

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549**

Form 10-Q

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

For the quarterly period ended September 30, 2024

Or

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

For the transition period from _____ to _____

Commission File No. 001-11596

PERMA-FIX ENVIRONMENTAL SERVICES, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of incorporation or organization)

8302 Dunwoody Place, Suite 250, Atlanta, GA
(Address of principal executive offices)

58-1954497
(IRS Employer
Identification Number)

30350
(Zip Code)

(770) 587-9898
(Registrant's telephone number)

N/A

(Former name, former address and former fiscal year, if changed since last report)

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

Title of each class	Trading Symbol	Name of each exchange on which registered
Common Stock, \$.001 Par Value	PESI	Nasdaq Capital Market

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the Registrant was required to submit and post such files).

Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See definition of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ☐ Accelerated Filer ☐ Non-accelerated Filer ☒ Smaller reporting company ☒ Emerging growth company ☐

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

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

Indicate the number of shares outstanding of each of the issuer's classes of Common Stock, as of the close of the latest practical date.

Class	Outstanding at November 1, 2024
Common Stock, \$.001 Par Value	15,827,977 shares

PERMA-FIX ENVIRONMENTAL SERVICES, INC.

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PART I - FINANCIAL INFORMATION
ITEM 1. – Financial Statements

PERMA-FIX ENVIRONMENTAL SERVICES, INC.
Condensed Consolidated Balance Sheets

(Amounts in Thousands, Except for Share and Per Share Amounts)	September 30, 2024 (Unaudited)	December 31, 2023
ASSETS		
Current assets:		
Cash	\$ 10,567	\$ 7,500
Accounts receivable, net of allowance for credit losses of \$21 and \$30, respectively	8,741	9,722
Unbilled receivables	7,277	8,432
Inventories	1,135	1,155
Prepaid and other assets	4,346	3,738
Current assets related to discontinued operations	12	13
Total current assets	32,078	30,560
Property and equipment:		
Buildings and land	24,764	24,311
Equipment	23,578	22,809
Vehicles	423	434
Leasehold improvements	8	8
Office furniture and equipment	1,139	1,130
Construction-in-progress	2,170	1,010
Total property and equipment	52,082	49,702
Less accumulated depreciation	(31,689)	(30,693)
Net property and equipment	20,393	19,009
Property and equipment related to discontinued operations	130	81
Operating lease right-of-use assets	1,778	1,990
Intangibles and other long term assets:		
Permits	10,453	9,905
Other intangible assets - net	420	461
Finite risk sinking fund (restricted cash)	12,525	12,074
Deferred tax assets	—	4,299
Other assets	381	370
Total assets	\$ 78,158	\$ 78,749

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

PERMA-FIX ENVIRONMENTAL SERVICES, INC.
Condensed Consolidated Balance Sheets, Continued

September 30,
2024

December 31,

(Amounts in Thousands, Except for Share and per Share Amounts)	(Unaudited)	2023
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 7,675	\$ 9,582
Accrued expenses	6,320	6,560
Disposal/transportation accrual	1,811	1,198
Deferred revenue	5,398	6,815
Accrued closure costs - current	40	79
Current portion of long-term debt	554	773
Current portion of operating lease liabilities	320	380
Current portion of finance lease liabilities	285	291
Current liabilities related to discontinued operations	251	269
Total current liabilities	22,654	25,947
Accrued closure costs	8,201	8,051
Long-term debt, less current portion	1,910	1,975
Long-term operating lease liabilities, less current portion	1,521	1,670
Long-term finance lease liabilities, less current portion	564	776
Long-term liabilities related to discontinued operations	942	953
Total long-term liabilities	13,138	13,425
Total liabilities	35,792	39,372
Commitments and Contingencies (Note 9)		
Stockholders' Equity:		
Preferred Stock, \$.001 par value; 2,000,000 shares authorized, no shares issued and outstanding	—	—
Common Stock, \$.001 par value; 30,000,000 shares authorized; 15,817,046 and 13,654,201 shares issued, respectively; 15,809,404 and 13,646,559 shares outstanding, respectively	16	14
Additional paid-in capital	136,047	116,502
Accumulated deficit	(93,441)	(76,951)
Accumulated other comprehensive loss	(168)	(100)
Less Common Stock in treasury, at cost; 7,642 shares	(88)	(88)
Total stockholders' equity	42,366	39,377
Total liabilities and stockholders' equity	\$ 78,158	\$ 78,749

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

PERMA-FIX ENVIRONMENTAL SERVICES, INC.
Condensed Consolidated Statements of Operations
(Unaudited)

(Amounts in Thousands, Except for Per Share Amounts)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
Net revenues	\$ 16,812	\$ 21,877	\$ 44,415	\$ 67,016
Cost of goods sold	15,478	17,328	45,007	54,942
Gross profit	1,334	4,549	(592)	12,074
Selling, general and administrative expenses	3,632	3,933	10,631	10,969
Research and development	303	120	872	340
Loss on disposal of property and equipment	—	—	1	—
(Loss) income from operations	(2,601)	496	(12,096)	765
Other income (expense):				
Interest income	292	146	679	445
Interest expense	(121)	(89)	(346)	(189)
Interest expense-financing fees	(18)	(36)	(47)	(80)
Other	59	(17)	61	(11)
(Loss) income from continuing operations before taxes	(2,389)	500	(11,749)	930
Income tax expense	6,417	254	4,300	482
(Loss) income from continuing operations, net of taxes	(8,806)	246	(16,049)	448
(Loss) income from discontinued operations, net of taxes (Note 10)	(173)	95	(441)	(44)
Net (loss) income	\$ (8,979)	\$ 341	\$ (16,490)	\$ 404
Net (loss) income per common share - basic:				
Continuing operations	\$ (.56)	\$.02	\$ (1.09)	\$.03
Discontinued operations	(.01)	.01	(.03)	—
Net (loss) income per common share	\$ (.57)	\$.03	\$ (1.12)	\$.03
Net (loss) income per common share - diluted:				
Continuing operations	\$ (.56)	\$.02	\$ (1.09)	\$.03
Discontinued operations	(.01)	—	(.03)	—
Net (loss) income per common share	\$ (.57)	\$.02	\$ (1.12)	\$.03

Number of common shares used in computing net (loss)
income per share:

Basic	15,803	13,568	14,695	13,468
Diluted	15,803	13,979	14,695	13,749

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

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PERMA-FIX ENVIRONMENTAL SERVICES, INC.
Condensed Consolidated Statements of Comprehensive (Loss) Income
(Unaudited)

(Amounts in Thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
Net (loss) income	\$ (8,979)	\$ 341	\$ (16,490)	\$ 404
Other comprehensive income (loss):				
Foreign currency translation adjustment	19	(57)	(68)	(4)
Total other comprehensive income (loss)	19	(57)	(68)	(4)
Comprehensive (loss) income	\$ (8,960)	\$ 284	\$ (16,558)	\$ 400

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

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PERMA-FIX ENVIRONMENTAL SERVICES, INC
Condensed Consolidated Statement of Stockholders' Equity
(Unaudited)
(Amounts in thousands, except for share amounts)

	Common Stock		Additional	Common	Accumulated		Total
	Shares	Amount	Paid-In Capital	Stock Held In Treasury	Other Comprehensive Loss	Accumulated Deficit	Stockholders' Equity
Balance at December 31, 2023	<u>13,654,201</u>	<u>\$ 14</u>	<u>\$ 116,502</u>	<u>\$ (88)</u>	<u>\$ (100)</u>	<u>\$ (76,951)</u>	<u>\$ 39,377</u>
Net loss	—	—	—	—	—	(3,560)	(3,560)
Foreign currency translation	—	—	—	—	(56)	—	(56)
Issuance of Common Stock for services	14,963	—	118	—	—	—	118
Issuance of Common Stock upon exercise of options	31,416	—	104	—	—	—	104
Issuance of Common Stock upon exercise of warrant	30,000	—	105	—	—	—	105
Stock-Based Compensation	—	—	152	—	—	—	152
Balance at March 31, 2024	<u>13,730,580</u>	<u>\$ 14</u>	<u>\$ 116,981</u>	<u>\$ (88)</u>	<u>\$ (156)</u>	<u>\$ (80,511)</u>	<u>\$ 36,240</u>
Net loss	—	—	—	—	—	(3,951)	(3,951)
Foreign currency translation	—	—	—	—	(31)	—	(31)
Issuance of Common Stock for services	9,965	—	120	—	—	—	120
Issuance of Common Stock upon exercise of options	4,201	—	9	—	—	—	9
Sale of Common Stock, net of offering costs (Note 14)	2,051,282	2	18,113	—	—	—	18,115
Issuance of warrants from sale of Common Stock (Note 14)	—	—	331	—	—	—	331
Stock-Based Compensation	—	—	132	—	—	—	132
Balance at June 30, 2024	<u>15,796,028</u>	<u>\$ 16</u>	<u>\$ 135,686</u>	<u>\$ (88)</u>	<u>\$ (187)</u>	<u>\$ (84,462)</u>	<u>\$ 50,965</u>
Net loss	—	—	—	—	—	(8,979)	(8,979)
Foreign currency translation	—	—	—	—	19	—	19
Issuance of Common Stock for services	12,218	—	123	—	—	—	123
Issuance of Common Stock upon exercise of options	8,800	—	46	—	—	—	46
Adjustment of offering costs from sale of Common Stock (Note 14)	—	—	10	—	—	—	10
Stock-Based Compensation	—	—	182	—	—	—	182
Balance at September 30, 2024	<u>15,817,046</u>	<u>\$ 16</u>	<u>\$ 136,047</u>	<u>\$ (88)</u>	<u>\$ (168)</u>	<u>\$ (93,441)</u>	<u>\$ 42,366</u>

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

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PERMA-FIX ENVIRONMENTAL SERVICES, INC
Condensed Consolidated Statement of Stockholders' Equity, Continued
(Unaudited)
(Amounts in thousands, except for share amounts)

	Common Stock		Additional Paid-In	Common Stock Held In	Accumulated Other Comprehensive	Accumulated	Total Stockholders'
	Shares	Amount	Capital	Treasury	Loss	Deficit	Equity
Balance at December 31, 2022	<u>13,332,398</u>	<u>\$ 13</u>	<u>\$ 115,209</u>	<u>\$ (88)</u>	<u>\$ (165)</u>	<u>\$ (77,436)</u>	<u>\$ 37,533</u>
Net loss	—	—	—	—	—	(411)	(411)
Foreign currency translation	—	—	—	—	7	—	7
Issuance of Common Stock for services	33,319	—	118	—	—	—	118
Issuance of Common Stock upon exercise of options	31,719	—	7	—	—	—	7
Stock-Based Compensation	—	—	118	—	—	—	118
Balance at March 31, 2023	<u>13,397,436</u>	<u>\$ 13</u>	<u>\$ 115,452</u>	<u>\$ (88)</u>	<u>\$ (158)</u>	<u>\$ (77,847)</u>	<u>\$ 37,372</u>
Net income	—	—	—	—	—	474	474
Foreign currency translation	—	—	—	—	46	—	46
Issuance of Common Stock for services	10,171	—	119	—	—	—	119
Issuance of Common Stock upon exercise of options	155,136	1	93	—	—	—	94
Stock-Based Compensation	—	—	125	—	—	—	125
Balance at June 30, 2023	<u>13,562,743</u>	<u>\$ 14</u>	<u>\$ 115,789</u>	<u>\$ (88)</u>	<u>\$ (112)</u>	<u>\$ (77,373)</u>	<u>\$ 38,230</u>
Net Income	—	—	—	—	—	341	341
Foreign currency translation	—	—	—	—	(57)	—	(57)
Issuance of Common Stock for services	10,712	—	119	—	—	—	119
Issuance of Common Stock upon exercise of options	15,478	—	49	—	—	—	49
Stock-Based Compensation	—	—	149	—	—	—	149
Balance at September 30, 2023	<u>13,588,933</u>	<u>\$ 14</u>	<u>\$ 116,106</u>	<u>\$ (88)</u>	<u>\$ (169)</u>	<u>\$ (77,032)</u>	<u>\$ 38,831</u>

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

PERMA-FIX ENVIRONMENTAL SERVICES, INC.
Condensed Consolidated Statements of Cash Flows
(Unaudited)

	Nine Months Ended September 30,	
(Amounts in Thousands)	2024	2023
Cash flows from operating activities:		
Net (loss) income	\$ (16,490)	\$ 404
Less: Loss from discontinued operations, net of taxes (Note 10)	(441)	(44)
(Loss) income from continuing operations, net of taxes	(16,049)	448
Adjustments to reconcile (loss) income from continuing operations to cash used in operating activities:		
Depreciation and amortization	1,295	2,124
Amortization of debt issuance costs	47	80
Deferred tax expense	4,300	482
(Recovery of) provision for credit losses on accounts receivable	(9)	56
Loss on disposal of property and equipment	1	—
Issuance of Common Stock for services	361	356
Stock-based compensation	466	392
Changes in operating assets and liabilities of continuing operations		
Accounts receivable	990	(6,034)
Unbilled receivables	1,155	(3,274)
Prepaid expenses, inventories and other assets	2,277	3,696
Accounts payable, accrued expenses and unearned revenue	(5,805)	2,175
Cash (used in) provided by continuing operations	(10,971)	501
Cash used in discontinued operations	(468)	(478)
Cash used in operating activities	(11,439)	23
Cash flows from investing activities:		
Purchases of property and equipment	(2,224)	(1,386)
Addition to permits and other intangible assets	(577)	(49)
Proceeds from sale of property and equipment	1	—
Cash used in continuing operations	(2,800)	(1,435)
Cash used in discontinued operations	(49)	—
Cash used in investing activities	(2,849)	(1,435)
Cash flows from financing activities:		
Repayments of revolving credit borrowings	(78,313)	(63,295)
Borrowing on revolving credit	78,313	63,295
Proceeds from long term debt	—	2,500
Proceeds from sale of Common Stock, net of offering costs paid (Note 14)	18,495	—
Principal repayments of finance lease liabilities	(218)	(135)
Principal repayments of long term debt	(675)	(450)
Payment of debt issuance costs	(61)	(175)
Proceeds from issuance of Common Stock upon exercise of options/warrant	264	150
Cash provided by financing activities of continuing operations	17,805	1,890
Effect of exchange rate changes on cash	1	—

Increase in cash and finite risk sinking fund (restricted cash)	3,518	478
Cash and finite risk sinking fund (restricted cash) at beginning of period	19,574	13,436
Cash and finite risk sinking fund (restricted cash) at end of period	<u>\$ 23,092</u>	<u>\$ 13,914</u>
Supplemental disclosure:		
Interest paid	\$ 349	\$ 172
Income taxes paid	50	—
Non-cash financing activities:		
Equipment/property purchase subject to finance	406	309

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

PERMA-FIX ENVIRONMENTAL SERVICES, INC.
Notes to Condensed Consolidated Financial Statements
September 30, 2024
(Unaudited)

1. Basis of Presentation

The condensed consolidated financial statements included herein have been prepared by the Company (which may be referred to as we, us or our), without an audit, pursuant to the rules and regulations of the Securities and Exchange Commission (the "Commission"). Certain information and note disclosures normally included in financial statements prepared in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP") have been condensed or omitted pursuant to such rules and regulations, although the Company believes the disclosures which are made are adequate to make the information presented not misleading. Further, the condensed consolidated financial statements reflect, in the opinion of management, all adjustments (which include only normal recurring adjustments) necessary to present fairly the financial position and results of operations as of and for the periods indicated. The results of operations for the nine months ended September 30, 2024, are not necessarily indicative of results to be expected for the fiscal year ending December 31, 2024.

