		
Vested / Settled	(192,825)	3.35		
Forfeited / Canceled	(14,925)	2.48		
PSUs outstanding at December 31, 2024	877,045	\$ 2.94	\$ 6,639	1.01

Stock Options

A summary of stock option activity for the year ended December 31, 2024 is presented below:

	Number of Options Outstanding and Exercisable	Weighted-Average Exercise Price	Aggregate Intrinsic Value (in thousands)	Weighted-Average Remaining Contractual Term (in years)
Options outstanding at January 1, 2024	1,000,000	\$ 3.00		
Options granted	—	—		
Options exercised	—	—		
Options expired / forfeited	—	—		
Options outstanding at December 31, 2024	1,000,000	\$ 3.00	\$ 4,570	8.54
Options vested and exercisable at December 31, 2024	333,333	\$ 3.00	\$ 1,523	8.54

Note 11 - Arq Acquisition

On February 1, 2023 (the "Acquisition Date"), the Company entered into a securities purchase agreement (the "Purchase Agreement") with Arq Ltd. for the Arq Acquisition in exchange for consideration (the "Purchase Consideration") totaling \$31.2 million and consisting of (i) 3,814,864 shares of the Company's common stock, valued at \$12.4 million based on the closing price of the common stock on the Acquisition Date and (ii) 5,294,462 shares of the Company's Series A Convertible Preferred Stock, par value \$0.001 per share (the "Series A Preferred Stock" or the "Preferred Shares"), valued at \$18.8 million. The Company also incurred \$8.7 million in acquisition-related costs, which were expensed as incurred.

Legacy Arq's principal location is in Corbin, Kentucky where it operates the Corbin Facility, which processes recovered bituminous coal fines into Arq Powder that can be used as an alternative to oil or in-ground mined coal to produce a range of carbon products. With the completion of the Arq Acquisition, the Company intends to sell Arq Powder as a feedstock to produce high-quality AC for use in water and air purification markets. The Company expects to begin using Arq Powder to produce granular activated carbon products during the first quarter of 2025.

The Company accounted for the Arq Acquisition as an acquisition of a business. The total Purchase Consideration was \$31.2 million and was allocated to the acquired assets and assumed liabilities of Legacy Arq based on their estimated fair values as of the Acquisition Date. The Purchase Consideration was comprised of the fair values as of the Acquisition Date of 3,814,864

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shares of common stock, valued at \$12.4 million, and 5,294,462 Preferred Shares, valued at \$18.8 million. The Company also incurred \$8.7 million in acquisition-related costs, which were expensed as incurred and included in the "General and administrative" and "Legal and professional fees" line items in the Statements of Operations.

The following table provides the final purchase price allocation to the assets acquired and liabilities assumed as of the date of the Arq Acquisition:

<i>(in thousands)</i>	Purchase Price Allocation
Fair value of assets acquired:	
Cash	\$ 1,411
Prepaid expenses and other current assets	2,229
Restricted cash, long-term	814
Property, plant and equipment, net	39,159
Other long-term assets, net	11,717
Amount attributable to assets acquired	<u>55,330</u>
Fair value of liabilities assumed:	
Accounts payable and accrued expenses	9,806
Current portion of long-term debt	494
Other current liabilities	103
Long-term debt, net of current portion	9,199
Other long-term liabilities	4,523
Amount attributable to liabilities assumed	<u>24,125</u>
Net assets acquired	<u><u>\$ 31,205</u></u>

The following represents the intangible asset identified as part of the Arq Acquisition and which is included in "Other long-term-assets, net" in the table above:

<i>(in thousands)</i>	Amount	Weighted Average Useful Life (years)
Developed technology	\$ 7,700	20

Series A Preferred Stock

In connection with the issuance of the Series A Preferred Stock pursuant to the Purchase Agreement, the Company filed the Certificate of Designations of Preferred Stock for the Series A Preferred Stock (the "Certificate of Designations") with the Secretary of State of the State of Delaware. Under the Certificate of Designations, 8.9 million preferred shares were designated as Series A Preferred Stock.

On June 13, 2023 (the "Conversion Date"), the Company's stockholders approved the conversion of all of the outstanding shares of Series A Preferred Stock, including the "Escrow Shares," as defined below, and the corresponding issuance of shares of common stock. Upon such approval, each outstanding share of Series A Preferred Stock was automatically converted into the number of shares of common stock described below. Each share of Series A Preferred Stock was deemed to have an original issue price of \$4.00 per share (the "Original Issue Amount"). The number of shares of common stock issued upon conversion of each share of Series A Preferred Stock was equal to the product of (i) the sum of (A) the Original Issue Amount plus (B) an amount equal to the cumulative amount of the accrued and unpaid dividends on such share at such time divided by (ii) the Original Issue Amount, subject to adjustment.

Holders of the Series A Preferred Stock were entitled to receive cumulative dividends, which accrued quarterly on the last day of each applicable quarter (whether or not declared or funds for their payment are lawfully available) and were payable quarterly, in arrears, on the earlier to occur of (a) the date any dividend is paid to holders of Common Stock with respect to such quarter and (b) 30 days after the end of each quarter (the "Series A Quarterly Dividend") at the rate per share of Series A

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Preferred Stock equal to the greater of (i) if the Company declared a cash dividend on the common stock with respect to such quarter, the amount of the cash dividend that would be received by a holder of Common Stock in which such share of Series A Preferred Stock would be convertible on the record date for such cash dividend and (ii) an annual rate (the "Rate") of 8.0% of the Original Issue Amount compounded quarterly with respect to such quarter.