These condensed consolidated financial statements should be read in conjunction with the consolidated financial statements and the notes thereto included in the Company's Annual Report on Form 10-K as of and for the year ended December 31, 2023.

The condensed consolidated financial statements include the accounts of our wholly-owned subsidiaries.

Reclassification

Certain amounts in the condensed consolidated statement of cash flows for the prior period have been reclassified to conform with current presentation. The reclassifications had no effect on the condensed consolidated statements of operations, balance sheets and stockholders' equity.

2. Summary of Significant Accounting Policies

Our accounting policies are as set forth in the notes to the December 31, 2023, consolidated financial statements referred to above.

Recently Issued Accounting Standards – Not Yet Adopted

In August 2023, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2023-05, "Business Combinations—Joint Venture Formations (Subtopic 805-60): Recognition and Initial Measurement." ASU 2023-05 applies to the formation of a "joint venture" or a "corporate joint venture" and requires a joint venture to initially measure all contributions received upon its formation at fair value. The guidance does not impact accounting by the venturers. The new guidance is applicable to joint venture entities with a formation date on or after January 1, 2025, on a prospective basis. The Company is currently evaluating the impact of this ASU on its consolidated financial statements.

In November 2023, the FASB issued ASU 2023-07, "Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures," which expands reportable segment disclosure requirements by requiring disclosures of significant reportable segment expenses that are regularly provided to the chief operating decision maker ("CODM") and included within each reported measure of a segment's profit or loss. The ASU also requires disclosure of the title and position of the individual identified as the CODM and an explanation of how the CODM uses the reported measures of a segment's profit or loss in assessing segment performance and deciding how to allocate resources. Additionally, ASU 2023-07 requires all segment profit or loss and assets disclosures to be provided on an annual and interim basis. The amendments in this ASU are required to be adopted for fiscal years beginning after December 15, 2023, and interim periods within fiscal years beginning after December 15, 2024, with early adoption permitted, and should be applied on a retrospective basis. ASU 2023-07 will be effective for the Company's financial statements for the year ended December 31, 2024. This ASU will not have impact on the Company's consolidated financial condition or results of operations. The Company is evaluating the impact to the related segment reporting disclosures.

In December 2023, the FASB issued ASU No. 2023-09, "Income Taxes (Topic 740): Improvements to Income Tax Disclosures," which modifies the rules on income tax disclosures to require entities to disclose (1) specific categories in the rate reconciliation, (2) the income or loss from continuing operations before income tax expense or benefit (separated between domestic and foreign) and (3) income tax expense or benefit from continuing operations (separated by federal, state and foreign). ASU 2023-09 also requires entities to disclose their income tax payments to international, federal, state and local jurisdictions, among other changes. The guidance is effective for annual periods beginning after December 15, 2024. ASU 2023-09 should be applied on a prospective basis, but retrospective application is permitted. This ASU will not have impact on the Company's consolidated financial condition or results of operations. The Company is evaluating the impact to its income taxes reporting disclosures.

3. Revenue

Disaggregation of Revenue

In general, the Company's business segmentation is aligned according to the nature and economic characteristics of our services and provides meaningful disaggregation of each business segment's results of operations. The nature of the Company's performance obligations within our Treatment and Services Segments result in the recognition of our revenue primarily over time. The following tables present further disaggregation of our revenues by different categories for our Services and Treatment Segments:

Revenue by Contract Type
(In thousands)

	Three Months Ended September 30, 2024			Three Months Ended September 30, 2023		
	Treatment	Services	Total	Treatment	Services	Total
Fixed price	\$ 9,064	\$ 6,396	\$ 15,460	\$ 10,795	\$ 10,188	\$ 20,983
Time and materials	—	1,352	1,352	—	894	894
Total	\$ 9,064	\$ 7,748	\$ 16,812	\$ 10,795	\$ 11,082	\$ 21,877

Revenue by Contract Type
(In thousands)

	Nine Months Ended September 30, 2024			Nine Months Ended September 30, 2023		
	Treatment	Services	Total	Treatment	Services	Total
Fixed price	\$ 26,116	\$ 15,405	\$ 41,521	\$ 33,223	\$ 29,995	\$ 63,218
Time and materials	—	2,894	2,894	—	3,798	3,798
Total	\$ 26,116	\$ 18,299	\$ 44,415	\$ 33,223	\$ 33,793	\$ 67,016

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Revenue by generator
(In thousands)

	Three Months Ended September 30, 2024			Three Months Ended September 30, 2023		
	Treatment	Services	Total	Treatment	Services	Total
Domestic government	\$ 6,578	\$ 7,346	\$ 13,924	\$ 7,095	\$ 8,444	\$ 15,539
Domestic commercial	2,229	312	2,541	3,450	2,170	5,620
Foreign government	—	65	65	250	445	695
Foreign commercial	257	25	282	—	23	23
Total	\$ 9,064	\$ 7,748	\$ 16,812	\$ 10,795	\$ 11,082	\$ 21,877

Revenue by generator
(In thousands)

	Nine Months Ended September 30, 2024			Nine Months Ended September 30, 2023		
	Treatment	Services	Total	Treatment	Services	Total
Domestic government	\$ 18,997	\$ 17,129	\$ 36,126	\$ 24,160	\$ 29,603	\$ 53,763
Domestic commercial	6,045	867	6,912	7,925	3,509	11,434
Foreign government	1	232	233	1,002	615	1,617
Foreign commercial	1,073	71	1,144	136	66	202
Total	\$ 26,116	\$ 18,299	\$ 44,415	\$ 33,223	\$ 33,793	\$ 67,016

Contract Balances

The timing of revenue recognition and billings can result in unbilled receivables (contract assets) or deferred revenue (contract liabilities). The following table represents changes in our contract asset and contract liabilities balances for the periods noted: The reduction in deferred revenue from December 31, 2023, to September 30, 2024, was primarily due to the substantial completion of a waste treatment project for a certain customer in which a prepayment was made to the Company by the customer in 2023.

(In thousands)	September 30, 2024	December 31, 2023	Change (\$)	Change (%)
Contract assets				
Unbilled receivables - current	\$ 7,277	\$ 8,432	\$ (1,155)	-14%
Contract liabilities				
Deferred revenue	\$ 5,398	\$ 6,815	\$ (1,417)	-20.8%
(In thousands)	September 30, 2023	December 31, 2022	Change (\$)	Change (%)
Contract assets				
Unbilled receivables - current	\$ 9,336	\$ 6,062	\$ 3,274	54.0%
Contract liabilities				
Deferred revenue	\$ 7,765	\$ 4,813	\$ 2,952	61.3%

During the three and nine months ended September 30, 2024, the Company recognized revenue of \$ 677,000 and \$5,596,000, respectively, related to untreated waste that was in the Company's control as of the beginning of the year. During the three and nine months ended September 30, 2023, the Company recognized revenue of \$842,000 and \$6,289,000, respectively, related to untreated waste that was in the Company's control as of the beginning of the year. All revenue recognized in each period related to performance obligations satisfied within the respective period.

Accounts Receivable

The following table represents changes in accounts receivable, net of credit losses, for the periods noted:

(In thousands)	September 30, 2024	December 31, 2023	Change (\$)	Change (%)
Accounts Receivable (net)	\$ 8,741	\$ 9,722	\$ (981)	-10.1%
(In thousands)	September 30, 2023	December 31, 2022	Change (\$)	Change (%)
Accounts Receivable (net)	\$ 15,342	\$ 9,364	\$ 5,978	63.8%

The decrease from December 31, 2023, to September 30, 2024, was primarily due to reduced billing from decreased revenues. The decrease in accounts receivable was also attributed to the collection by May 2024 of outstanding accounts receivable for work performed for a certain Canadian project for which a settlement agreement was reached, with collection subject to meeting certain conditions/terms. (see "Note 11 - Perma-Fix Canada Inc. ("PF Canada")" for a discussion on the collection of the receivables).

Remaining Performance Obligations

The Company applies the practical expedient in Accounting Standards Codification ("ASC") 606-10-50-14 and does not disclose information about remaining performance obligations that have original expected durations of one year or less.

Within our Services Segment, there are service contracts which provide that the Company has a right to consideration from a customer in an amount that corresponds directly with the value to the customer of our performance completed to date. For those contracts, the Company has utilized the practical expedient in ASC 606-10-55-18, which allows the Company to recognize revenue in the amount for which we have the right to invoice; accordingly, the Company does not disclose the value of remaining performance obligations for those contracts.

The Company's contracts and subcontracts relating to activities at governmental sites generally allow for termination for convenience at any time at the government's option without payment of a substantial penalty. The Company does not disclose remaining performance obligations on these contracts.

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4. Leases

At the inception of an arrangement, the Company determines if an arrangement is, or contains, a lease based on facts and circumstances present in that arrangement. Lease classifications, recognition, and measurement are then determined at the lease commencement date.

The Company's operating lease right-of-use ("ROU") assets and operating lease liabilities include primarily leases for office and warehouse spaces used to conduct our business. The Company's operating leases also previously included the lease of a building with land where its Oak Ridge Environmental Waste Operations ("EWOC") facility conducts its waste treatment operations. In July 2024, the Company completed the purchase of the EWOC property under the lease purchase option (see "Note 8 – Long Term Debt" for a discussion of the purchase of this property by the Company). Finance leases consist primarily of processing equipment and vehicles/trucks used by our facilities' operations.

The components of lease cost for the Company's leases for the three and nine months ended September 30, 2024, and 2023 were as follows (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
Operating Leases:				
Lease cost	\$ 129	\$ 157	\$ 420	\$ 470
Finance Leases:				
Amortization of ROU assets	65	39	196	115
Interest on lease liability	20	9	63	22
	85	48	259	137
Short-term lease rent expense	1	—	3	1
Total lease cost	\$ 215	\$ 205	\$ 682	\$ 608

The weighted average remaining lease term and the weighted average discount rate for operating and finance leases at September 30, 2024, were:

	Operating Leases	Finance Leases
Weighted average remaining lease terms (years)	4.9	3.9
Weighted average discount rate	7.7%	9.0%

The weighted average remaining lease term and the weighted average discount rate for operating and finance leases at September 30, 2023, were:

	Operating Leases	Finance Leases
Weighted average remaining lease terms (years)	5.7	3.2
Weighted average discount rate	7.5%	7.0%

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The following table reconciles the undiscounted cash flows for the operating and finance leases at September 30, 2024, to the operating and finance lease liabilities recorded on the balance sheet (in thousands):

	Operating Leases	Finance Leases
2024	\$ 108	\$ 91
2025	486	345
2026	479	192
2027	447	157
2028	343	134
2029 and thereafter	407	102
Total undiscounted lease payments	2,270	1,021
Less: Imputed interest	(429)	(172)
Present value of lease payments	\$ 1,841	\$ 849
Current portion of operating lease obligations	\$ 320	\$ —

Long-term operating lease obligations, less current portion	\$	1,521	\$	—
Current portion of finance lease obligations	\$	—	\$	285
Long-term finance lease obligations, less current portion	\$	—	\$	564

Supplemental cash flow and other information related to our leases were as follows for the three and nine months ended September 30, 2024, and 2023 (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
Cash paid for amounts included in the measurement of lease liabilities:				
Operating cash flow used in operating leases	\$ 119	\$ 145	\$ 415	\$ 435
Operating cash flow used in finance leases	\$ 20	\$ 9	\$ 63	\$ 22
Financing cash flow used in finance leases	\$ 72	\$ 54	\$ 218	\$ 135
ROU assets obtained in exchange for lease obligations for:				
Finance liabilities	\$ —	\$ 154	\$ —	\$ 311
Operating liabilities	\$ —	484	\$ 497	\$ 484
Reduction to ROU assets resulting from purchase of underlying asset:				
Operating liabilities	404	—	404	—

The reduction in ROU resulted from the purchase of the Company's property as discussed above (see "Note 8 – Long Term Debt" for a discussion of this purchase).

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5. Intangible Assets

The following table summarizes information relating to the Company's definite-lived intangible assets:

	Weighted Average Amortization Period (Years)	September 30, 2024			December 31, 2023		
		Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Other Intangibles (amount in thousands)							
Patents	8.3	\$ 733	\$ (397)	\$ 336	\$ 710	\$ (387)	\$ 323
Software	3	673	(589)	84	667	(529)	138
Total		\$ 1,406	\$ (986)	\$ 420	\$ 1,377	\$ (916)	\$ 461

The intangible assets noted above are amortized on a straight-line basis over their useful lives.

The following table summarizes the expected amortization over the next five years for our definite-lived intangible assets:

Year	Amount (In thousands)
2024 (Remaining)	\$ 13
2025	45
2026	40
2027	22
2028	13
Total	\$ 133

Amortization expense relating to the definite-lived intangible assets as discussed above was \$ 22,000 and \$70,000 for the three and nine months ended September 30, 2024, respectively, and \$55,000 and \$165,000 for the three and nine months ended September 30, 2023, respectively.

6. Capital Stock, Stock Plans and Stock-Based Compensation

The Company has certain stock option plans under which it may award incentive stock options ("ISOs") and/or non-qualified stock options ("NQSOs") to employees, officers, outside directors, and outside consultants.

On January 18, 2024, the Company granted ISOs to certain employees under the 2017 Stock Option Plan ("2017 Plan"), for the purchase of up to an aggregate of 45,000 shares of the Company's common stock, par value \$.001 (the "Common Stock"). Each ISO granted is for a contractual term of six years with one-fifth vesting annually over a five-year period. The exercise price of the ISO is \$7.75 per share, which was equal to the fair market value of the Company's Common Stock on the date of grant.

On July 18, 2024, the Company granted ISOs to certain employees under the 2017 Stock Option Plan, for the purchase of up to an aggregate of 35,500 shares of the Company's Common Stock. Each ISO granted is for a contractual term of six years with one-fifth vesting annually over a five-year period. The exercise price of the ISO is \$10.05 per share, which was equal to the fair market value of the Company's Common Stock on the date of grant.

On July 18, 2024, the Company issued a NQSO to each of the Company's seven reelected outside (non-management) directors for the purchase, under the Company's 2003 Outside Directors Stock Plan (the "2003 Plan"), of up to 10,000 shares of the Company's Common Stock. Dr. Louis Centofanti and Mark Duff, each an executive officer of the Company as well as a director, were not eligible to receive an option under the 2003 Plan. Each NQSO granted is for a contractual term of ten years with one-fourth vesting annually over a four-year period. The exercise price of each NQSO is \$10.20 per share, which was equal to the fair market value of the Company's Common Stock on the day preceding the grant date, in accordance with the 2003 Plan.

The following table summarizes stock-based compensation recognized for the three and nine months ended September 30, 2024, and 2023 for our employee and director stock options.

Stock Options	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
Employee Stock Options	\$ 96,000	\$ 94,000	\$ 259,000	\$ 273,000
Director Stock Options	86,000	55,000	207,000	119,000
Total	<u>\$ 182,000</u>	<u>\$ 149,000</u>	<u>\$ 466,000</u>	<u>\$ 392,000</u>

At September 30, 2024, the Company had approximately \$ 2,091,000 of total unrecognized compensation costs related to unvested options for employee and directors. The weighted average period over which the unrecognized compensation costs are expected to be recognized is approximately 3.2 years.