On March 31, 2023, the Company declared a dividend of 68,464 Series A PIK Shares with respect to the accrued dividends on the Preferred Shares for the first quarter of 2023 (the "PIK Dividend"). The PIK Dividend was recorded at the estimated fair value of \$0.2 million as of March 31, 2023 and was paid on April 21, 2023.

Of the total Preferred Shares issued in the Arq Acquisition, 833,914 were held in escrow (the "Escrow Shares") based on a contingent redemption feature, (the "Contingent Redemption Feature," as defined below). The fair value of the Preferred Shares issued was determined to be \$3.46 per Preferred Share on the Acquisition Date (the "Preferred Share Price") plus the value of the Contingent Feature related to the Escrow Shares. The Escrow Shares were converted into shares of common stock on the Conversion Date and continue to be held in escrow (the "Escrow Common Shares").

The Escrow Common Shares were withheld pending a determination by the IRS that no tax withholding is required on the Purchase Consideration issued to Arq Ltd. (the "Arq Ltd. Tax Liability"). The Company estimated the fair value of the potential Arq Ltd. Tax Liability at \$3.3 million. In April 2024, the IRS determined that no withholding was required by Arq Ltd. in connection with the Purchase Consideration received by Arq Ltd., all of the Escrow Common Shares were released and delivered to Arq Ltd.

The Series A Preferred Stock contained a mandatory redemption feature in the event the Preferred Shares, including future issuances of Series A Preferred Stock issued under dividend requirements, were not converted into shares of Common Stock prior to February 1, 2028. The Company concluded that both the Escrow Shares and the Non Escrow Shares did not meet the definition of mandatorily redeemable financial instruments as there was a substantive conversion feature, and were therefore not classified as liabilities. As both the Escrow Shares and Non Escrow Shares represented financial instruments that were redeemable for cash, SEC guidance mandates that preferred securities which are redeemable upon the occurrence of an event that is not solely within the control of the issuer be classified outside of permanent equity as "temporary equity." Accordingly, the Company classified and reported the Series A Preferred Stock as temporary equity and in the Consolidated Balance Sheet as of the Acquisition Date. On the Conversion Date, all shares of Series A Preferred Stock were converted into 5,362,926 shares of Common Stock, and the Company reclassified all of the Series A Preferred Stock to Common Stock as of June 30, 2023.

PIPE Investment

On February 1, 2023 and pursuant to the Arq Acquisition, the Company entered into Subscription Agreements with certain persons (the "Subscribers"), which included existing shareholders of Arq Ltd., three of which were appointed to the Company's Board of Directors (the "Board"), pursuant to which the Subscribers subscribed for and purchased 3,842,315 shares of Common Stock for an aggregate purchase price of \$15.4 million and at a price per share of \$4.00 (such transaction, the "PIPE Investment").

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Unaudited Pro Forma Financial Information

The following represents the pro forma effects of the Arq Acquisition as if it had occurred on January 1, 2022. The pro forma net loss has been calculated after applying the Company's accounting policies in effect for those years. In addition, pro forma net loss for the year ended December 31, 2023 includes: (1) an increase in depreciation and amortization resulting from fair value adjustments to Property, plant, equipment of \$0.2 million; (2) an increase in amortization resulting from fair value adjustments to Intangibles of \$0.1 million; (3) an increase to interest expense for: (a) the issuance of the CFG Loan including stated interest and the amortization of the CFG Loan's discount and issuance costs and (b) amortization of debt discount related to a fair value adjustment to the assumed CTB Loan of Arq of \$0.2 million; (4) the removal of \$1.9 million of Payroll and benefits for compensation expense payable to certain Arq employees triggered by change in control provisions in employment agreements, as well as in employee severance agreements, for the year ended December 31, 2023; (5) a decrease to general and administrative expenses resulting from fair value adjustments to operating leases acquired of \$0.1 million, and (6) the addition of \$2.4 million of transaction costs incurred for the period from January 1, 2023 through the Arq Acquisition Date, together with the income tax effects on (1) through (6). Since Arq had no revenue for the year ended December 31, 2023, pro forma revenue is the same as the Company's reported revenue for that year.

<i>(in thousands)</i>	Year ended December 31, 2023
Revenue	\$ 99,183
Net loss	\$ (11,119)

Other

The amounts of year to date revenue and net loss for Arq for the period from the Acquisition Date to December 31, 2023 are as follows:

<i>(in thousands)</i>	Year ended December 31, 2023
Revenue	\$ —
Net loss	\$ (11,660)

Note 12 - Income Taxes

The sources of pretax loss are as follows:

<i>(in thousands)</i>	Years ended December 31,	
	2024	2023
Domestic	\$ (3,435)	\$ (9,123)
Foreign	(1,838)	(2,973)
	\$ (5,273)	\$ (12,096)

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The provision for income taxes consists of the following:

<i>(in thousands, except for rate)</i>	Years Ended December 31,	
	2024	2023
Current portion of income tax (benefit) expense:		
Federal	\$ —	\$ —
State and other	(164)	153
	<u>(164)</u>	<u>153</u>
Deferred portion of income tax (benefit) expense:		
Federal	—	—
State and other	—	—
	<u>—</u>	<u>—</u>
Total income tax (benefit) expense	<u>\$ (164)</u>	<u>\$ 153</u>
Effective tax rate	<u>3 %</u>	<u>(1)%</u>