The summary of the Company's stock option plans as of September 30, 2024, and September 30, 2023, and changes during the periods then ended, are presented below. The Company's plans consist of the 2017 Plan and the 2003 Plan:

	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value ⁽⁴⁾
Options outstanding January 1, 2024	994,500	\$ 5.57		
Granted	150,500	\$ 9.43		
Exercised	(58,700)	\$ 5.57		\$ 306,574
Forfeited	(46,400)	\$ 5.93		
Options outstanding end of period ⁽¹⁾	<u>1,039,900</u>	<u>\$ 6.12</u>	<u>4.8</u>	<u>\$ 6,397,354</u>
Options exercisable at September 30, 2024 ⁽²⁾	<u>386,000</u>	<u>\$ 5.31</u>	<u>4.0</u>	<u>\$ 2,684,482</u>

	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value ⁽⁴⁾
Options outstanding January 1, 2023	1,018,400	\$ 5.02		
Granted	365,000	\$ 3.19		
Exercised	(282,400)	\$ 3.70		\$ 2,118,892
Forfeited/expired/cancelled	(64,500)	\$ 3.67		
Options outstanding end of period ⁽²⁾	<u>1,036,500</u>	<u>\$ 5.48</u>	<u>5.1</u>	<u>\$ 5,146,126</u>
Options exercisable at September 30, 2023 ⁽³⁾	<u>302,300</u>	<u>\$ 4.91</u>	<u>3.9</u>	<u>\$ 1,675,604</u>

(1) Options with exercise prices ranging from \$3.15 to \$10.20

(2) Options with exercise prices ranging from \$3.15 to \$9.81

(3) Options with exercise prices ranging from \$3.15 to \$7.50

(4) The intrinsic value of a stock option is the amount by which the market value of the underlying stock exceeds the exercise price.

During the nine months ended September 30, 2024, the Company issued a total of 37,146 shares of its Common Stock under the 2003 Plan to its outside directors as compensation for serving on our Board of Directors (the "Board"). The Company recorded approximately \$363,000 in compensation expenses (included in selling, general and administration ("SG&A") expenses) in connection with the issuance of shares of its Common Stock to outside directors.

During the nine months ended September 30, 2024, the Company issued an aggregate 14,717 shares of its Common Stock from cashless exercises of options for the purchase of 29,000 shares of the Company's Common Stock ranging from \$3.15 per share to \$7.005 per share. Additionally, the Company issued 29,700 shares of its Common Stock from the cash exercises of options for the purchase of 29,700 shares of the Company's Common Stock, at exercise prices ranging from \$3.70 per share to \$7.005 per share, resulting in proceeds of approximately \$159,000.

During the first quarter of 2024, a remaining warrant issued in connection with a \$2,500,000 loan that the Company received on April 1, 2019 (which was paid in full in December 2020 by the Company) for the purchase of up to 30,000 shares of the Company's Common Stock at an exercise price of \$3.51 per share, was exercised by the optionee, resulting in proceeds received by the Company of approximately \$105,000.

7. (Loss) Income Per Share

Basic (loss) income per share is calculated based on the weighted-average number of outstanding common shares during the applicable period. Diluted (loss) income per share is based on the weighted-average number of outstanding common shares plus the weighted-average number of potential outstanding common shares. In periods where they are anti-dilutive, such amounts are excluded from the calculations of dilutive earnings per share. The following table reconciles the (loss) income and average share amounts used to compute both basic and diluted (loss) income per share:

(Amounts in Thousands, Except for Per Share Amounts)	Three Months Ended September 30, (Unaudited)		Nine Months Ended September 30, (Unaudited)	
	2024	2023	2024	2023
<u>(Loss) income per common share from continuing operations</u>				
(Loss) income from continuing operations, net of taxes	\$ (8,806)	\$ 246	\$ (16,049)	\$ 448
Basic (loss) income per share	<u>\$ (.56)</u>	<u>\$.02</u>	<u>\$ (1.09)</u>	<u>\$.03</u>

Diluted (loss) income per share	\$ (1.56)	\$.02	\$ (1.09)	\$.03
<u>(Loss) income per common share from discontinued operations, net of taxes</u>				
(Loss) income from discontinued operations, net of taxes	\$ (173)	\$ 95	\$ (441)	\$ (44)
Basic (loss) income per share	\$ (.01)	\$.01	\$ (.03)	\$ —
Diluted loss per share	\$ (.01)	\$ —	\$ (.03)	\$ —
<u>Net (loss) income per common share</u>				
Net (loss) income	\$ (8,979)	\$ 341	\$ (16,490)	\$ 404
Basic (loss) income per share	\$ (.57)	\$.03	\$ (1.12)	\$.03
Diluted (loss) income per share	\$ (.57)	\$.02	\$ (1.12)	\$.03
Weighted average shares outstanding:				
Basic weighted average shares outstanding	15,803	13,568	14,695	13,468
Add: dilutive effect of stock options	—	370	—	244
Add: dilutive effect of warrants	—	41	—	37
Diluted weighted average shares outstanding	15,803	13,979	14,695	13,749
Potential shares excluded from above weighted average share calculations due to their anti-dilutive effect include:				
Stock options	—	—	70	70
Warrant	62	—	62	—
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8. Long Term Debt

Long-term debt consists of the following:

(Amounts in Thousands)	September 30, 2024	December 31, 2023
Revolving Credit facility dated May 8, 2020, borrowings based upon eligible accounts receivable, subject to monthly borrowing base calculation, balance due on May 15, 2027. Effective interest rate for the first nine months of 2024 was 10.5% ⁽¹⁾	\$ —	\$ —
Term Loan 1 dated May 8, 2020, payable in equal monthly installments of principal, balance due on May 15, 2027. Effective interest rate for the first nine months of 2024 was 9.5% ⁽¹⁾	—	213
Term Loan 2 dated July 31, 2023, payable in equal monthly installments of principal, balance due on May 15, 2027. Effective interest rate for first nine months of 2024 was 9.4% ⁽¹⁾	1,958	2,333
Capital Line dated May 4, 2021, payable in equal monthly installments of principal, balance due on May 15, 2027. Effective interest rate for first six months of 2024 was 8.8% ⁽¹⁾	279	358
Debt Issuance Costs	(184) ⁽²⁾	(170) ⁽²⁾
Notes Payable up to 2044, with annual interest rates ranging from 8.10% to 10.7% ⁽³⁾	411	14
Total debt	2,464	2,748
Less current portion of long-term debt	554	773
Long-term debt	<u>\$ 1,910</u>	<u>\$ 1,975</u>

(1)Our revolving credit facility is collateralized by our accounts receivable, and our term loans and capital line are collateralized by our property, plant, and equipment.

(2)Aggregate unamortized debt issuance costs in connection with the Company's credit facility, which consists of the revolving credit, Term loan 1, Term loan 2 and Capital Line, as applicable.

(3)Includes a promissory note entered into on July 24, 2024, in connection with the purchase of the Company's EWOC property. See a discussion of this note below which include a variable interest rate provision.

Revolving Credit and Term Loan Agreement

The Company entered into a Second Amended and Restated Revolving Credit, Term Loan and Security Agreement, dated May 8, 2020, which has since been amended from time to time, with PNC National Association ("PNC" and "lender"), acting as agent and lender (the "Loan Agreement"). The Loan Agreement provides the Company with a credit facility with a maturity date of May 15, 2027 (the "Credit Facility") as follows: (a) up to \$12,500,000 revolving credit ("revolving credit"), which borrowing capacity is subject to eligible receivables (as defined) and reduced by outstanding standby letters of credit (\$3,950,000 as of September 30, 2024) and borrowing reductions that the Company's lender may impose from time to time (\$ 750,000 as of September 30, 2024); (b) a term loan ("Term Loan 1") of approximately \$1,742,000, requiring monthly installments of \$ 35,547 (Term Loan 1 was paid off by the Company in June 2024); (c) a term loan ("Term Loan 2") of \$2,500,000, requiring monthly installments of \$41,667; and (d) a capital expenditure line ("Capital Line") of up to \$1,000,000 with advances on the line, subject to certain limitations, permitted for up to twelve months starting May 4, 2021 (the "Borrowing Period"). Amounts advanced under the Capital Line at the end of the Borrowing Period totaled approximately \$524,000, requiring monthly installments of principal of approximately \$8,700 plus interest, commencing June 1, 2022.

Pursuant to the Loan Agreement, payments of annual interest rates are as follows: (i) interest due on the revolving credit is at prime (8.00% at September 30, 2024) plus 2% or Secured Overnight Finance Rate ("SOFR") (as defined in the Loan Agreement) plus 3.00% plus an SOFR Adjustment applicable for an interest period selected by the Company; (ii) interest due on each Term Loan 1 and the Capital Line was/is at prime plus 2.50% or SOFR plus 3.50% plus an SOFR Adjustment applicable for an interest period selected by the Company; and (iii) interest due on Term Loan 2 is at prime plus 3% or SOFR plus 4.00% plus an SOFR Adjustment applicable for an interest period selected by the Company. SOFR Adjustment rates of 0.10% and 0.15% are applicable for a one-month interest period and three-month period, respectively, that may be selected by the Company.

The Company agreed to pay PNC 0.5% of the total financing under the Loan Agreement if the Company pays off its obligations to its lender after July 31, 2024, to and including July 31, 2025. No early termination fee shall apply if the Company pays off its obligations under Loan Agreement after July 31, 2025.

On May 8, 2024, the Company entered into an amendment to its Loan Agreement with its lender which provided the following, among other things:

- removed the quarterly fixed charge coverage ratio ("FCCR") testing requirement for the first and second quarters of 2024;
- reinstated the quarterly FCCR testing requirement starting in the third quarter of 2024 and revised the methodology to be used in calculating the FCCR as follows (with no change to the minimum 1.15:1 ratio requirement): FCCR for the third quarter is to be determined based on financial results for the three-months period ending September 30, 2024; FCCR for the fourth quarter is to be determined based on financial results for the six-months period ending December 31, 2024; FCCR for the first quarter of 2025 is to be determined based on financial results for the nine-months period ending March 31, 2025; and FCCR for the second quarter of 2025 and each fiscal quarter thereafter is to be determined based on financial results for a trailing twelve-months period ending basis;
- required maintenance of a daily minimum of \$2,250,000 in Liquidity (defined as borrowing availability under the revolving credit plus cash in the money market deposit account ("MMDA") maintained with the Company's lender) under its Credit Facility through June 29, 2024, (which was met by the Company) and a minimum of daily \$3,000,000 in Liquidity starting June 30, 2024, through June 29, 2025 (which the Company has met this requirement to date); and
- in the event the Company is able to achieve its minimum quarterly FCCR requirement utilizing its financial results based on a trailing twelve-months period starting with the quarter ending June 30, 2024 (which the Company has not been able to achieve as of September 30, 2024), the maintenance of a daily minimum Liquidity requirement of \$3,000,000 as discussed above will be removed. Any subsequent fiscal quarter testing of the FCCR will revert back to a trailing twelve-months period method.

In connection with the amendment, the Company paid its lender a fee of \$ 25,000 which is being amortized over the remaining term of the Loan Agreement as interest expense-financing fees.

At September 30, 2024, the Company had no outstanding borrowing under its revolving credit and its Liquidity under the Credit Facility was approximately \$13,984,000.

The Company's Credit Facility under its Loan Agreement with PNC contains certain financial covenants, along with customary representations and warranties. A breach of any of these financial covenants, unless waived by PNC, could result in a default under our Credit Facility allowing our lender to immediately require the repayment of all outstanding debt under our Credit Facility and terminate all commitments to extend further credit. The Company was not required to perform testing of its FCCR requirement for the first and second quarters of 2024 pursuant to the amendment dated May 8, 2024, to the Company's Loan Agreement as discussed above. The Company was also not required to perform testing of its FCCR for the third quarter of 2024 pursuant to an amendment dated November 12, 2024, to the Company's Loan Agreement, as amended (See "Note 15 – Subsequent Events – Credit Facility" for a discussion of this amendment which removed the testing requirement of the FCCR for the third quarter of 2024, among other things). Otherwise, the Company met all of its other financial covenant requirements in each of the first three quarters of 2024.

On July 24, 2024, the Company purchased the property which its EWOC facility operates on pursuant to a Purchase and Sales Agreement dated April 30, 2024, for a purchase price of \$425,000. The Company paid \$63,750 in cash and entered into a promissory note dated July 24, 2024, in an amount of \$361,250 with a bank (the "lender") for the remaining balance of the purchase price, with a maturity date in twenty years or July 24, 2044 (the "Note"). For the first five years starting August 24, 2024, monthly payments under the Note will consist of approximately \$3,100 which include an annual fixed interest rate of 8.10%. Monthly payments under the Note will then be adjusted at the end of years five, ten and fifteen, with interest calculated based on the weekly average five-year US Treasury Securities Rate plus 3.0%. Under no circumstances will the variable interest rates on the Note be less than 4.0% per annum or more than (except in the case of default) the lesser of 20.5% per annum or the maximum rate allowed by applicable law. The Company agreed to pay the lender 3.0% of the total outstanding principal balance under the Note in the event the Company pays off its obligations during the first year of the Note. The prepayment penalty rate will be reduced by 1.0% at each subsequent annual anniversary of the Note. No prepayment penalty will apply in the event the Company pays off the Note on the fourth anniversary of the Note or thereafter. The property was previously accounted for under the Company's operating leases.

9. Commitments and Contingencies

Hazardous Waste

In connection with our waste management services, the Company processes hazardous, non-hazardous, low-level radioactive and mixed (containing both hazardous and low-level radioactive) waste, which the Company transports to its own, or other, facilities for destruction or disposal. As a result of disposing of hazardous substances, in the event any cleanup is required at the disposal site, the Company could be a potentially responsible party for the costs of the cleanup notwithstanding any absence of fault on our part.

Legal Matters

In the normal course of conducting our business, the Company may be involved in various litigation. The Company is not a party to any litigation or governmental proceeding which our management believes could result in any judgments or fines against us that would have a material adverse effect on our financial position, liquidity or results of future operations.

Tetra Tech EC, Inc. ("Tetra Tech")

During July 2020, Tetra Tech EC, Inc. ("Tetra Tech") filed a complaint in the United States District Court for the Northern District of California (the "Court") against CH2M Hill, Inc. ("CH2M") and four subcontractors of CH2M, including the Company ("Defendants"). The complaint alleges various claims, including a claim for negligence, negligent misrepresentation, equitable indemnification and related business claims against all Defendants related to alleged damages suffered by Tetra Tech in respect of certain draft reports prepared by Defendants at the request of the U.S. Navy as part of an investigation and review of certain whistleblower complaints about Tetra Tech's environmental restoration at the Hunter's Point Naval Shipyard in San Francisco.

CH2M was hired by the Navy in 2016 to review Tetra Tech's work. CH2M subcontracted with environmental consulting and cleanup firms Battelle Memorial Institute, Cabrera Services, Inc., SC&A, Inc. and the Company to assist with the review, according to the complaint.

The Company's insurance carrier is providing a defense on our behalf in connection with this lawsuit, subject to a \$ 100,000 self-insured retention and the terms and limitations contained in the insurance policy.

The majority of Tetra Tech's claims have been dismissed by the Court. Remaining claims include: (1) intentional interference with contractual relations; and (2) inducing a breach of contract. The Company continues to believe it has no liability exposure to Tetra Tech.

Insurance

The Company has a 25-year finite risk insurance policy entered into in June 2003 ("2003 Closure Policy") with AIG Specialty Insurance Company ("AIG"), which provides financial assurance to the applicable states for our permitted facilities in the event of unforeseen closure. The 2003 Closure Policy, as amended, provides for a maximum allowable coverage of \$28,177,000 which includes available capacity to allow for annual inflation and other performance and surety bond requirements. Total coverage under the 2003 Closure Policy, as amended, was \$23,379,000 at September 30, 2024. As of September 30, 2024, and December 31, 2023, finite risk sinking funds contributed by the Company related to the 2003 Closure Policy, which is included in other long term assets on the accompanying Condensed Consolidated Balance Sheets, totaled \$12,525,000 and \$12,074,000, respectively, which included interest earned of \$3,054,000 and \$2,603,000 on the finite risk sinking funds as of September 30, 2024, and December 31, 2023, respectively. Interest income for the three and nine months ended September 30, 2024, was approximately \$153,000 and \$451,000, respectively. Interest income for the three and nine months ended September 30, 2023, was approximately \$146,000 and \$356,000, respectively. If we so elect, AIG is obligated to pay the Company an amount equal to 100% of the finite risk sinking fund account balance in return for a complete release of liability from both the Company and any applicable regulatory agency using this policy as an instrument to comply with financial assurance requirements.