Income tax (benefit) expense differed from the amount that would be computed by applying the U.S. statutory federal income tax rate of 21% to loss before income taxes for the years ended December 31, 2024 and 2023 as follows:

<i>(in thousands)</i>	Years Ended December 31,	
	2024	2023
Federal statutory rate	\$ (1,107)	\$ (2,540)
State income taxes, net of federal benefit	(130)	116
Permanent differences	(336)	755
Valuation allowances	1,493	1,385
Changes in tax rates	(73)	(74)
Stock-based compensation	—	367
Return to provision and other true-ups	(11)	144
Income tax (benefit) expense	<u>\$ (164)</u>	<u>\$ 153</u>

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Deferred income taxes are provided for the effects of temporary differences between the tax basis of an asset or liability and their reported amounts in the accompanying Consolidated Balance Sheets. These temporary differences result in taxable or deductible amounts in future years. Details of the Company's deferred tax assets and liabilities are summarized as follows:

<i>(in thousands)</i>	As of December 31,	
	2024	2023
Deferred tax assets		
Tax credits	\$ 86,125	\$ 86,125
Net operating loss carryforwards	18,985	17,018
Intangible assets	1,010	1,061
Employee related liabilities	1,553	1,047
Operating lease obligations	2,345	2,506
ARO, net of reimbursements	976	1,428
Research and development capitalization	1,591	1,227
Other investments	547	515
Inventory	680	612
Interest limitations	527	121
Other	622	647
Total deferred tax assets	114,961	112,307
Less valuation allowance	(101,598)	(98,836)
Deferred tax assets	13,363	13,471
Less: Deferred tax liabilities		
Property and equipment and other	(9,730)	(9,230)
Right of use operating lease assets	(2,289)	(2,454)
Upfront customer consideration	(1,344)	(1,383)
Equity method investments	—	(404)
Total deferred tax liabilities	(13,363)	(13,471)
Net deferred tax assets	\$ —	\$ —

Accounting for income taxes requires that companies assess whether a valuation allowance should be recorded against a deferred tax asset based on an assessment of the amount of the deferred tax asset that is "more likely than not" to be realized. Valuation allowances are established, when necessary, to reduce deferred tax assets to the amount that is more likely than not to be realized.

The Company assesses a valuation allowance recorded against deferred tax assets at each reporting date. The determination of whether a valuation allowance is appropriate requires the evaluation of positive and negative evidence that can be objectively verified. Consideration must be given to all sources of taxable income available to realize a deferred tax asset, including, as applicable, the future reversal of existing temporary differences, future taxable income forecasts exclusive of the reversal of temporary differences and carryforwards, taxable income in carryback years and tax planning strategies. In estimating taxes, the Company assesses the relative merits and risks of the appropriate tax treatment of transactions taking into account statutory, judicial and regulatory guidance.

As of December 31, 2024, the Company concluded it is more likely than not the Company will not generate sufficient taxable income within the applicable net operating loss and tax credit carry-forward periods to realize any of its net deferred tax assets. For the year ended December 31, 2024, the Company increased a valuation allowance from December 31, 2023 by \$2.8 million and as of December 31, 2024, has a valuation allowance equal to 100% of its net deferred tax assets. In reaching this conclusion, the Company primarily considered its pretax losses incurred over a cumulative three-year lookback period.

Arq, Inc. and Subsidiaries
Notes to Consolidated Financial Statements

The following table presents the approximate amount of federal and state net operating loss carryforwards and federal tax credit carryforwards available to reduce future taxable income, along with the respective range of years that the net operating loss and tax credit carryforwards would expire if not utilized:

<i>(in thousands)</i>	As of December 31,		
	2024	Beginning expiration year	Ending expiration year
Federal net operating loss carryforwards	\$ 10,471	2035	Indefinite
Foreign net operation loss carryforwards	\$ 3,992	Indefinite	Indefinite
State and other net operating loss carryforwards	\$ 4,517	2025	Indefinite
Federal tax credit carryforwards	\$ 86,125	2032	2041

The following table sets forth a reconciliation of the beginning and ending unrecognized tax positions on a gross basis for the years ended December 31, 2024 and 2023:

<i>(in thousands)</i>	Years Ended December 31,	
	2024	2023
Balance as of January 1	\$ 54	\$ 54
Lapse of applicable statute of limitations	(54)	—
Balance as of December 31	\$ —	\$ 54

For the years ended December 31, 2024 and 2023, the Company did not record any adjustments or recognize interest expense for uncertain tax positions. Interest and penalties related to uncertain tax positions are accrued and included in the "Interest expense" line item in the Consolidated Statements of Operations. Additional information related to the components of "Interest expense" is included in Note 8.

The Company files income tax returns in the U.S., various states and the United Kingdom. The Company is no longer subject to U.S. federal examinations by tax authorities for years before 2021. The Company is generally no longer subject to state examinations by tax authorities for years before 2017.

U.S. federal income tax rules, and Sections 382 of the Internal Revenue Code in particular, could substantially limit the use of Section 45 tax credits and other tax assets if the Company experiences an "ownership change" (as defined in the Internal Revenue Code). In general, an ownership change occurs if the aggregate stock ownership of certain stockholders (generally 5% stockholders, applying certain look-through rules) increases by more than 50 percentage points over such stockholders' lowest percentage ownership during the testing period (generally three years).

An entity that experiences an ownership change generally will be subject to an annual limitation on its pre-ownership change tax loss and credit carryforwards equal to the equity value of the entity immediately before the ownership change, multiplied by the long-term, tax-exempt rate posted monthly by the Internal Revenue Service (subject to certain adjustments). The annual limitation would be increased each year to the extent that there is an unused limitation in a prior year.

In connection with the equity offerings completed at various dates during 2024, the Company issued additional shares of its common stock. The Company performed an IRC Section 382 analysis as of those dates and determined that it had not experienced an ownership change as of those dates.

The Company acquired certain tax assets (the "Legacy Arq Tax Assets") in the Arq Acquisition, totaling approximately \$12.5 million. The Legacy Arq Tax Assets are comprised of net operating loss carryforwards, of which \$8.8 million were in the U.S. Prior to the Acquisition Date, Legacy Arq completed numerous equity offerings that resulted in ownership changes. The Company has not completed a formal IRC Section 382 analysis of Legacy Arq equity changes from its inception through the Acquisition Date, however, the Company believes that one or more "ownership changes" occurred during this time period as defined under Sections 382 and 383 and that a portion or all the Legacy Arq Tax Assets may subject to an annual limitation.

Arq, Inc. and Subsidiaries
Notes to Consolidated Financial Statements

Note 13 - Marshall Mine, LLC

On March 27, 2023, (the "MM Closing Date"), the Company completed the sale of all of its membership interests in Marshall Mine, LLC to a third party (the "Buyer") in exchange for cash payment of \$2.2 million (the "MM Purchase Price") made by the Company to the Buyer and the assumption by the Buyer of certain liabilities of Marshall Mine, LLC. As of the MM Closing Date, Marshall Mine, LLC had outstanding liabilities of approximately \$4.9 million that were discharged upon payment of the MM Purchase Price by the Company, and the Company recognized a gain of approximately \$2.7 million in the Statement of Operations for the year ended December 31, 2023.

Note 14 - Related Party Transactions

Consumables Cost of Revenue

For the year ended December 31, 2024, the Company recognized \$0.9 million of Tinnuum Group Royalty expense, which is included in the "Cost of revenue, exclusive of depreciation and amortization" line item in the Consolidated Statement of Operations.

Tinnuum Group Obligation

As of December 31, 2024 and 2023, the Company had an outstanding liability of \$1.7 million related to its contractual amount due under the Tinnuum Group Obligation, which is included in the "Other current liabilities" line item in the Consolidated Balance Sheet. Refer to Note 7 for further discussion.

Note 15 - Defined Contribution Savings Plans

The Company sponsors a qualified defined contribution savings plan (the "401(k) Plan") that allows participation by eligible employees who may defer a portion of their gross pay. The Company makes contributions to the 401(k) Plan based on percentages of an employee's eligible compensation as specified in the 401(k) Plan, and such employer contributions are in the form of cash.

The following table presents the amount of the Company's contributions made to the 401(k) Plan:

<i>(in thousands)</i>	Years Ended December 31,	
	2024	2023
401(k) Plans employer contributions	\$ 544	\$ 613

Note 16 - Segment Reporting

Overall

The Company has one reportable segment – advanced purification technologies or "APT." The APT segment primarily manufactures and sells AC based environmental remediation products, comprised of powdered activated carbon and granular activated carbon, and other chemicals used to capture and remove contaminants for coal-fired power generation, industrial, municipal water and air, water, and soil treatment and remediation markets. The Company derives revenue primarily in the U.S. and manages the business activities on a consolidated basis. The Company manufactures all of its finished goods at the Red River Plant. The Company's chief operating decision maker ("CODM") is the Company's chief executive officer.

The Company's accounting policies of the APT segment are the same as those described in the summary of significant accounting policies which are provided in Note 1. The CODM assesses performance for the APT segment and decides how to allocate resources based on net income that also is reported on the income statement as consolidated net income. The measure of segment assets is reported on the balance sheet as total consolidated assets.

The CODM uses net income to evaluate income generated from APT assets (return on assets) in deciding how to allocate cash flows from operations within the APT segment. Net income is used to monitor budget versus actual operating results in assessing performance of the APT segment.

The level of detail used in reviewing operating financial performance and managing the business is contained in the Company's Consolidated Statements of Operations.

Arq, Inc. and Subsidiaries
Notes to Consolidated Financial Statements

Products and services

The Company operates in one segment, APT, and all revenue reported to external customers represents sales of APT products and are presented in the Consolidated Statements of Operations.

Geographic areas

The Company is domiciled in the U.S. The table below shows revenue by country for the years ended December 31, 2024 and 2023.

<i>(in thousands)</i>	Year ended December 31,	
	2024	2023
United States	\$ 101,103	\$ 91,366
Canada	7,856	7,817
Total	\$ 108,959	\$ 99,183

Major Customers

Revenue from external customers who represent 10% or more of the Company's revenue for the years ended December 31, 2024 and 2023 were as follows:

Customer	Revenue Type	Years ended December 31,	
		2024	2023
A	Consumables	21%	19%

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

As required by Rule 13a-15(b) under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), we have evaluated, under the supervision of and with the participation of our management, including our principal executive officer and principal financial officer, the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of the end of the period covered by this annual report. Our disclosure controls and procedures are designed to ensure that information required to be disclosed in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms. Based upon this evaluation, our principal executive officer and principal financial officer concluded that our disclosure controls and procedures were effective as of December 31, 2024.