Letter of Credits and Bonding Requirements

From time to time, the Company is required to post standby letters of credit and various bonds to support contractual obligations to customers and other obligations, including facility closures. At September 30, 2024, the total amount of standby letters of credit outstanding was approximately \$3,950,000 and the total amount of bonds outstanding was approximately \$20,568,000.

10. Discontinued Operations

The Company's discontinued operations consist of all our subsidiaries included in our Industrial Segment which encompasses subsidiaries divested in 2011 and earlier, as well as three previously closed locations.

The Company's discontinued operations had net loss \$173,000 (net of tax expense of \$79,000) and net income of \$95,000 (net of tax benefits of \$234,000) for the three months ended September 30, 2024, and 2023, respectively, and net losses of \$441,000 (net of \$0 tax expense) and \$44,000 (net of tax benefit of \$353,000) for the nine months ended September 30, 2024 and 2023, respectively. The income and losses (excluding the tax benefits) were primarily due to costs incurred in the administration and continued monitoring/evaluation of our discontinued operations. The Company's discontinued operations had no revenue for any of the periods noted above.

The following table presents the major class of assets of discontinued operations as of September 30, 2024, and December 31, 2023. No assets and liabilities were held for sale at each of the periods noted.

(Amounts in Thousands)	September 30, 2024	December 31, 2023
Current assets		
Other assets	\$ 12	\$ 13
Total current assets	12	13
Long-term assets		
Property, plant and equipment, net ⁽¹⁾	130	81
Total long-term assets	130	81
Total assets	<u>\$ 142</u>	<u>\$ 94</u>
Current liabilities		
Accounts payable	\$ 96	\$ 80
Accrued expenses and other liabilities	154	128
Environmental liabilities	1	61
Total current liabilities	251	269
Long-term liabilities		
Closure liabilities	176	169
Environmental liabilities	766	784
Total long-term liabilities	942	953
Total liabilities	<u>\$ 1,193</u>	<u>\$ 1,222</u>

(1) net of accumulated depreciation of \$10,000 for each period presented.

On June 1, 2024, our Perma-Fix South Georgia, Inc. ("PFSG") subsidiary entered into a lease agreement with a tenant leasing a portion of the PFSG property. The lease is for a two-years term and requires monthly payment by the lessee of approximately \$8,500 for the first year and approximately \$8,755 for the second year. The lessee is responsible for all expenses relating to the permitted usage of the property, including all utilities, a portion of the annual real estate taxes and is responsible for maintaining insurance coverage, among other things.

11. Perma-Fix Canada, Inc. ("PF Canada")

During the fourth quarter of 2021, PF Canada received a Notice of Termination ("NOT") from Canadian Nuclear Laboratories, LTD. ("CNL") on a Task Order Agreement ("TOA") that PF Canada entered into with CNL in May 2019 for remediation work within Ontario, Canada ("Agreement"). The NOT was received after work under the TOA was substantially completed and work under the TOA has since been completed. CNL may terminate the TOA at any time for convenience. At year-end 2023, PF Canada had approximately \$2,389,000 in outstanding receivables due from CNL as a result of work performed under the TOA. A settlement agreement was reached between PF Canada and CNL on the payment of the aforementioned amount by CNL, subject to certain conditions/terms precedents being met. The Company received a partial payment from CNL of the outstanding receivables during the first quarter of 2024. In May 2024, PF Canada received the remaining approximately \$1,612,000 in outstanding receivables from CNL. As a result of the aforementioned payments received from CNL, no outstanding receivables remain under the TOA from CNL.

12. Operating Segments

In accordance with ASC 280, "Segment Reporting", the Company defines an operating segment as a business activity: (1) from which we may earn revenue and incur expenses; (2) whose operating results are regularly reviewed by the CODM to make decisions about resources to be allocated to the

segment and assess its performance; and (3) for which discrete financial information is available. The Company's CODM generally does not utilize total asset in allocating resources to its operating segments.

Our reporting segments are defined below:

TREATMENT SEGMENT, which includes:

- nuclear, low-level radioactive, mixed waste (containing both hazardous and low-level radioactive constituents), hazardous and non-hazardous waste treatment, processing and disposal services primarily through four uniquely licensed and permitted treatment and storage facilities; and
- Research and Development ("R&D") activities to identify, develop and implement innovative waste processing techniques for problematic waste streams.

SERVICES SEGMENT, which includes:

- Technical services, which include:
 - o professional radiological measurement and site survey of large government and commercial installations using advanced methods, technology and engineering;
 - o integrated Occupational Safety and Health services including industrial hygiene ("IH") assessments; hazardous materials surveys, e.g., exposure monitoring; lead and asbestos management/abatement oversight; indoor air quality evaluations; health risk and exposure assessments; health & safety plan/program development, compliance auditing and training services; and Occupational Safety and Health Administration ("OSHA") citation assistance;
 - o global technical services providing consulting, engineering, project management, waste management, environmental, and decontamination and decommissioning field, technical, and management personnel and services to commercial and government customers; and
 - o on-site waste management services to commercial and governmental customers.
- Nuclear services, which include:
 - o technology-based services including engineering, decontamination and decommissioning ("D&D"), specialty services and construction, logistics, transportation, processing and disposal;
 - o remediation of nuclear licensed and federal facilities and the remediation cleanup of nuclear legacy sites. Such services capability includes: project investigation; radiological engineering; partial and total plant D&D; facility decontamination, dismantling, demolition, and planning; site restoration; logistics; transportation; and emergency response; and
- A company owned equipment calibration and maintenance laboratory that services, maintains, calibrates, and sources (i.e., rental) health physics, IH and customized nuclear, environmental, and occupational safety and health ("NEOSH") instrumentation.

Our reporting segments exclude our corporate headquarters and our discontinued operations (see "Note 10 – Discontinued Operations") which do not generate revenues.

The table below presents certain financial information of our operating segments for the three and nine months ended September 30, 2024, and 2023 (in thousands).

Segment Reporting for the Quarter Ended September 30, 2024

	Treatment	Services	Segments Total	Corporate ⁽¹⁾	Consolidated Total
Revenue from external customers	\$ 9,064	\$ 7,748	\$ 16,812	\$ —	\$ 16,812
Intercompany revenues	13	23	36	—	—
Gross profit	410	924	1,334	—	1,334
Research and development	205	34	239	64	303
Interest income	6	—	6	286	292
Interest expense	(37)	(3)	(40)	(81)	(121) ⁽¹⁾
Interest expense-financing fees	—	—	—	(18)	(18) ⁽¹⁾
Depreciation and amortization	370	44	414	19	433
Segment loss	(4,902)	(2,294)	(7,196)	(1,610)	(8,806) ⁽⁴⁾
Expenditures for segment assets	1,203	180	1,383	—	1,383 ⁽²⁾

Segment Reporting for the Quarter Ended September 30, 2023

	Treatment	Services	Segments Total	Corporate ⁽¹⁾	Consolidated Total
Revenue from external customers	\$ 10,795	\$ 11,082	\$ 21,877	\$ —	\$ 21,877
Intercompany revenues	4	88	92	—	—
Gross profit	1,494	3,055	4,549	—	4,549
Research and development	102	1	103	17	120
Interest income	—	—	—	146	146
Interest expense	(23)	(1)	(24)	(65)	(89) ⁽¹⁾
Interest expense-financing fees	—	—	—	(36)	(36) ⁽¹⁾
Depreciation and amortization	584	88	672	14	686
Segment income (loss)	1,014	1,120	2,134	(1,888)	246
Expenditures for segment assets	333	7	340	—	340 ⁽³⁾

Segment Reporting for the Nine Months Ended September 30, 2024

	Treatment	Services	Segments Total	Corporate ⁽¹⁾	Consolidated Total
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Revenue from external customers	\$ 26,116	\$ 18,299	\$ 44,415	\$ —	\$ 44,415
Intercompany revenues	67	52	119	—	—
Gross (loss) profit	(839)	247	(592)	—	(592)
Research and development	609	87	696	176	872
Interest income	7	—	7	672	679
Interest expense	(107)	(4)	(111)	(235)	(346)
Interest expense-financing fees	—	—	—	(47)	(47)
Depreciation and amortization	1,104	133	1,237	58	1,295
Segment loss	(7,416)	(3,713)	(11,129)	(4,920)	(16,049) ⁽⁴⁾
Expenditures for segment assets	1,820	404	2,224	—	2,224 ⁽²⁾

Segment Reporting for the Nine Months Ended September 30, 2023

	Treatment	Services	Segments Total	Corporate ⁽¹⁾	Consolidated Total
Revenue from external customers	\$ 33,223	\$ 33,793	\$ 67,016	\$ —	\$ 67,016
Intercompany revenues	234	124	358	—	—
Gross profit	5,237	6,837	12,074	—	12,074
Research and development	260	11	271	69	340
Interest income	—	—	—	445	445
Interest expense	(68)	(2)	(70)	(119)	(189)
Interest expense-financing fees	—	—	—	(80)	(80)
Depreciation and amortization	1,745	337	2,082	42	2,124
Segment income (loss)	2,619	2,933	5,552	(5,104)	448
Expenditures for segment assets	1,376	10	1,386	—	1,386 ⁽³⁾

(1) Amounts reflect the activity for corporate headquarters not included in the segment information.

(2) Net of financed amount of \$361,000 and \$406,000 for the three and nine months ended September 30, 2024, respectively.

(3) Net of financed amount of \$152,000 and \$309,000 for the three and nine months ended September 30, 2023, respectively.

(4) Includes tax expense recorded in the amount of approximately \$6,417,000 in the third quarter of 2024 in connection with a full valuation allowance against the Company's U.S. deferred tax assets (see "Note 13 – Income Taxes" below for a discussion of this tax expense).

13. Income Taxes

The Company uses an estimated annual effective tax rate, which is based on expected annual income, statutory tax rates and tax planning opportunities available in the various jurisdictions in which the Company operates, to determine its quarterly provision for income taxes.

The Company records valuation allowances against its net deferred tax assets to the extent it determines it is more likely than not that such assets will not be realized in the future. The Company regularly evaluates the probability that its deferred tax assets will be realized and determines whether valuation allowances or adjustments thereto are needed. This determination involves judgement and the use of estimates and assumptions, including expectations of future taxable income and tax planning strategies. The Company applies judgment to consider the relative impact of negative and positive evidence, and the weight given to negative and positive evidence is commensurate with the extent to which such evidence can be objectively verified. Based on the Company's evaluation of all available positive and negative evidence, and with greater weight placed on the objectively verifiable evidence which included the Company's substantial losses incurred during the nine months ended September 30, 2024, the Company determined, at the end of the third quarter, that it is more likely than not that the Company's net U.S. deferred tax assets will not be realized. As a result, the Company provided a full valuation allowance against its U.S. federal and state deferred tax assets resulting in a recorded income tax expense in the amount of approximately \$6,417,000. The Company continues to maintain a valuation allowance against foreign tax attributes that may not be realized.

The Company had income tax expenses of \$ 6,417,000 and \$4,300,000 for the three and nine months ended September 30, 2024, respectively, and income tax expenses of \$254,000 and \$482,000 for the three and nine months ended September 30, 2023, respectively, for our continuing operations. The Company's effective tax rates were approximately 268.6% and 36.6% for the three and nine months ended September 30, 2024, respectively, and 50.8% and 51.8% for the three and nine months ended September 30, 2023, respectively. The Company's effective tax rates for the three and nine months ended September 30, 2024, were primarily impacted by the full valuation allowance on its deferred assets as discussed above.

14. Sale of Common Stock

On May 21, 2024, the Company entered into a Securities Purchase Agreement (the "Securities Purchase Agreement") with certain institutional and retail investors (the "Purchasers"), pursuant to which the Company sold and issued, in a registered direct offering, an aggregate of 2,051,282 shares of the Company's Common Stock, at a negotiated purchase price per share of \$9.75 (the "Shares"), for aggregate gross proceeds to the Company of approximately \$20,000,000, before deducting fees payable to the placement agents and other estimated offering expenses payable by the Company (the "Offering"). The net proceeds from the Offering is to fund (i) continued R&D and business development relating to the Company's patent-pending process for the destruction of PFAS (Per- and polyfluoroalkyl substances), as well as the cost of installing at least one commercial treatment unit; (ii) ongoing facility capital expenditures and maintenance costs; and (iii) general corporate and working capital purposes.

The Shares were offered and sold by the Company pursuant to the Company's "shelf" registration statement on Form S-3 and prospectus supplement relating thereto.

Craig-Hallum Capital Group LLC ("Craig-Hallum") and Wellington Shields & Co. LLC ("Wellington Shields") (Wellington Shields and Craig-Hallum together are known as the "Placement Agents") served as the exclusive placement agents in connection with the Offering. The Company paid the Placement Agents a total cash fee of 6.00% of the aggregate gross proceeds in the Offering, which totaled approximately \$ 1,200,000. The Company also reimbursed the Placement Agents certain expenses in connection with the Offering in an aggregate amount of approximately \$80,000. As additional compensation to the Placement Agents in connection with the Offering, the Company also issued to the Placement Agents and two (2) of their members designees, warrants (the "Placement Agents' Warrants") to purchase an aggregate of 61,538 shares of Common Stock (the "Warrant Shares"), with the

aggregate number of Warrant Shares that may be acquired under the Placement Agents' Warrants equal to 3.0% of the number of Shares sold in the registered direct offering, at an exercise price per share equal to \$12.19, which is equal to approximately 125% of the price per share of the Shares sold in the Offering. Neither the Placement Agents' Warrants nor the Warrant Shares have been registered under the Registration Statement or otherwise. The Placement Agents' Warrants have a term of five years, are exercisable at any time and from time to time, in whole or in part, during the four and one-half (4 ½) year period commencing 180 days from the last date of closing of the Offering which was May 24, 2024, and are exercisable via "cashless exercise" in certain circumstances. The aggregate fair value of the "Placement Agents' Warrants" was determined to be approximately \$ 331,000 using the Black-Scholes pricing model with the following assumptions: 58.78% volatility, risk free interest rate of 4.53%, an expected life of five years and no dividend. The aggregate fair market value of the Placement Agent's Warrants was recorded as an offset to gross proceeds of the Offering and an increase to additional-paid-in capital.

After deducting costs incurred of approximately \$1,544,000 (exclusive of the aggregate fair market value of the Placement Agents' Warrants as discussed above) which were recorded as a deduction to equity in connection with the Offering, net cash proceeds to the Company totaled approximately \$18,456,000. The Company has paid approximately \$ 1,505,000 of the \$1,544,000 costs incurred in connection with the Offering.