Management's Report on Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. Internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external purposes in accordance with generally accepted accounting principles. The Company's internal control over financial reporting includes those policies and procedures that:

1. Pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of our assets;
2. Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of our management and directors; and
3. Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on our financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Under the supervision of, and with the participation of our management, including the principal executive officer and principal financial officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework and criteria established in *Internal Control-Integrated Framework* in 2013, issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this evaluation, our management concluded that our internal control over financial reporting was effective as of December 31, 2024.

We acquired Legacy Arq during the first quarter of 2023 (refer to Item 8. Note 12 of this Report). As permitted by Securities and Exchange Commission Staff interpretive guidance for newly acquired businesses, management excluded Legacy Arq from its evaluation of internal control over financial reporting as of December 31, 2023. We incorporated Legacy Arq into our annual report on internal control over financial reporting for our year ending December 31, 2024. As of December 31, 2023, Legacy Arq net assets totaled \$40.5 million. Legacy Arq contributed \$11.7 million of net loss in our Consolidated Statements of Operations for the year ended December 31, 2023.

Our independent registered public accounting firm, Moss Adams LLP, has issued an attestation report on our internal control over financial reporting as of December 31, 2024.

Changes in Internal Control Over Financial Reporting

We acquired Legacy Arq during the first quarter of our fiscal year ended December 31, 2023. As such, Legacy Arq's control environment and processes are included in the scope of our assessment of our internal controls over financial reporting beginning in the first quarter of our fiscal year ended December 31, 2024.

Other than as discussed above, during the three months ended December 31, 2024 there were no changes to our internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act) that have materially affected or are reasonably likely to materially affect our internal control over financial reporting.

Report of Independent Registered Public Accounting Firm

The Shareholders and the Board of Directors

Arq, Inc.

Opinion on Internal Control over Financial Reporting

We have audited Arq, Inc. (and subsidiaries)'s (the Company) internal control over financial reporting as of December 31, 2024, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2024, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by COSO.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of Arq, Inc. (and subsidiaries) as of December 31, 2024 and 2023, with the related consolidated statements of operations, changes in stockholders' equity and cash flows for each of the years then ended, and the related notes (collectively referred to as the "consolidated financial statements") and our report dated March 5, 2025, expressed an unqualified opinion on those consolidated financial statements.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management Report on Internal Control over Financial Reporting included in Item 9A. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed 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. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Moss Adams LLP

Denver, Colorado

March 5, 2025

We have served as the Company's auditor since 2017.

Item 9B. Other Information

During the three months ended December 31, 2024, no director or officer of the Company adopted or terminated a Rule 10b5-1 trading arrangement or non-Rule 10b5-1 trading arrangement, as each term is defined in Item 408(a) of Regulation S-K.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

None.

PART III

Item 10. Directors, Executive Officers, and Corporate Governance

The information required by this Item is incorporated by reference to our definitive proxy statement for the Annual Meeting of Stockholders to be filed within 120 days from December 31, 2024 under the headings "Corporate Governance", "Executive Compensation", "Delinquent Section 16(a) Reports", "Company Policies Relating to Executive Compensation-Insider Trading Policy" and "Information about our Executive Officers".

Item 11. Executive Compensation

The information required by this Item is incorporated by reference to our definitive proxy statement for the Annual Meeting of Stockholders to be filed within 120 days from December 31, 2024 under the headings "Executive Compensation" and "Director Compensation".

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information required by this Item concerning security ownership of certain beneficial owners and management is incorporated by reference to our definitive proxy statement for the Annual Meeting of Stockholders to be filed within 120 days from December 31, 2024 under the heading "Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters", with the exception of the following information.

Securities Authorized for Issuance under Equity Compensation Plans

We have plans under which equity awards are authorized for grant or issuance as compensation to eligible employees, consultants, and members of the Board. Our stockholders have approved these plans. See Note 10 - "Stock-Based Compensation" included in Item 8 of this Report for further information about the material terms of our equity compensation plans. The following table is a summary of the shares of our common stock authorized for issuance under the equity compensation plans as of December 31, 2024:

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in the first column)
Equity compensation plans approved by security holders ⁽¹⁾	477,045 ⁽²⁾	\$ —	1,906,407
Equity compensation plans not approved by security holders	1,400,000	\$ 3.00 ⁽³⁾	—
Total	1,877,045		1,906,407

⁽¹⁾ Includes securities registered for issuance under the 2017 Omnibus Incentive Plan, 2022 Omnibus Incentive Plan and 2024 Omnibus Incentive Plan.

⁽²⁾ Represent shares subject to unvested performance share units.

⁽³⁾ The restricted shares and RSUs were granted at full value, and therefore, have a weighted-average exercise price of \$0. Excluding RSUs from this calculation, the weighted-average exercise price of outstanding non-qualified stock options was \$3.00 at December 31, 2024.

Item 13. Certain Relationships and Related Transactions and Director Independence

The information required by this Item is incorporated by reference to our definitive proxy statement for the Annual Meeting of Stockholders to be filed within 120 days from December 31, 2024 under the heading "Related Person Transactions" and "Corporate Governance - Director Independence".