15. Subsequent Events

The Company evaluated subsequent events and transactions that occurred after the balance sheet date through November 13, 2024, the date that these condensed consolidated financial statements were available to be issued. Based upon this review, the Company did not identify any subsequent events that would have required adjustment or disclosure in the condensed consolidated financial statements other than the below:

Credit Facility

On November 12, 2024, the Company entered into an amendment to its Loan Agreement, as amended, with its lender which provided the following, among other things:

- removes the quarterly FCCR testing requirement for the third quarter of 2024;
- reinstates the quarterly FCCR testing requirement starting in the fourth quarter of 2024 and revises the methodology to be used in calculating the FCCR as follows (with no change to the minimum 1.15:1 ratio requirement): FCCR for the fourth quarter is to be determined based on financial results for the three-months period ending December 31, 2024; FCCR for the first quarter of 2025 is to be determined based on financial results for the six-months period ending March 31, 2025; FCCR for the second quarter of 2025 is to be determined based on financial results for the nine-months period ending June 30, 2025; and FCCR for the third quarter of 2025 and each fiscal quarter thereafter is to be determined based on financial results for a trailing twelve-months period ending basis;
- extends the required maintenance of a daily minimum of \$3,000,000 in Liquidity from the ending date of June 29, 2025 (and including) to September 29, 2025 (and including); and
- in the event the Company is able to achieve its minimum quarterly FCCR requirement utilizing its financial results based on a trailing twelve-months period starting with the quarter ended September 30, 2024, the maintenance of a daily minimum Liquidity requirement of \$3,000,000 as discussed above will be removed. Any subsequent fiscal quarter testing of the FCCR will revert back to a trailing twelve-months period method.

In connection with the amendment, the Company paid its lender a fee of \$ 12,500.

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

Forward-looking Statements

Certain statements contained within this report may be deemed "forward-looking statements" within the meaning of the "Private Securities Litigation Reform Act of 1995". All statements in this report other than a statement of historical fact are forward-looking statements that are subject to known and unknown risks, uncertainties and other factors, which could cause actual results and performance of the Company to differ materially from such statements. The words "believe," "expect," "anticipate," "intend," "will," and similar expressions identify forward-looking statements. Forward-looking statements contained herein relate to, among other things,

- demand for our services;
- reductions in the level of government funding in future years;
- accelerated investments;
- base business is positioned for improvement in 2025;
- results of operations improvement in 2025;
- advancement of initiatives to be more fully realized in 2025;
- reducing operating costs and non-essential expenditures;
- ability to meet loan agreement quarterly financial covenant requirements;

- government shutdown or Continuing Resolution ("CR") impact;
- cash flow requirements;
- sufficient Liquidity to fund operations for the next twelve months;
- revenue under the Italian project;
- manner in which the applicable government will be required to spend funding to remediate various sites;
- successful on international bids;
- funding of operating and capital expenditures from cash from operations, Liquidity under our Credit Facility, and/or financing;
- our PFAS technology process will exceed current treatment options available;
- receipt of an additional 20,000 AFFF liquid;
- advancement of our PFAS technology by mid-2025;
- strategy for our System;
- funding of remediation expenditures for sites from funds generated internally;
- compliance with environmental regulations;
- positioning for procurements from DOE and other government agencies;
- potential effect of being a potentially responsible party ("PRP"); and
- potential violations of environmental laws and attendant remediation at our facilities.

While the Company believes the expectations reflected in such forward-looking statements are reasonable, it can give no assurance such expectations will prove to be correct. There are a variety of factors which could cause future outcomes to differ materially from those described in this report, including, but not limited to:

- general economic conditions;
- contract bids, including international markets;
- material reduction in revenues;
- inability to meet PNC covenant requirements;
- inability to collect in a timely manner a material amount of receivables;
- increased competitive pressures;
- inability to maintain and obtain required permits and approvals to conduct operations;
- inability to develop new and existing technologies in the conduct of operations;
- inability to maintain and obtain closure and operating insurance requirements;
- inability to retain or renew certain required permits;
- discovery of additional contamination or expanded contamination at any of the sites or facilities leased or owned by us or our subsidiaries which would result in a material increase in remediation expenditures;
- delays at our third-party disposal site can extend collection of our receivables greater than twelve months;
- refusal of third-party disposal sites to accept our waste;
- changes in federal, state and local laws and regulations, especially environmental laws and regulations, or in interpretation of such;
- inability of the federal government to adopt a budget in a timely manner or additional CRs;
- requirements to obtain permits for treatment, storage and disposal (TSD) activities or licensing requirements to handle low level radioactive materials are limited or lessened;
- management retention and development;
- financial valuation of intangible assets is substantially more/less than expected;
- the need to use internally generated funds for purposes not presently anticipated;
- shutdown of the federal government;

- change in government priorities;
- inability of the Company to maintain the listing of its Common Stock on the Nasdaq;
- terminations of contracts with government agencies or subcontracts involving government agencies or reduction in amount of waste delivered to the Company under the contracts or subcontracts;
- failure of partner to perform its requirements in connection with the Italian project;
- changes in the scope of work relating to existing contracts;
- occurrence of an event similar to COVID-19 having adverse effects on the U.S. and world economics;
- renegotiation of contracts involving government agencies;
- disposal expense accrual could prove to be inadequate in the event the waste requires re-treatment;
- inability to raise capital on commercially reasonable terms;
- inability to increase profitable revenue;
- economic uncertainties;
- non-acceptance of our new technology;
- adjustments to our valuation allowance;
- new governmental regulations; and
- risk factors and other factors set forth in "Special Note Regarding Forward-Looking Statements" contained in the Company's 2023 Form 10-K and the "Forward-Looking Statements" contained in the Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A") for the first and second quarters of 2024 and this third quarter 2024 10-Q.

Overview

Our third quarter financial results were impacted by continued acceleration of our investments and a number of unexpected events/factors which included the following:

- certain waste shipments that were expected to occur in the third quarter of 2024 were pushed into the fourth quarter of 2024 by certain government related customers;
- unexpected equipment breakdowns that occurred in the latter part of June and during the third quarter of 2024 which required replacement or repair in certain of our Treatment Segment facilities delayed revenue production. All of the equipment is now back in service;
- weather conditions caused by Hurricane Helene resulted in waste shipment delays by certain customers at our Florida facility and temporary demobilization of a Services Segment project mandated by the customer. This project resumed in early October. Additionally, Hurricane Helene caused a temporary shutdown of our Florida facility for approximately one week which impacted revenue production;
- continued acceleration in investment of our new PFAS (Per- and polyfluoroalkyl substances) technology which requires significant management and operation support, including the installation of our first full scale commercial system in treating PFAS. This system installation also caused production delays (see "Known Trends and Uncertainties – New Processing Technology" within this MD&A for a discussion of this technology); and
- the completion of two large projects in the Services Segment in late 2023 were not replaced by new projects of similar value. Together, these two large projects had generated significant amount of revenue in the third quarter of 2023 when they were in full operational status.

In addition to the aforementioned factors, we continue to experience delays in procurements and contract awards from government clients in the first nine months of 2024. Although we are disappointed with our 2024 financial results for the first nine months of 2024, we believe our base business is positioned for improvement in 2025 and that our results of operations should improve in 2025. As previously disclosed, we continue to advance a variety of additional initiatives that are expected to be more fully realized in 2025. These initiatives include, among other things, positioning ourselves for large and mid-size procurements within the U.S. Department of Energy ("DOE") and U.S. Navy and waste treatment in support of DOE's Hanford closure strategy, continued investments in our facilities and capabilities to allow for broader waste treatment (including PFAS), and continued expansion of our waste treatment offerings within the international and commercial markets.

As a result of the aforementioned events and factors, our overall revenue decreased by \$5,065,000 or 23.2% to \$16,812,000 for the three months ended September 30, 2024, from \$21,877,000 for the corresponding period of 2023. We saw decreases in both segments where Treatment Segment revenue decreased by \$1,731,000 to \$9,064,000 or 16.0% from \$10,795,000 and Services Segment revenue decreased by \$3,334,000 or 30.1% to \$7,748,000 from \$11,082,000. Gross profit for the third quarter of 2024 was approximately \$1,334,000 as compared to gross profit of \$4,549,000 for the corresponding period of 2023, reflecting a decrease in gross profit of approximately \$3,215,000 or 70.7%, primarily due to decreased revenue in both segments. Selling, General and Administrative ("SG&A") expenses decreased by \$301,000 or 7.7% for the three months ended September 30, 2024, as compared to the corresponding period of 2023.

During the third quarter of 2024, we provided a full valuation allowance against our deferred tax assets (see a discussion of this valuation allowance and the impact to our financial statements in "Results of Operations – Income Taxes" below).

For the nine months ended September 30, 2024, overall revenue decreased by \$22,601,000 or 33.7% to \$44,415,000 from \$67,016,000 for the corresponding period of 2023 where we saw decrease in revenue in both segments. Treatment Segment revenue decreased by \$7,107,000 to \$26,116,000 or 21.4% from \$33,223,000 and Services Segment revenue decreased by \$15,494,000 or 45.8% to \$18,299,000 from \$33,793,000. The decrease in revenue within the Treatment Segment was attributed to factors which included among other things, delays in waste shipments by certain customers due to poor weather conditions and earlier Continuing Resolution ("CR") impacts, temporary outages at our three primary facilities for equipment replacement and repairs, program enhancement and testing to support permit expansion and broader market penetration, weather impacts at certain of our treatment facilities resulting in temporary shutdown which limited revenue production and accelerated investment in R&D on our new technology to treat PFAS. Overall lower averaged price from waste mix within the Treatment Segment also contributed to revenue decrease. The decrease in revenue in the Services Segment was due to slower mobilization and delays in certain projects from the earlier impact of CR and poor weather conditions. Additionally, the decrease in revenue in the Services Segment was also attributed to the completion of two large projects in late 2023 which were not replaced by new projects of similar value. Together, these two large projects had generated a significant amount of revenues in the first nine months of 2023 when they were in full operational status. Total gross profit for the nine months ended 2024 decreased \$12,666,000 or 104.9% due to decreased revenue generated in both segments. SG&A expenses decreased \$338,000 or 3.1% for the nine months ended September 30, 2024, as compared to the corresponding period of 2023.

Business Environment

Our Treatment and Services Segments' business continues to be heavily dependent on services that we provide to U.S governmental clients, primarily as subcontractors for others who are prime contractors to government entities or directly as the prime contractor. We believe demand for our services will continue to be subject to fluctuations due to a variety of factors beyond our control, including, without limitation, the economic conditions, the manner in which the applicable government will be required to spend funding to remediate various sites and potential future federal budget issues. In addition, our governmental contracts and subcontracts relating to activities at governmental sites in the United States are generally subject to termination for convenience at any time at the government's option. Our Italian contract under our partnership may be terminated by the Contracting Authority under certain conditions as set forth in the contract. Significant reductions in the level of governmental funding or specifically mandated levels for different programs that are important to our business could have a material adverse impact on our business, financial position, results of operations, and cash flows.

We continue to aggressively bid on various contracts, including potential contracts within the international markets.

Results of Operations

The reporting of financial results and pertinent discussions are tailored to our two reportable segments: The Treatment Segment and Services Segment.

Summary – Three and Nine Months Ended September 30, 2024, and 2023

Consolidated (amounts in thousands)	Three Months Ended September 30,				Nine Months Ended September 30,			
	2024	%	2023	%	2024	%	2023	%
Net revenues	\$ 16,812	100.0	\$ 21,877	100.0	\$ 44,415	100.0	\$ 67,016	100.0
Cost of goods sold	15,478	92.1	17,328	79.2	45,007	101.3	54,942	82.0
Gross profit (loss)	1,334	7.9	4,549	20.8	(592)	(1.3)	12,074	18.0
Selling, general and administrative	3,632	21.6	3,933	18.0	10,631	23.9	10,969	16.4
Research and development	303	1.8	120	.5	872	2.0	340	.5
Loss on disposal of property and equipment	—	—	—	—	1	—	—	—
(Loss) income from operations	(2,601)	(15.5)	496	2.3	(12,096)	(27.2)	765	1.1
Interest income	292	1.7	146	.7	679	1.5	445	.7
Interest expense	(121)	(.7)	(89)	(.4)	(346)	(.8)	(189)	(.3)
Interest expense-financing fees	(18)	(.1)	(36)	(.2)	(47)	(.1)	(80)	(.1)
Other	59	.4	(17)	(.01)	61	.1	(11)	—
(Loss) income from continuing operations before taxes	(2,389)	(14.2)	500	2.3	(11,749)	(26.5)	930	1.4
Income tax expense	6,417	38.2	254	1.2	4,300	9.6	482	.7
(Loss) income from continuing operations, net of taxes	<u>\$ (8,806)</u>	<u>(52.4)</u>	<u>\$ 246</u>	<u>1.1</u>	<u>\$ (16,049)</u>	<u>(36.1)</u>	<u>\$ 448</u>	<u>.7</u>

Revenues

Consolidated revenues decreased \$5,065,000 for the three months ended September 30, 2024, compared to the three months ended September 30, 2023, as follows:

(In thousands)	2024	% Revenue	2023	% Revenue	Change	% Change
Treatment						
Government waste	\$ 5,794	34.5	\$ 6,692	30.6	\$ (898)	(13.4)
Hazardous/non-hazardous ⁽¹⁾	1,199	7.1	1,389	6.3	(190)	(13.7)
Other nuclear waste	2,071	12.3	2,714	12.4	(643)	(23.7)
Total	9,064	53.9	10,795	49.3	(1,731)	(16.0)
Services						
Nuclear services	6,433	38.3	9,996	45.7	(3,563)	(35.6)
Technical services	1,315	7.8	1,086	5.0	229	21.1
Total	7,748	46.1	11,082	50.7	(3,334)	(30.1)
Total	<u>\$ 16,812</u>	<u>100.0</u>	<u>\$ 21,877</u>	<u>100.0</u>	<u>\$ (5,065)</u>	<u>(23.2)</u>

⁽¹⁾ Includes wastes generated by government clients of \$784,000 and \$653,000 for the three months ended September 30, 2024, and the corresponding period of 2023, respectively.

Treatment Segment revenue decreased by \$1,731,000 or 16.0% for the three months ended September 30, 2024, over the same period in 2023. The

overall decrease in revenue in the Treatment Segment was primarily due to lower waste volume as discussed in the "Overview" above. Services Segment revenue decreased by approximately \$3,334,000 or 30.1%. The decrease in revenue in the Services Segment was due to reasons as discussed in the "Overview" above. Additionally, our Services Segment revenues are project based; as such, the scope, duration, and completion of each project vary.

Consolidated revenues decreased \$22,601,000 for the nine months ended September 30, 2024, as compared to the nine months ended September 30, 2023, as follows:

(In thousands)	2024	% Revenue	2023	% Revenue	Change	% Change
Treatment						
Government waste	\$ 16,668	37.5	\$ 23,036	34.4	\$ (6,368)	(27.6)
Hazardous/non-hazardous ⁽¹⁾	3,829	8.6	4,522	6.7	(693)	(15.3)
Other nuclear waste	5,619	12.7	5,665	8.5	(46)	(0.8)
Total	26,116	58.8	33,223	49.6	(7,107)	(21.4)
Services						
Nuclear services	15,563	35.0	31,918	47.6	(16,355)	(51.2)
Technical services	2,736	6.2	1,875	2.8	861	45.9
Total	18,299	41.2	33,793	50.4	(15,494)	(45.8)
Total	\$ 44,415	100.0	\$ 67,016	100.0	\$ (22,601)	(33.7)

⁽¹⁾ Includes wastes generated by government clients of \$2,330,000 and \$2,126,000 for the nine months ended September 30, 2024, and the corresponding period of 2023, respectively.

Treatment Segment revenue decreased by \$7,107,000 or 21.4% for the nine months ended September 30, 2024, over the same period in 2023. The overall decrease in revenue was primarily due to lower waste volume attributed from the factors as discussed in the "Overview" section above. Overall lower averaged price from waste mix within the Treatment Segment also contributed to the revenue decrease. Services Segment revenue decreased by approximately \$15,494,000 or 45.8%. The decrease in revenue in the Services Segment was due to the reasons as discussed in the "Overview" above. Additionally, our Services Segment revenues are project based; as such, the scope, duration, and completion of each project vary.