Item 14. Principal Accountant Fees and Services

The information required by this Item is incorporated by reference to our definitive proxy statement for the Annual Meeting of Stockholders to be filed within 120 days from December 31, 2024 under the headings "Independent Registered Public Accounting Firm" and "Audit Committee Approval of Services".

PART IV

Item 15. Exhibits and Financial Statement Schedules

- (a) The following consolidated financial statements of Arq, Inc. are filed as part of this Report under Item 8:
- (1) Financial Statements – see Index to Consolidated Financial Statements in Item 8;
 - (2) Financial Statement Schedules – All schedules are omitted because the required information is not applicable or is not present in amounts sufficient to require submission of the schedule or because the information required is included in the Consolidated Financial Statements and Notes thereto; and
 - (3) Exhibits – Those exhibits required by Item 601 of Regulation S-K and by paragraph (b) below.
- (b) The following exhibits are filed as part of this Report or, where indicated, were heretofore filed and are hereby incorporated by reference:

Exhibit No.	Description	Form	File No.	Incorporated by Reference Exhibit	Filing Date
3.1	Second Amended and Restated Certificate of Incorporation of Advanced Emissions Solutions, Inc.	10-Q	000-54992	3.1	August 9, 2013
3.2	Certificate of Amendment to the Amended and Restated Certificate of Incorporation, effective February 1, 2024	8-K	001-37822	3.1	January 31, 2024
3.3	Certificate of Designation, Preferences, and Rights of Series B Junior Participating Preferred Stock of Advanced Emissions Solutions, Inc.	8-K	001-37822	3.1	May 8, 2017
3.4	Certificate of Designations of Series A Preferred Stock	8-K	001-37822	3.1	February 1, 2023
3.5	Amended and Restated Bylaws of Arq, Inc., as amended	10-Q	001-37822	3.1	May 8, 2024
4.1	Form of Specimen Common Stock Certificate	10-Q	000-54992	4.1	August 9, 2013
4.2	Tax Asset Protection Plan dated as of May 5, 2017, by and between the Company and Computershare Trust Company, N.A., as rights agent, which includes as Exhibit B the Form of Rights Certificate	8-K	001-37822	3.2	May 8, 2017
4.3	First Amendment to Tax Asset Protection Plan dated as of April 6, 2018, by and between the Company and Computershare Trust Company, N.A., as rights agent	8-K	001-37822	4.2	April 11, 2018
4.4	Second Amendment to Tax Asset Protection Plan dated as of April 5, 2019, by and between the Company and Computershare Trust Company, N.A., as rights agent	8-K	001-37822	4.3	April 11, 2019
4.5	Third Amendment to Tax Asset Protection Plan dated as of April 8, 2020, by and between the Company and Computershare Trust Company, N.A., as rights agent	8-K	001-37822	4.4	April 9, 2020
4.6	Fourth Amendment to Tax Asset Protection Plan dated as of April 9, 2021, by and between the Company and Computershare Trust Company, N.A., as rights agent	8-K	001-37822	4.5	April 13, 2021
4.7	Fifth Amendment to Tax Asset Protection Plan dated as of March 15, 2022, by and between the Company and Computershare Trust Company, N.A., as rights agent	8-K	001-37822	4.6	March 16, 2022
4.8	Sixth Amendment to Tax Asset Protection Plan dated as of April 13, 2023, by and between the Company and Computershare Trust Company, N.A., as rights agent.	8-K	001-37822	4.7	April 14, 2023
4.9	Seventh Amendment to Tax Asset Protection Plan dated as of April 15, 2024, by and between the Company and Computershare Trust Company, N.A. as rights agent	8-K	001-37822	4.1	April 16, 2024
4.10	Description of the Registrant's Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934	10-K	001-37822	4.10	March 12, 2024
10.1	Advanced Emissions Solutions, Inc. 2017 Omnibus Incentive Plan**	8-K	001-37822	10.1	June 22, 2017
10.2	Advanced Emissions Solutions, Inc. 2022 Omnibus Incentive Plan**	8-K	001-37822	10.1	May 17, 2022

Exhibit No.	Description	Form	File No.	Incorporated by Reference Exhibit	Filing Date
10.3	Form of Restricted Stock Award Agreement under the 2022 Omnibus Incentive Plan**	10-K	001-37822	10.1	March 12, 2024
10.4	Form of Performance Stock Unit Agreement under the 2022 Omnibus Incentive Plan**	10-K	001-37822	10.1	March 12, 2024
10.5	Arq. Inc. 2024 Omnibus Incentive Plan	8-K	001-37822	10.1	June 13, 2024
10.6	Second Amended and Restated Operating Agreement of Clean Coal Solutions, LLC dated May 27, 2011, by and among Clean Coal Solutions, LLC, ADA-ES, Inc., GSFS Investments I Corp. and NexGen Refined Coal, LLC***	10-Q/A	000-50216	10.33	September 28, 2011
10.7	The First Amendment to the Second Amended and Restated Operating Agreement of Clean Coal Solutions, LLC, by and among Clean Coal Solutions, LLC, ADA-ES, Inc., GSFS Investments I Corp. and NexGen Refined Coal, LLC dated September 9, 2011	10-Q	000-50216	10.89	November 14, 2011
10.8	Second Amendment to the Second Amended and Restated Operating Agreement of Clean Coal Solutions, LLC by and among ADA-ES, Inc., NexGen Refined Coal, LLC and GSFS Investments I Corp. dated July 31, 2012	10-Q	000-50216	10.59	November 9, 2012
10.9	Contribution Agreement dated May 27, 2011 between ADA-ES, Inc. and NexGen Refined Coal, LLC	10-Q	000-50216	10.87	August 12, 2011
10.10	Amended and Restated Limited Liability Company Operating Agreement by and between ADA-ES, Inc., NexGen Refined Coal, LLC and Clean Coal Solutions Services, LLC dated November 20, 2013	10-K	000-54992	10.38	February 29, 2016
10.11	Amended and Restated License Agreement between ADA-ES, Inc. and Clean Coal Solutions, LLC dated October 30, 2009	10-Q	000-50216	10.77	August 16, 2010
10.12	First Amendment to the Amended and Restated License Agreement between ADA-ES, Inc. and Clean Coal Solutions, LLC dated as of August 4, 2010	10-K	000-50216	10.81	March 28, 2011
10.13	Second Amendment to Amended and Restated License Agreement by and between ADA-ES, Inc. and Clean Coal Solutions, LLC dated as of July 23, 2013***	10-Q	000-54992	10.63	November 12, 2013
10.14	Technology Sublicense Agreement between ADA-ES, Inc., Clean Coal Solutions, LLC, and GS RC Investments LLC dated June 29, 2010	10-Q	000-50216	10.74	August 16, 2010
10.15	Amendment to Technology Sublicense Agreement between ADA-ES, Inc., GS RC Investments, LLC, and Clean Coal Solutions, LLC dated November 21, 2011***	10-K	000-54992	10.44	February 29, 2016
10.16	Amendment #2 to Technology Sublicense Agreement between ADE-ES, Inc., GS RC Investments, LLC, and Clean Coal Solutions, LLC dated December 15, 2011	10-K	000-50216	10.49	March 15, 2012
10.17	M-45 Technology License Agreement between ADA-ES, Inc. and Clean Coal Solutions, LLC dated July 27, 2012***	10-Q	000-50216	10.58	November 9, 2012
10.18	Lignite Mining Agreement between Demery Resources Company, L.L.C. and Five Forks Mining, LLC dated as of June 29, 2009***	10-K	001-37822	10.43	March 18, 2019
10.19	First Amendment to Lignite Mining Agreement between Demery Resources Company, L.L.C. and Five Forks Mining, LLC, dated as of March 22, 2017***	10-K	001-37822	10.44	March 18, 2019
10.20	Third Amendment to the Second Amended and Restated Operating Agreement of Tinnium Group, LLC. dated September 4, 2019***	10-Q	001-37822	10.1	November 12, 2019
10.21	Master Agreement for Supply of Furnace Products between ADA Carbon Solutions, LLC and Cabot Norit Americas, Inc.***, †	8-K	001-37822	10.1	September 30, 2020

Exhibit No.	Description	Form	File No.	Incorporated by Reference Exhibit	Filing Date
10.22	Amendment to Master Agreement for Supply of Furnace Products, by and between Arq Solutions (Red River), LLC and Norit Americas, Inc., dated as of February 8, 2024***, †	8-K	001-37822	10.1	February 13, 2024
10.23	Securities Purchase Agreement, dated as of February 1, 2023, by and among Advanced Emissions Solutions, Inc. and Arq Limited***	8-K	001-37822	2.1	February 1, 2023
10.24	Loan Agreement among Community Trust Bank, Inc.; Corbin Project LLC, Arq Projects Holding Company LLC, Arq St. Rose LLC, Arq Corbin LLC and Arq Corbin Land LLC, dated January 27, 2021†	10-K	001-37822	10.35	March 8, 2023
10.25	Loan Modification Agreement, among Community Trust Bank, Inc.; Corbin Project LLC, Arq Projects Holding Company LLC, Arq St. Rose LLC, Arq Corbin LLC and Arq Corbin Land LLC, dated as of June 2, 2023	8-K	001-37822	10.1	June 6, 2023
10.26	Securities Purchase Agreement dated as of May 15, 2024, by and among the Company and the Purchasers named therein.	8-K	001-37822	10.1	May 16, 2024
10.27	Registration Rights Agreement dated as of May 15, 2024, by and among the Company and the Purchasers named therein.	8-K	001-37822	10.2	May 16, 2024
10.28	Underwriting Agreement, dated September 20, 2024, by and between the Company and Canaccord Genuity LLC as representative of the underwriters named therein.	8-K	001-37822	1.1	September 20, 2024
10.29	Credit, Security and Guaranty Agreement, dated as of December 27, 2024, by and among Arq, Inc., certain subsidiaries of Arq, Inc., MidCap Funding IV Trust as agent, and the lenders from time to time party thereto.†	8-K	001-37822	10.1	January 2, 2025
10.30	Employment Agreement by and between Robert E. Rasmus and Advanced Emissions Solutions, Inc., dated July 17, 2023	8-K	001-37822	10.2	July 17, 2023
10.31	Employment Agreement by and between Jeremy D. Williamson and Advanced Emissions Solutions, Inc., dated September 18, 2023	8-K	001-37822	10.3	September 18, 2023
10.32	Employment Agreement by and between Stacia Hansen and Advanced Emissions Solutions, Inc., dated November 6, 2023	8-K	001-37822	10.1	November 8, 2023
10.33	Employment Agreement by and between Clay Smith and Advanced Emissions Solutions, Inc., dated April 26, 2024*,***				
19	Arq Insider Trading Policy *				
21.1	Subsidiaries of Arq, Inc. *				
23.1	Consent of Moss Adams LLP *				
31.1	Certification of Principal Executive Officer of Arq, Inc. Pursuant to 17 CFR 240.13a-14(a) or 17 CFR 240.15d-14(a)*				
31.2	Certification of Principal Financial Officer of Arq, Inc. Pursuant to 17 CFR 240.13a-14(a) or 17 CFR 240.15d-14(a)*				
32.1	Certification of Principal Executive Officer and Principal Financial Officer of Arq, Inc. Pursuant to 18 U.S.C Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002*				
95	Mine Safety Disclosure Exhibit *				
97	Clawback Policy	10-K	001-37822	97	March 12, 2024