Cost of Goods Sold

Cost of goods sold decreased \$1,850,000 for the quarter ended September 30, 2024, as compared to the quarter ended September 30, 2023, as follows:

(In thousands)	2024	% Revenue	2023	% Revenue	Change
Treatment	\$ 8,654	95.5	\$ 9,301	86.2	\$ (647)
Services	6,824	88.1	8,027	72.4	(1,203)
Total	\$ 15,478	92.1	\$ 17,328	79.2	\$ (1,850)

Cost of goods sold for the Treatment Segment decreased by approximately \$647,000 or 7.0% primarily due to lower revenue. Treatment Segment's variable costs decreased by approximately \$931,000 primarily due to overall lower transportation, disposal and lab costs. Treatment Segment's overall fixed costs were higher by approximately \$284,000 resulting from the following: salaries and payroll related expenses were higher by approximately \$528,000 due to higher headcount; maintenance expenses were higher by approximately \$136,000 due to unexpected breakdowns of certain equipment which required repair/replacement as discussed in the "Overview" previously; travel expenses were lower by approximately \$22,000; depreciation expenses were lower by approximately \$213,000 due to fully depreciated asset retirement obligations ("AROs") that occurred in the third quarter of 2023 in connection with our EWOC facility; regulatory expenses were lower by approximately \$41,000; and general expenses were lower by \$104,000 in various categories. Services Segment cost of goods sold decreased \$1,203,000 or 15.0% primarily due to lower revenue. The decrease in cost of goods sold was primarily due to overall lower salaries/payroll related, outside services, and travel costs totaling approximately \$1,379,000; lower depreciation expenses of approximately \$44,000; lower general expenses of approximately \$110,000 in various categories; and overall higher material and supplies, regulatory, disposal and lab expenses totaling approximately \$330,000. Included within cost of goods sold is depreciation and amortization expense of \$408,000 and \$666,000 for the three months ended September 30, 2024, and 2023, respectively.

Cost of goods sold decreased \$9,935,000 for the nine months ended September 30, 2024, as compared to the nine months ended September 30, 2023, as follows:

(In thousands)	2024	% Revenue	2023	% Revenue	Change
Treatment	\$ 26,955	103.2	\$ 27,986	84.2	\$ (1,031)
Services	18,052	98.7	26,956	79.8	(8,904)
Total	\$ 45,007	101.3	\$ 54,942	82.0	\$ (9,935)

Cost of goods sold for the Treatment Segment decreased by approximately \$1,031,000 or 3.7%. Treatment Segment's variable costs decreased by approximately \$1,092,000 primarily due to overall lower material and supplies, transportation, disposal and lab costs. Treatment Segment's overall fixed costs increased by approximately \$61,000 resulting from the following: salaries and payroll related expenses were higher by \$1,057,000 due to higher headcount; depreciation expenses were lower by approximately \$641,000 due to fully depreciated AROs that occurred in the third quarter of 2023 in connection with our EWOC facility; regulatory expenses were lower by approximately \$75,000; maintenance expenses were lower by approximately \$80,000; general expenses were lower by \$196,000 in various categories; and travel expenses were slightly lower by approximately \$4,000. Services Segment cost of goods sold decreased \$8,904,000 or 33.0% primarily due to lower revenue. The decrease in cost of goods sold was primarily due to overall lower salaries/payroll related, outside services, and travel costs totaling approximately \$8,673,000; lower depreciation expenses of approximately \$204,000; lower general expenses of \$75,000 in various categories; and overall higher material and supplies, regulatory, disposal and lab expenses totaling approximately \$48,000. Included within cost of goods sold is depreciation and amortization expense of \$1,218,000 and \$2,063,000 for the nine months ended September 30, 2024, and 2023, respectively.

Gross Profit

Gross profit for the quarter ended September 30, 2024, decreased \$3,215,000 over the same period of 2023, as follows:

(In thousands)	2024	% Revenue	2023	% Revenue	Change
Treatment	\$ 410	4.5	\$ 1,494	13.8	\$ (1,084)
Services	924	11.9	3,055	27.6	(2,131)
Total	<u>\$ 1,334</u>	<u>7.9</u>	<u>\$ 4,549</u>	<u>20.8</u>	<u>\$ (3,215)</u>

Treatment Segment gross profit decreased by \$1,084,000 or approximately 72.6% and gross margin decreased to 4.5% from 13.8% primarily due to lower revenue from lower waste volume and the impact of our fixed costs structure. Services Segment gross profit decreased by \$2,131,000 or 69.8% primarily due to decreased revenue as discussed in the "Overview" above. The decrease in gross margin in the Services Segment from 27.6% to 11.9% was attributed to overall lower margin projects as the two large projects completed in late 2023 were higher margin projects. Our overall Services Segment gross margin is impacted by our current projects which are competitively bid on and will therefore, have varying margin structures.

Gross profit for the nine months ended September 30, 2024, decreased \$12,666,000 over the same period in 2023, as follows:

(In thousands)	2024	% Revenue	2023	% Revenue	Change
Treatment	\$ (839)	(3.2)	\$ 5,237	15.8	\$ (6,076)
Services	247	1.3	6,837	20.2	(6,590)
Total	<u>\$ (592)</u>	<u>(1.3)</u>	<u>\$ 12,074</u>	<u>18.0</u>	<u>\$ (12,666)</u>

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Treatment Segment gross profit decreased by \$6,076,000 or approximately 116.0% and gross margin decreased to (3.2)% from 15.8% primarily due to lower revenue from lower waste volume, overall lower averaged price from waste mix and the impact of our fixed costs structure. Services Segment gross profit decreased by \$6,590,000 or 96.4% primarily due to decreased revenue as discussed in the "Overview" above. The decrease in gross margin from 20.2% to 1.3% was attributed to overall lower margin projects as the two large projects completed in late 2023 were higher margin projects. Our overall Services Segment gross margin is impacted by our current projects which are competitively bid on and will therefore, have varying margin structures.

SG&A

SG&A expenses decreased \$301,000 for the three months ended September 30, 2024, as compared to the corresponding period for 2023, as follows:

(In thousands)	2024	% Revenue	2023	% Revenue	Change
Administrative	\$ 1,733	—	\$ 1,916	—	\$ (183)
Treatment	1,084	12.0	1,039	9.6	45
Services	815	10.5	978	8.8	(163)
Total	<u>\$ 3,632</u>	<u>21.6</u>	<u>\$ 3,933</u>	<u>18.0</u>	<u>\$ (301)</u>

The decrease in Administrative SG&A expenses was primarily due to lower accrued incentive expenses. In the prior year quarter, approximately \$178,000 in estimated accrued incentive expenses were recorded in connection with the Company's management incentive plans ("MIPs") and other employees' bonus plans. Treatment Segment SG&A expenses were higher primarily due to higher salaries and payroll related expenses of approximately \$139,000 which were offset by lower outside services expenses of \$20,000 from fewer consulting matters and lower general expenses of \$74,000 in various categories. The decrease in Services Segment SG&A was primarily due to the following: salaries and payroll related expenses were lower by approximately \$65,000; outside services expenses were lower by approximately \$69,000 due to fewer consulting/legal matters; and overall general expenses were lower by approximately \$29,000 in various categories. Included in SG&A expenses is depreciation and amortization expenses of \$25,000 and \$20,000 for the three months ended September 30, 2024, and 2023, respectively.

SG&A expenses decreased \$338,000 for the nine months ended September 30, 2024, as compared to the corresponding period for 2023, as follows:

(In thousands)	2024	% Revenue	2023	% Revenue	Change
Administrative	\$ 5,134	—	\$ 5,281	—	\$ (147)
Treatment	3,224	12.3	3,071	9.2	153
Services	2,273	12.4	2,617	7.7	(344)
Total	<u>\$ 10,631</u>	<u>23.9</u>	<u>\$ 10,969</u>	<u>16.4</u>	<u>\$ (338)</u>

Administrative SG&A expenses were lower primarily due to the following: payroll-related expenses were lower by approximately \$178,000 primarily due to lower accrued incentive expenses. Administrative SG&A expenses in the third quarter of 2023 included estimated incentives recorded in the amount of approximately \$178,000 in connection with the Company's management incentive plans ("MIPs") and other employees' bonus plans. Such incentives were not recorded in the first nine months of 2024; outside services expenses were lower by approximately \$40,000 from fewer consulting/legal matters; and overall general and maintenance expenses were higher by approximately \$71,000. Treatment Segment SG&A expenses were higher primarily due to higher salaries and payroll related expenses of approximately \$332,000 which were offset by overall lower travel, outside services and general expenses totaling approximately \$179,000. The decrease in Services Segment SG&A was primarily due to lower outside services expenses of approximately \$116,000 from fewer consulting and legal matters, lower salaries and payroll related expenses of approximately \$203,000 and lower general expenses of \$25,000 in various categories. Included in SG&A expenses is depreciation and amortization expenses of \$77,000 and \$61,000 for the nine months ended September 30, 2024, and 2023, respectively.

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R&D

R&D expenses increased by \$183,000 and \$532,000 for the three and nine months ended September 30, 2024, respectively, as compared to the corresponding period of 2023 primarily due to expenses incurred in connection with our new PFAS technology.

Interest Income

Interest income increased by approximately \$146,000 and \$234,000 for the three and nine months ended September 30, 2024, respectively, as compared to the corresponding period of 2023. The higher interest income for the third quarter of 2024 as compared to the corresponding quarter of 2023 was primarily due to interest income earned from our money market deposit account ("MMDA") that we maintained with our lender starting in late 2023.

The increase in interest income for the nine months ended September 30, 2024, as compared to the corresponding period of 2023 was primarily due to higher interest income earned from our finite risk sinking fund from higher interest rates that took effect starting in April 2023. Additionally, the increase in interest income resulted from interest income earned from our MMDA that we maintained with our lender starting in late 2023. The overall increase in interest income from the above was reduced by interest income received in March of 2023 of approximately \$60,000 in connection with the Employee Retention Credit refund that we received.

Interest Expense

Interest expense increased by approximately \$32,000 and \$157,000 for the three and nine months ended September 30, 2024, respectively, as compared to the corresponding period of 2023. The increase for each of the periods above was attributed primarily to interest incurred on the \$2,500,000 term loan dated July 31, 2023, under our credit facility and the promissory note that we entered into on July 24, 2024, for the purchase of our EWOC facility. The higher interest expense was also from more finance leases.

Income Taxes

We use an estimated annual effective tax rate, which is based on expected annual income, statutory tax rates and tax planning opportunities available in the various jurisdictions in which we operate, to determine our quarterly provision for income taxes.

We record valuation allowances against our net deferred tax assets to the extent we determine it is more likely than not that such assets will not be realized in the future. We regularly evaluate the probability that our deferred tax assets will be realized and determines whether valuation allowances or adjustments thereto are needed. This determination involves judgement and the use of estimates and assumptions, including expectations of future taxable income and tax planning strategies. We apply judgment to consider the relative impact of negative and positive evidence, and the weight given to negative and positive evidence is commensurate with the extent to which such evidence can be objectively verified. Based on our evaluation of all available positive and negative evidence, and with greater weight placed on the objectively verifiable evidence which included our substantial losses incurred during the nine months ended September 30, 2024, we determined, at the end of the third quarter, that it is more likely than not that our net U.S. deferred tax assets will not be realized. As a result, we provided a full valuation allowance against our U.S. federal and state deferred tax assets resulting in a recorded income tax expense in the amount of approximately \$6,417,000. We continue to maintain a valuation allowance against foreign tax attributes that may not be realized.

We had income tax expenses of \$6,417,000 and \$4,300,000 for the three and nine months ended September 30, 2024, respectively, and income tax expenses of \$254,000 and \$482,000 for the three and nine months ended September 30, 2023, respectively, for our continuing operations. Our effective tax rates were approximately 268.6% and 36.6% for the three and nine months ended September 30, 2024, respectively, and 50.8% and 51.8% for the three and nine months ended September 30, 2023, respectively. Our effective tax rates for the three and nine months ended September 30, 2024, were primarily impacted by the full valuation allowance on our deferred assets as discussed above.

Liquidity and Capital Resources

Our cash flow requirements during the nine months ended September 30, 2024, were primarily financed by our operations and Liquidity (defined as borrowing availability under the revolving credit plus cash in our MMDA maintained with our lender) under our Credit Facility. Our cash included net proceeds received from the sale of 2,051,282 shares our Common Stock to certain institutional and retail investors in May 2024 (see "Financing Activities" below for a discussion of this direct offering, including the planned usage of the proceeds). Our cash flow requirements for the next twelve months will consist primarily of general working capital needs, scheduled principal payments on our debt obligations, remediation projects, R&D on our PFAS technology and capital expenditures which include our PFAS technology (see "Known Trends and Uncertainties – New Processing Technology" within this MD&A for a discussion of this technology). We plan to fund these requirements from our operations and Liquidity under our Credit Facility. Our ability to utilize our Credit Facility from our lender is subject to meeting our quarterly financial covenant requirements, among other things. We are continually reviewing operating costs and reviewing the possibility of further reducing operating costs and non-essential expenditures to bring them in line with revenue levels. At September 30, 2024, we had no outstanding borrowing under our revolving credit and our Liquidity under our Credit Facility was approximately \$13,984,000. We believe that our cash flows from operations and our Liquidity should be sufficient to fund our operations for the next twelve months. Although we believe we should be profitable in 2025, if we continue to incur losses, such may cause a reduction in our Liquidity.

The following table reflects the cash flow activities during the first nine months of 2024

(In thousands)	
Cash used in operating activities of continuing operations	\$ (10,971)
Cash used in operating activities of discontinued operations	(468)
Cash used in investing activities of continuing operations	(2,800)
Cash used in investing activities of discontinued operations	(49)
Cash provided by financing activities of continuing operations	17,805
Effect of exchange rate changes in cash	1
Increase in cash and finite risk sinking fund (restricted cash)	<u>\$ 3,518</u>

As of September 30, 2024, we were in a positive cash position with no revolving credit balance. At September 30, 2024, we had cash on hand of approximately \$10,567,000.

Operating Activities

Accounts receivable, net of credit losses, totaled \$8,741,000 as of September 30, 2024, a decrease of \$981,000 from the December 31, 2023, balance of \$9,722,000. The decrease was attributed to reduced billing from decreased revenues which were negatively impacted by a number of events as previously discussed (See "Overview" within this MD&A). Our accounts receivable was also reduced by the collection in May 2024 of outstanding accounts receivable for work performed for a certain Canadian project for which a settlement agreement was reached, with collection subject to meeting certain conditions/terms precedent (see "Perma-Fix Canada Inc. ("PF Canada")" below for a discussion on the collection of the receivables).

Accounts payable totaled \$7,675,000 as of September 30, 2024, a decrease of \$1,907,000 from the December 31, 2023, balance of \$9,582,000. The decrease in accounts payable was attributed to our overall reduced operations as discussed previously. Additionally, our accounts payable are impacted by the timing of payments as we are continually managing payment terms with our vendors to maximize our cash position throughout our segments.

We had working capital of \$9,424,000 (which included working capital of our discontinued operations) as of September 30, 2024, as compared to working capital of \$4,613,000 as of December 31, 2023. The improvement in our working capital was primarily due to the increase in our cash from the sale of our Common Stock (see "Financing Activities" below for a discussion of this direct offering, including the planned usage of the proceeds) which was

offset by the significant losses incurred from our results of operations attributed to the various factors as previously discussed.