Exhibit No.	Description	Form	File No.	Incorporated by Reference Exhibit	Filing Date
101	The following financial statements, formatted in Inline XBRL: (i) Consolidated Balance Sheets as of December 31, 2024 and 2023, (ii) Consolidated Statements of Operations for the Years ended December 31, 2024 and 2023, (iii) Consolidated Statements of Changes in Stockholders' Equity for the Years ended December 31, 2024 and 2023, (iv) Consolidated Statements of Cash Flows for the Years ended December 31, 2024 and 2023; and (v) Notes to the Consolidated Financial Statements. *				
104	The cover page from Arq, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2024, formatted in Inline XBRL (included as Exhibit 101)*				

Notes:

- * – Filed or furnished herewith.
- ** – Management contract or compensatory plan or arrangement.
- *** – Portions of this exhibit have been omitted pursuant to Item 601(b)(10) as information that the Company customarily and actually treats that information as private or confidential and is not material.
- † – Schedules and exhibits have been omitted pursuant to Item 601(a)(5) of Regulation S-K. The Company hereby undertakes to furnish supplemental copies of any of the omitted schedules and exhibits upon request by the SEC.

Filings for the Company were made under the name ADA-ES, Inc. (File No. 000-50216) prior to July 1, 2013, the effective date of our reorganization, and under the name Advanced Emissions Solutions, Inc. (File No. 000-54992) starting on July 1, 2013. Filings for the Company were made under the name Advanced Emissions Solutions, Inc. (File No. 001-37822) starting on July 6, 2016. On February 1, 2024, the Company changed its name to Arq, Inc.

(c) Financial Statement Schedules. Please refer to Item 15(a) above.

Item 16. Form 10-K Summary

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Exchange Act, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Arq, Inc. (Registrant)

By /s/ Robert Rasmus
Robert Rasmus
Chief Executive Officer (Principal Executive Officer)

Date: March 5, 2025

By /s/ Stacia Hansen
Stacia Hansen
Chief Accounting Officer (Principal Financial and
Accounting Officer)

Date: March 5, 2025

Pursuant to the requirements of the Exchange Act, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

By /s/ Richard Campbell-Breeden
Richard Campbell-Breeden, Director
Date: March 5, 2025

By /s/ Jeremy Blank
Jeremy Blank, Director
Date: March 5, 2025

By /s/ Carol Eicher
Carol Eicher, Director
Date: March 5, 2025

By /s/ Gilbert Li
Gilbert Li, Director
Date: March 5, 2025

By /s/ Julian McIntyre
Julian McIntyre, Director
Date: March 5, 2025

By /s/ Laurie Bergman
Laurie Bergman, Director
Date: March 5, 2025

By /s/ L. Spencer Wells
L. Spencer Wells, Director
Date: March 5, 2025

By /s/ Robert Rasmus
Robert Rasmus, Director
Date: March 5, 2025



Directors & Officers

Board of Directors

Laurie Bergman
Chief Financial Officer, Legacy Food Group

Jeremy Blank
Chief Investment Officer, Community Fund

Richard Campbell-Breeden
Founder, Omeshorn Capital Advisors

Carol Eicher
Former Chief Executive Officer, Innocor, Inc.

Gilbert Li
Former Managing Partner, Alta Fundamental Advisers LLC

Julian McIntyre
Principal, McIntyre Partners

Robert Rasmus
Chief Executive Officer and President, Arq, Inc.

L. Spencer Wells
Founding Partner, Drivetrain Advisors

Executive Officers

Robert Rasmus
Chief Executive Officer and President

Jay Voncannon
Chief Financial Officer

Jeremy "Deke" Williamson
Chief Operating Officer

Joe M. Wong
Chief Technology Officer

Stacia Hansen
Chief Accounting Officer and Treasurer

Clay Smith
General Counsel and Corporate Secretary

TRANSFER AGENT

Computershare Trust Company, N.A.
6200 S. Quebec Street, Suite 300
Greenwood Village, CO 80111
(720) 241-7200

ANNUAL MEETING

Arq, Inc. will hold its 2025 Annual Meeting of Stockholders on Tuesday, June 3, 2025 at 9:00 a.m. MDT. Additional details regarding the meeting can be found in the definitive proxy statement for the meeting filed with the SEC and available on our website at <https://ir.arq.com/sec-filings>.



Corporate Headquarters

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contactus@arq.com

Investor Relations

Anthony Nathan – Investor & Corporate Relations (Arq)
Marc Silverberg - Managing Partner (ICR)
investors@arq.com