Investing Activities

For the nine months ended September 30, 2024, our purchases of capital equipment totaled approximately \$2,630,000, of which \$406,000 was subject to financing, with the remaining funded from cash from operations, cash from the equity raise that we completed in May 2024 and our Credit Facility. We budgeted approximately \$2,000,000 for 2024 capital expenditures for our Treatment and Services Segments to maintain operations and regulatory compliance requirements and support revenue growth. Our capital expenditures for 2024 also included additional expenditures made to support our PFAS initiatives from cash from our equity raise completed in May 2024. Certain of our 2024 budgeted projects may either be delayed until later years or deferred altogether. We plan to fund our capital expenditures from cash from operations, Liquidity under our Credit Facility and/or financing. The initiation and timing of projects are also determined by financing alternatives or funds available for such capital projects.

On July 24, 2024, the Company purchased the property which its EWOC facility operates on pursuant to a Purchase and Sales Agreement for a purchase price of \$425,000. In connection with this transaction, we paid \$63,750 in cash and financed the remaining \$361,250 of the purchase price with a bank ("see Financing Activities" below for a discussion of the Note and its terms).

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Financing Activities

We entered into a Second Amended and Restated Revolving Credit, Term Loan and Security Agreement, dated May 8, 2020, which has since been amended from time to time, with PNC National Association ("PNC" and "lender"), acting as agent and lender (the "Loan Agreement"). The Loan Agreement provides us with the following credit facility with a maturity date of May 15, 2027 (the "Credit Facility"): (a) up to \$12,500,000 revolving credit ("revolving credit"), which borrowing capacity is subject to eligible receivables (as defined) and reduced by outstanding standby letters of credit (\$3,950,000 as of September 30, 2024) and borrowing reductions that our lender may impose from time to time (\$750,000 as of September 30, 2024); (b) a term loan ("Term Loan 1") of approximately \$1,742,000, requiring monthly installments of \$35,547 (Term Loan 1 was paid off by us in June 2024); (c) a term loan ("Term Loan 2") of \$2,500,000, requiring monthly installments of \$41,667; and (d) a capital expenditure line ("Capital Line") of up to \$1,000,000 with advances on the line, subject to certain limitations, permitted for up to twelve months starting May 4, 2021 (the "Borrowing Period"). Amounts advanced under the Capital Line at the end of the Borrowing Period totaled approximately \$524,000, requiring monthly installments of principal of approximately \$8,700 plus interest, commencing June 1, 2022.

Pursuant to our Loan Agreement, payments of annual interest rates are as follows: (i) interest due on the revolving credit is at prime (8.00% at September 30, 2024) plus 2% or SOFR (as defined in the Loan Agreement, as amended) plus 3.00% plus an SOFR Adjustment applicable for an interest period selected by us; (ii) interest due on each Term Loan 1 and the Capital Line was/is at prime plus 2.50% or SOFR plus 3.50% plus an SOFR Adjustment applicable for an interest period selected by us; and (iii) interest due on Term Loan 2 is at prime plus 3% or SOFR plus 4.00% plus an SOFR Adjustment applicable for an interest period selected by us. SOFR Adjustment rates of 0.10% and 0.15% are applicable for a one-month interest period and three-month period, respectively, that may be selected by us.

We agreed to pay PNC 0.5% of the total financing if we pay off our obligations under our Loan Agreement to our lender after July 31, 2024, to and including July 31, 2025. No early termination fee shall apply if we pay off our obligations under Loan Agreement after July 31, 2025.

On May 8, 2024, we entered into an amendment to our Loan Agreement with our lender which provided the following, among other things:

- removed the quarterly FCCR testing requirement for the first and second quarters of 2024;
- reinstated the quarterly FCCR testing requirement starting in the third quarter of 2024 and revised the methodology to be used in calculating the FCCR as follows (with no change to the minimum 1.15:1 ratio requirement): FCCR for the third quarter is to be determined based on financial results for the three-months period ending September 30, 2024; FCCR for the fourth quarter is to be determined based on financial results for the six-months period ending December 31, 2024; FCCR for the first quarter of 2025 is to be determined based on financial results for the nine-months period ending March 31, 2025; and FCCR for the second quarter of 2025 and each fiscal quarter thereafter is to be determined based on financial results for a trailing twelve-months period ending basis;
- required maintenance of a daily minimum of \$2,250,000 in Liquidity under our Credit Facility through June 29, 2024, (which was met by us) and a minimum of daily \$3,000,000 in Liquidity starting June 30, 2024, through June 29, 2025 (which we have met to date); and
- in the event we are able to achieve the minimum quarterly FCCR requirement utilizing our financial results based on a trailing twelve-months period starting with the quarter ending June 30, 2024 (which we have not been able to achieve as of September 30, 2024), the maintenance of a daily minimum Liquidity requirement of \$3,000,000 as discussed above will be removed. Any subsequent fiscal quarter testing of the FCCR will revert back to a trailing twelve-months period method.

In connection with the amendment, we paid our lender a fee of \$25,000 which is being amortized over the remaining term of the Loan Agreement as interest expense-financing fees.

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On November 12, 2024, we entered into an amendment to our Loan Agreement, as amended, with our lender which provided the following, among other things:

- removes the quarterly FCCR testing requirement for the third quarter of 2024;
- reinstates the quarterly FCCR testing requirement starting in the fourth quarter of 2024 and revises the methodology to be used in calculating the FCCR as follows (with no change to the minimum 1.15:1 ratio requirement): FCCR for the fourth quarter is to be determined based on financial results for the three-months period ending December 31, 2024; FCCR for the first quarter of 2025 is to be determined based on financial results for the six-months period ending March 31, 2025; FCCR for the second quarter of 2025 is to be determined based on financial results for the nine-months period ending June 30, 2025; and FCCR for the third quarter of 2025 and each fiscal quarter thereafter is to be determined based on financial results for a trailing twelve-months period ending basis;
- extends the required maintenance of a daily minimum of \$3,000,000 in Liquidity from the ending date of June 29, 2025 (and including) to September 29, 2025 (and including); and
- in the event we are able to achieve our minimum quarterly FCCR requirement utilizing our financial results based on a trailing twelve-months period starting with the quarter ended September 30, 2024, the maintenance of a daily minimum Liquidity requirement of \$3,000,000 as discussed above will be removed. Any subsequent fiscal quarter testing of the FCCR will revert back to a trailing twelve-months period method.

In connection with the amendment, we paid our lender a fee of \$12,500.

Our Credit Facility under our Loan Agreement with PNC contains certain financial covenants, along with customary representations and warranties. A breach of any of these financial covenants, unless waived by PNC, could result in a default under our Credit Facility allowing our lender to immediately require the repayment of all outstanding debt under our Credit Facility and terminate all commitments to extend further credit. We were not required to perform testing of our FCCR requirement for the first and second quarters of 2024 pursuant to the amendment dated May 8, 2024, to our Loan Agreement

as discussed above. We were also not required to perform testing of our FCCR requirement for the third quarter of 2024 pursuant to the amendment dated November 12, 2024, to our Loan Agreement, as amended, as discussed above. Otherwise, we met all of our other financial covenant requirements in each of the first three quarters of 2024. We expect to meet our quarterly financial covenant requirements for the next twelve months.

On May 21, 2024, we entered into a Securities Purchase Agreement (the "Securities Purchase Agreement") with certain institutional and retail investors (the "Purchasers"), pursuant to which we sold and issued, in a registered direct offering, an aggregate of 2,051,282 shares of the Company's Common Stock, at a negotiated purchase price per share of \$9.75 (the "Shares"), for aggregate gross proceeds to us of approximately \$20,000,000, before deducting fees payable to the placement agents and other estimated offering expenses payable by the Company (the "Offering"). The net proceeds from the Offering is to fund (i) continued R&D and business development relating to the Company's patent-pending process for the destruction of PFAS, as well as the cost of installing at least one commercial treatment unit; (ii) ongoing facility capital expenditures and maintenance costs; and (iii) general corporate and working capital purposes.

The Shares were offered and sold by us pursuant to the our "shelf" registration statement on Form S-3 and prospectus supplement relating thereto.

Craig-Hallum Capital Group LLC ("Craig-Hallum") and Wellington Shields & Co. LLC ("Wellington Shields") (Wellington Shields and Craig-Hallum together are known as the "Placement Agents") served as the exclusive placement agents in connection with the Offering. We paid the Placement Agents a total cash fee of 6.00% of the aggregate gross proceeds in the Offering, which totaled approximately \$1,200,000. We also reimbursed the Placement Agents certain expenses in connection with the Offering in an aggregate amount of approximately \$80,000. As additional compensation to the Placement Agents in connection with the Offering, we also issued to the Placement Agents and two (2) of their members designees, warrants (the "Placement Agents' Warrants") to purchase an aggregate of 61,538 shares of Common Stock (the "Warrant Shares"), with the aggregate number of Warrant Shares that may be acquired under the Placement Agents' Warrants equal to 3.0% of the number of Shares sold in the registered direct offering, at an exercise price per share equal to \$12.19, which is equal to approximately 125% of the price per share of the Shares sold in the Offering. Neither the Placement Agents' Warrants nor the Warrant Shares have been registered under the Registration Statement or otherwise. The Placement Agents' Warrants have a term of five years, are exercisable at any time and from time to time, in whole or in part, during the four and one-half (4 ½) year period commencing 180 days from the last date of closing of the Offering which was May 24, 2024, and are exercisable via "cashless exercise" in certain circumstances. The aggregate fair value of the "Placement Agents' Warrants" was determined to be approximately \$331,000 using the Black-Scholes pricing model with the following assumptions: 58.78% volatility, risk free interest rate of 4.53%, an expected life of five years and no dividend. The aggregate fair market value of the Placement Agent's Warrants was recorded as an offset to gross proceeds of the Offering and an increase to additional-paid-in capital.

After deducting costs incurred of approximately \$1,544,000 (exclusive of the aggregate fair market value of the Placement Agents' Warrants as discussed above) which were recorded as a deduction to equity in connection with the Offering, net cash proceeds to us totaled approximately \$18,456,000. We have paid approximately \$1,505,000 of the \$1,544,000 costs incurred in connection with the Offering.

On July 24, 2024, We purchased the property which our EWOC facility operates on pursuant to a Purchase and Sales Agreement dated April 30, 2024, for a purchase price of \$425,000. We paid \$63,750 in cash and entered into a promissory note dated July 24, 2024, in an amount of \$361,250 with a bank (the "lender") for the remaining balance of the purchase price, with a maturity date in twenty years or July 24, 2044 (the "Note"). For the first five years starting August 24, 2024, monthly payments under the Note will consists of approximately \$3,100 which include an annual fixed interest rate of 8.10%. Monthly payments under the Note will then be adjusted at the end of years five, ten and fifteen, with interest calculated based on the weekly average five-year US Treasury Securities Rate plus 3.0%. Under no circumstances will the variable interest rate on the Note be less than 4.0% per annum or more than (except in the case of default) the lesser of 20.5% per annum or the maximum rate allowed by applicable law. We agreed to pay the lender 3.0% of the total outstanding principal balance under the Note in the event we pays off our obligations during the first year of the Note. The prepayment penalty rate will be reduced by 1.0% at each subsequent annual anniversary of the Note. No prepayment penalty will apply in the event we pay off the Note on the fourth anniversary of the Note or thereafter. The property was previously accounted for under our operating leases.

Perma-Fix Canada Inc. ("PF Canada")

During the fourth quarter of 2021, PF Canada received a Notice of Termination ("NOT") from Canadian Nuclear Laboratories, LTD. ("CNL") on a Task Order Agreement ("TOA") that PF Canada entered into with CNL in May 2019 for remediation work within Ontario, Canada ("Agreement"). The NOT was received after work under the TOA was substantially completed and work under the TOA has since been completed. CNL may terminate the TOA at any time for convenience. At year-end 2023, PF Canada had approximately \$2,389,000 in outstanding receivables due from CNL as a result of work performed under the TOA. A settlement agreement was reached between PF Canada and CNL on the payment of the aforementioned amount by CNL, subject to certain conditions/terms precedents being met. PF Canada received a partial payment from CNL of the outstanding receivables during the first quarter of 2024. In May 2024, PF Canada received the remaining approximately \$1,612,000 in outstanding receivables from CNL. As a result of the aforementioned payments received from CNL, no outstanding receivables remain under the TOA from CNL.

Off Balance Sheet Arrangements

From time to time, we are required to post standby letters of credit and various bonds to support contractual obligations to customers and other obligations, including facility closures. At September 30, 2024, the total amount of standby letters of credit outstanding totaled approximately \$3,950,000 and the total amount of bonds outstanding totaled approximately \$20,568,000. We also provide closure and post-closure requirements through a financial assurance policy for certain of our Treatment Segment facilities through AIG. At September 30, 2024, the closure and post-closure requirements for these facilities were approximately \$23,379,000.

Critical Accounting Policies and Estimates

There were no significant changes in our accounting policies or critical accounting estimates that are discussed in our Annual Report on Form 10-K for the year ended December 31, 2023.

Recent Accounting Pronouncements

See "Note 2 – Summary of Significant Accounting Policies" in the "Notes to Condensed Consolidated Financial Statements" for the recent accounting pronouncement that will be adopted in future periods.

Known Trends and Uncertainties

Significant Customers. The contracts that we are a party to with others as subcontractors to the U.S government or directly with the U.S government generally provide that the government may terminate the contract at any time for convenience at the government's option. Our inability to continue under existing contracts that we have with U.S. government authorities (directly or indirectly as a subcontractor) or significant reductions in the level of governmental funding in any given year could have a material adverse impact on our operations and financial condition. We performed services relating to waste generated by U.S government clients, either directly as a prime contractor or indirectly for others as a subcontractor to U.S. government entities,

representing approximately \$11,749,000 or 69.9% and \$31,748,000 or 71.5% of our total revenues generated during the three and nine months ended September 30, 2024, respectively, as compared to 14,923,000 or 68.2% and \$52,270,000 or 78.0% of our total revenues generated during the three and nine months ended September 30, 2023, respectively. Our partnership's Italian contract may be terminated by the Contracting Authority under certain conditions as set forth in the contract. The scope of work to be performed in the initial phases of the Italian contract will be performed predominately by our JV partner. Revenue generated by the Company under the initial phases of the Italian contract will be limited to project management support through 2025 and is not material to date. The Company expects to generate an increase in revenue under the Italian contract starting in 2026 when the waste treatment phases begin.

Potential U.S. Government Shutdown. As discussed above, a significant portion of our revenue is generated through contracts entered into indirectly as subcontractors for others who are prime contractors or directly as the prime contractor to U.S. government authorities. In September 2024, a CR was enacted by Congress to avoid a U.S. government shutdown and provide temporary funding for government operations through December 20, 2024. If Congress is unable to enact FY 2025 appropriation bills by the deadline of December 20, 2024, or extend the CR, the U.S. government could enter into shutdown. In the past, even with the enactment of a CR by Congress, there were instances in which certain of our government clients delayed procurement, waste shipments and project starts due to uncertain budget projections. The full impact of any government shutdown or further CR is uncertain and could negatively impact our financial results by delays in procurement actions, contract awards, waste shipments and/or project starts.

New Processing Technology. We have completed the fabrication, installation, commissioning and startup of our first full scale commercial Perma-FAS system ("System") for PFAS (commonly known as "forever chemicals") destruction at our Perma-Fix Florida, Inc. facility. Our System and patent-pending technology successfully processed commercial PFAS-containing waste materials. There are limited current treatment options for these materials, and we expect that our process will exceed any of these methods. Some of the sizable markets for PFAS include AFFF (aqueous film-forming foam) firefighting foams, both expired concentrate and flushing liquids, contaminated liquids from PFAS systems, and other water-based separation products from a variety of industrial systems. We have already secured approximately 6,000 gallons of AFFF liquids to support ongoing operations and demonstration, and we believe that we will receive an additional 20,000 gallons in the coming months.

Our strategy for our System includes continued treatment of PFAS liquids over the coming months and targeting engineering refinements to support larger-scale Systems. By mid-2025, we expect to advance this technology into pilot-scale applications for soil, biosolids, and filter media, broadening the reach of our System's destruction capabilities.

Environmental Contingencies

We are engaged in the waste management services segment of the pollution control industry. As a participant in the on-site treatment, storage and disposal market and the off-site treatment and services market, we are subject to rigorous federal, state and local regulations. These regulations mandate strict compliance and therefore are a cost and concern to us. Because of their integral role in providing quality environmental services, we make every reasonable attempt to maintain complete compliance with these regulations; however, even with a diligent commitment, we, along with many of our competitors, may be required to pay fines for violations or investigate and potentially remediate our waste management facilities.

We routinely use third party disposal companies, who ultimately destroy, or secure landfill residual materials generated at our facilities or at a client's site. In the past, numerous third-party disposal sites have improperly managed waste and consequently require remedial action; consequently, any party utilizing these sites may be liable for some or all of the remedial costs. Despite our aggressive compliance and auditing procedures for disposal of wastes, we could further be notified, in the future, that we are a PRP at a remedial action site, which could have a material adverse effect.

We have three environmental remediation projects, all within our discontinued operations, which principally entail the removal/remediation of contaminated soil, and, in most cases, the remediation of surrounding ground water. We expect to fund the expenses to remediate these sites from funds generated from operations. As of September 30, 2024, we had total accrued environmental remediation liabilities of \$767,000, a decrease of approximately \$78,000 from the December 31, 2023, balance of \$845,000. The decrease represents payments for remediation projects. At September 30, 2024, \$1,000 of the total accrued environmental liabilities was recorded as current.

Item 3. Quantitative and Qualitative Disclosures about Market Risks

Not required for smaller reporting companies.

Item 4. Controls and Procedures

(a) *Evaluation of disclosure controls and procedures.*

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our periodic reports filed with the Securities and Exchange Commission is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the Securities and Exchange Commission and that such information is accumulated and communicated to our management. As of the end of the period covered by this report, we carried out an evaluation with the participation of our Principal Executive Officer and Principal Financial Officer. Based on this recent assessment, our Principal Executive Officer and Principal Financial Officer have concluded that our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934, as amended) were not effective as of September 30, 2024, due to the material weakness in internal control over financial reporting described below.

Material Weakness

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected on a timely basis. In the period ended September 30, 2024, management identified a material weakness related to the precision level needed in order to properly evaluate the need for a valuation allowance on our U.S. deferred tax assets. This material weakness resulted in an income tax valuation adjustment recorded during the quarter. The necessary level of precision was not applied when evaluating the need for a valuation allowance. The error was corrected by management in the Condensed Consolidated Financial Statements as of September 30, 2024, and for the three and nine months ended September 30, 2024. The material weakness noted did not result in a material misstatement in our previously issued financial statements, nor in the financial statements included in this Quarterly Report on Form 10-Q.

Management's Plan to Remediate the Material Weakness

Our management is committed to maintaining a strong internal control environment. As it relates to the material weakness identified, we have enhanced our management and precision level of review control activities in order to evaluate the income tax valuation allowance in subsequent reporting periods. In addition, if deemed necessary, we will retain a third-party specialist to review management's valuation allowance conclusions.

(b) *Changes in internal control over financial reporting.*

Other than the identification of the material weakness and the related remediation plan described above, there have been no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during our most recently completed fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II – OTHER INFORMATION

Item 1. Legal Proceedings

There are no material legal proceedings pending against us and/or our subsidiaries not previously reported by us in Item 3 of our Form 10-K for the year ended December 31, 2023. Additionally, there has been no other material change in legal proceedings previously disclosed by us in our Form 10-K for the year ended December 31, 2023.

Item 1A. Risk Factors

There is no other material change from the risk factors previously disclosed in our Form 10-K for the year ended December 31, 2023, and our Form 10-Q for the quarter ended March 31, 2024, except as follows:

The following additional Risk Factor under "Risks Relating to our Business and Operations" is as follows:

We have sustained losses during 2024.

The Company sustained substantial losses during the first nine months of 2024. We believe that our results of operations should substantially improve in 2025. If, however, we fail to become profitable on an annualized basis in the foreseeable future, this could have a material adverse effect on our operations, credit facility, liquidity and potential growth.

The following additional Risk Factor under "General Risk Factors" is as follows:

Failure to maintain effective internal control over financial reporting or failure to remediate a material weakness in internal control over financial reporting could have a material adverse effect on our business, operating results, and stock price.

Maintaining effective internal control over financial reporting is necessary for us to produce reliable financial reports and is important in helping to prevent financial fraud. If we are unable to maintain adequate internal controls, our business and operating results could be harmed. We are required to satisfy the requirements of Section 404 of Sarbanes Oxley and the related rules of the Commission, which require, among other things, management to assess the effectiveness of our internal control over financial reporting.

In the period ended September 30, 2024, management identified a material weakness related to the precision level needed in order to properly evaluate the need for a valuation allowance on its U.S. deferred tax assets. This material weakness resulted in an income tax valuation adjustment recorded during the quarter. The necessary level of precision was not applied when evaluating the need for a valuation allowance. The error was corrected by management in the Condensed Consolidated Financial Statements as of September 30, 2024, and for the three and nine months ended September 30, 2024. The material weakness noted did not result in a material misstatement in our previously issued financial statements, nor in the financial statements included in this Quarterly Report on Form 10-Q. We have implemented a plan to remediate this material weakness.

If we are unable to maintain adequate internal control over financial reporting and/or remediate any material weakness identified, there is a reasonable possibility that a misstatement of our annual or interim financial statements will not be prevented or detected in a timely manner. If we cannot produce reliable financial reports, investors could lose confidence in our reported financial information, the market price of our Common Stock could decline significantly, and our business, financial condition, and reputation could be harmed.

Item 6. Exhibits

(a) **Exhibits**

- 4.1 [Revised Second Amended and Restated Revolving Credit, Term Loan and Security Agreement referenced as Annex A in the Fifth Amendment, as incorporated by reference from Exhibit 4.2 to the Company's Form 8-K filed on August 29, 2022.](#)
- 4.2 [Eighth Amendment to Second Amended and Restated Revolving Credit, Term Loan and Security Agreement dated May 8, 2024, between Perma-Fix Environmental Services, Inc. and PNC Bank, National Association, as incorporated by reference from Exhibit 4.1 to the Company Form 10-Q for the first quarter 2024, filed on May 9, 2024.](#)
- 4.3 [Ninth Amendment to Second Amended and Restated Revolving Credit, Term Loan and Security Agreement, dated November 12, 2024, between Perma-Fix Environmental Services, Inc. and PNC Bank, National Association](#)
- 31.1 [Certification by Mark Duff, Chief Executive Officer of the Company pursuant to Rule 13a-14\(a\) or 15d-14\(a\).](#)
- 31.2 [Certification by Ben Naccarato, Chief Financial Officer of the Company pursuant to Rule 13a-14\(a\) or 15d-14\(a\).](#)
- 32.1 [Certification by Mark Duff, Chief Executive Officer of the Company furnished pursuant to 18 U.S.C. Section 1350.](#)
- 32.2 [Certification by Ben Naccarato, Chief Financial Officer of the Company furnished pursuant to 18 U.S.C. Section 1350.](#)
- 101.INS Inline XBRL Instance Document-the instance document does not appear in the Interactive Data File because XBRL tags are embedded within the Inline XBRL document*
- 101.SCH Inline XBRL Taxonomy Extension Schema Document*
- 101.CAL Inline XBRL Taxonomy Extension Calculation Linkbase Document*
- 101.DEF Inline XBRL Taxonomy Extension Definition Linkbase Document*
- 101.LAB Inline XBRL Taxonomy Extension Labels Linkbase Document*
- 101.PRE Inline XBRL Taxonomy Extension Presentation Linkbase Document*
- 104 Cover Page Interactive Data File (formatted as an Inline XBRL document and included in Exhibit 101).

* Pursuant to Rule 406T of Regulation S-T, the Inline Interactive Data File in Exhibit 101 hereto are deemed not filed or part of a registration statement or prospectus for purposes of Section 11 or 12 of the Securities Act of 1933, as amended, are deemed not filed for purpose of Section 18 of the Securities Exchange Act of 1934, as amended, and otherwise are not subject to liability under those sections.

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SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, hereunto duly authorized.

PERMA-FIX ENVIRONMENTAL SERVICES

Date: November 13, 2024

By: /s/ Mark Duff

Mark Duff
President and Chief (Principal) Executive Officer

Date: November 13, 2024

By: /s/ Ben Naccarato

Ben Naccarato
Chief (Principal) Financial Officer

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NINTH AMENDMENT TO SECOND AMENDED AND RESTATED REVOLVING
CREDIT, TERM LOAN AND SECURITY AGREEMENT

THIS NINTH AMENDMENT TO SECOND AMENDED AND RESTATED REVOLVING CREDIT, TERM LOAN AND SECURITY AGREEMENT, dated as of November 12, 2024 (this "Amendment"), relating to the Credit Agreement referenced below, is by and among PERMA-FIX ENVIRONMENTAL SERVICES, INC., a Delaware corporation (the "Borrower"), and PNC Bank, National Association, a national banking association, as agent (in such capacity, the "Agent") and the lender (in such capacity, the "Lender"). Terms used herein but not otherwise defined herein shall have the meanings provided to such terms in the Credit Agreement.

W I T N E S S E T H

WHEREAS, a credit facility has been extended to the Borrower pursuant to the terms of that certain Second Amended and Restated Revolving Credit, Term Loan and Security Agreement dated as of May 8, 2020 (as amended and modified from time to time, the "Credit Agreement") among the Borrower, the Lender identified therein, and PNC Bank, National Association, as agent and Lender;

WHEREAS, the Borrower has requested certain modifications to the Credit Agreement; and

WHEREAS, the Lender has agreed to the requested modifications on the terms and conditions set forth herein;

NOW, THEREFORE, IN CONSIDERATION of the premises and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

1. Amendments. The Credit Agreement is amended as set forth below.

(a) The definition of "Trigger Date" appearing in Section 1.2 thereof is amended to read as follows:

"Trigger Date" means the first to occur of (a) the date, if any, on which the Borrower delivers to Agent evidence that Borrower and its Subsidiaries have maintained a Fixed Charge Coverage Ratio of not less than 1.15 to 1.00 for trailing twelve-month period most recently ended, which evidence shall be in form and substance satisfactory to the Agent in its sole discretion and (b) September 30, 2025."

(b) Section 6.5(a) is amended to read as follows:

"(a) Liquidity.

Maintain Liquidity in an amount not less than \$3,000,000 at all times on and after June 30, 2024 to (but excluding) the Trigger Date; provided, that, each such determination of Liquidity pursuant to the foregoing clauses (i) and (ii) shall include at least \$500,000 of Undrawn Availability."

(c) Section 6.5(b) is amended to read as follows:

"(b) Fixed Charge Coverage Ratio.

Beginning with the fiscal quarter ending December 31, 2024, cause to be maintained a Fixed Charge Coverage Ratio of not less than 1.15 to 1.00 for (i) the one quarter period ending as of December 31, 2024, (ii) the two quarter period ending as of March 31, 2025, (iii) the three quarter period ending as of June 30, 2025, and (iv) the four quarter period ending as of September 30, 2025 and for each fiscal quarter thereafter; provided, that, in the event the Trigger Date occurs at any time prior September 30, 2025, the Fixed Charge Coverage Ratio shall be tested as of the end of each quarter after the Trigger Date for the four quarter period then-ended."

2. Conditions Precedent. This Amendment shall be effective as of the date hereof upon satisfaction of the following conditions:

(a) the execution of this Amendment by the Borrower and PNC Bank, National Association as the Agent and Lender; and

(b) receipt by the Agent of an amendment fee of \$12,500.

3. Representations and Warranties. The Borrower hereby represents and warrants in connection herewith that as of the date hereof (after giving effect hereto) (i) the representations and warranties set forth in Article V of the Credit Agreement are true and correct in all material respects (except those which expressly relate to an earlier date), and (ii) no Default or Event of Default has occurred and is continuing under the Credit Agreement.

4. Acknowledgments, Affirmations and Agreements. The Borrower (i) acknowledges and consents to all of the terms and conditions of this Amendment and (ii) affirms all of its obligations under the Credit Agreement and the Other Documents.

5. Credit Agreement. Except as expressly modified hereby, all of the terms and provisions of the Credit Agreement remain in full force and effect.

6. Expenses. The Borrower agrees to pay all reasonable costs and expenses in connection with the preparation, execution and delivery of this Amendment, including the reasonable fees and expenses of the Agent's legal counsel.

7. Counterparts. This Amendment may be executed in any number of counterparts, each of which when so executed and delivered shall be deemed an original. It shall not be necessary in making proof of this Amendment to produce or account for more than one such counterpart.

8. Governing Law. This Amendment shall be deemed to be a contract under, and shall for all purposes be construed in accordance with, the laws of the State of New York.

[Remainder of page intentionally blank; signature page follows.]

IN WITNESS WHEREOF, each of the parties hereto has caused a counterpart of this Amendment to be duly executed and delivered as of the date first above written.

BORROWER:

PERMA-FIX ENVIRONMENTAL SERVICES, INC.

By: /s/ Ben Naccarato

Name: Ben Naccarato

Title: CFO

AGENT AND LENDER:

PNC BANK, NATIONAL ASSOCIATION,
in its capacity as Agent and as Lender

By: /s/Scott Goldstein

Name: Scott Goldstein

Title: Senior Vice President

Ninth Amendment to Second Amended and Restated Revolving Credit,
Term Loan and Security Agreement (Perma-Fix Environmental Services, Inc.)

CERTIFICATIONS

I, Mark Duff, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Perma-Fix Environmental Services, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of the internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 13, 2024

/s/ Mark Duff

Mark Duff

Chief Executive Officer, President
and Principal Executive Officer

CERTIFICATIONS

I, Ben Naccarato, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Perma-Fix Environmental Services, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of the internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 13, 2024

/s/ Ben Naccarato

Ben Naccarato
Executive Vice President and
Chief Financial Officer and
Principal Financial Officer

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906
OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Quarterly Report of Perma-Fix Environmental Services, Inc. ("PESI") on Form 10-Q for the quarter ended September 30, 2024, as filed with the Securities and Exchange Commission on the date hereof (the "Form 10-Q"), I, Mark Duff, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Form 10-Q fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. §78m or §78o(d)); and

(2) The information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: November 13, 2024

/s/ Mark Duff

Mark Duff

Chief Executive Officer, President
and Principal Executive Officer

This certification is furnished to the Securities and Exchange Commission solely for purpose of 18 U.S.C. §1350 subject to the knowledge standard contained therein, and not for any other purpose.

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906
OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Quarterly Report of Perma-Fix Environmental Services, Inc. ("PESI") on Form 10-Q for the quarter ended September 30, 2024, as filed with the Securities and Exchange Commission on the date hereof (the "Form 10-Q"), I, Ben Naccarato, Executive Vice President and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Form 10-Q fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. §78m or §78o(d)); and
- (2) The information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: November 13, 2024

/s/ Ben Naccarato

Ben Naccarato
Executive Vice President and Chief Financial
Officer and Principal Financial Officer

This certification is furnished to the Securities and Exchange Commission solely for purpose of 18 U.S.C. §1350 subject to the knowledge standard contained therein, and not for any other purpose.
