

**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, 2020

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. 111596

PERMA-FIX ENVIRONMENTAL SERVICES, INC.

(Exact name of registrant as specified in its charter)

Delaware
*(State or other jurisdiction
of incorporation or organization)*

58-1954497
*(IRS Employer
Identification Number)*

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

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 Markets
Preferred Stock Purchase Rights		NASDAQ Capital Markets

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 4, 2020
Common Stock, \$.001 Par Value	12,153,897 shares

PERMA-FIX ENVIRONMENTAL SERVICES, INC.

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PART I - FINANCIAL INFORMATION
ITEM 1. – Financial Statements

PERMA-FIX ENVIRONMENTAL SERVICES, INC.
Consolidated Balance Sheets

(Amounts in Thousands, Except for Share and Per Share Amounts)	September 30, 2020 (Unaudited)	December 31, 2019 (Audited)
ASSETS		
Current assets:		
Cash	\$ 4,811	\$ 390
Accounts receivable, net of allowance for doubtful accounts of \$432 and \$487, respectively	13,442	13,178
Unbilled receivables	14,366	7,984
Inventories	525	487
Prepaid and other assets	3,863	2,983
Current assets related to discontinued operations	17	104
Total current assets	37,024	25,126
Property and equipment:		
Buildings and land	20,049	19,967
Equipment	22,285	20,068
Vehicles	456	410
Leasehold improvements	23	23
Office furniture and equipment	1,470	1,418
Construction-in-progress	1,513	1,609
Total property and equipment	45,796	43,495
Less accumulated depreciation	(27,900)	(26,919)
Net property and equipment	17,896	16,576
Property and equipment related to discontinued operations	81	81
Operating lease right-of-use assets	2,353	2,545
Intangibles and other long term assets:		
Permits	8,875	8,790
Other intangible assets - net	923	1,065
Finite risk sinking fund (restricted cash)	11,418	11,307
Other assets	911	989
Other assets related to discontinued operations	—	36
Total assets	\$ 79,481	\$ 66,515

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

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

(Amounts in Thousands, Except for Share and Per Share Amounts)	September 30, 2020 (Unaudited)	December 31, 2019 (Audited)
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 14,652	\$ 9,277
Accrued expenses	6,743	6,118
Disposal/transportation accrual	1,041	1,156
Deferred revenue	4,806	5,456
Accrued closure costs - current	75	84
Current portion of long-term debt	828	1,300
Current portion of operating lease liabilities	265	244
Current portion of finance lease liabilities	675	471
Current liabilities related to discontinued operations	919	994
Total current liabilities	30,004	25,100
Accrued closure costs	6,207	5,957
Deferred tax liabilities	588	590
Long-term debt, less current portion	6,426	2,580
Long-term operating lease liabilities, less current portion	2,141	2,342
Long-term finance lease liabilities, less current portion	715	466
Other long-term liabilities	838	—
Long-term liabilities related to discontinued operations	250	244
Total long-term liabilities	17,165	12,179
Total liabilities	47,169	37,279
Commitments and Contingencies (Note 10)		
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; 12,152,363 and 12,123,520 shares issued, respectively; 12,144,721 and 12,115,878 shares outstanding, respectively	12	12
Additional paid-in capital	108,790	108,457
Accumulated deficit	(74,445)	(77,315)
Accumulated other comprehensive loss	(251)	(211)
Less Common Stock in treasury, at cost; 7,642 shares	(88)	(88)
Total Perma-Fix Environmental Services, Inc. stockholders' equity	34,018	30,855
Non-controlling interest	(1,706)	(1,619)
Total stockholders' equity	32,312	29,236
Total liabilities and stockholders' equity	\$ 79,481	\$ 66,515

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

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

(Amounts in Thousands, Except for Per Share Amounts)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
Net revenues	\$ 30,172	\$ 22,535	\$ 77,079	\$ 51,378
Cost of goods sold	25,422	17,378	64,379	40,449
Gross profit	4,750	5,157	12,700	10,929
Selling, general and administrative expenses	3,308	2,945	8,935	8,548
Research and development	157	165	598	615
Loss on disposal of property and equipment	—	4	27	3
Income from operations	1,285	2,043	3,140	1,763
Other income (expense):				
Interest income	28	77	112	265
Interest expense	(87)	(99)	(306)	(293)
Interest expense-financing fees	(58)	(69)	(187)	(139)
Other	180	(2)	189	222
Loss on debt extinguishment of debt	—	—	(27)	—
Income from continuing operations before taxes	1,348	1,950	2,921	1,818
Income tax (benefit) expense	(133)	55	(128)	99
Income from continuing operations, net of taxes	1,481	1,895	3,049	1,719
Loss from discontinued operations, net of taxes of \$0	(67)	(156)	(266)	(424)
Net income	1,414	1,739	2,783	1,295
Net loss attributable to non-controlling interest	(32)	(29)	(87)	(90)
Net income attributable to Perma-Fix Environmental Services, Inc. common stockholders	\$ 1,446	\$ 1,768	\$ 2,870	\$ 1,385
Net income (loss) per common share attributable to Perma-Fix Environmental Services, Inc. stockholders - basic:				
Continuing operations	\$.13	\$.16	\$.26	\$.15
Discontinued operations	(.01)	(.01)	(.02)	(.03)
Net income per common share	\$.12	\$.15	\$.24	\$.12
Net income (loss) per common share attributable to Perma-Fix Environmental Services, Inc. stockholders - diluted:				
Continuing operations	\$.13	\$.16	\$.25	\$.15
Discontinued operations	(.01)	(.01)	(.02)	(.04)
Net income per common share	\$.12	\$.15	\$.23	\$.11
Number of common shares used in computing net income per share:				
Basic	12,145	12,070	12,134	12,029
Diluted	12,371	12,123	12,337	12,061

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

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

(Amounts in Thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
Net income	\$ 1,414	\$ 1,739	\$ 2,783	\$ 1,295
Other comprehensive income (loss):				
Foreign currency translation adjustment	11	4	(40)	12
Comprehensive income	1,425	1,743	2,743	1,307
Comprehensive loss attributable to non-controlling interest	(32)	(29)	(87)	(90)
Comprehensive income attributable to Perma-Fix Environmental Services, Inc. stockholders	\$ 1,457	\$ 1,772	\$ 2,830	\$ 1,397

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

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

	Common Stock		Additional Paid-In Capital	Common Stock Held In Treasury	Accumulated Other Comprehensive Loss	Non- controlling Interest in Subsidiary	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount						
Balance at December 31, 2019	<u>12,123,520</u>	<u>\$ 12</u>	<u>\$ 108,457</u>	<u>\$ (88)</u>	<u>\$ (211)</u>	<u>\$ (1,619)</u>	<u>\$ (77,315)</u>	<u>\$ 29,236</u>
Net Income (loss)	—	—	—	—	—	(26)	1,220	1,194
Foreign currency translation	—	—	—	—	(79)	—	—	(79)
Issuance of Common Stock upon exercise of options	3,643	—	6	—	—	—	—	6
Issuance of Common Stock for services	5,128	—	48	—	—	—	—	48
Stock-Based Compensation	—	—	44	—	—	—	—	44
Balance at March 31, 2020	<u>12,132,291</u>	<u>\$ 12</u>	<u>\$ 108,555</u>	<u>\$ (88)</u>	<u>\$ (290)</u>	<u>\$ (1,645)</u>	<u>\$ (76,095)</u>	<u>\$ 30,449</u>
Net Income (loss)	—	—	—	—	—	(29)	204	175
Foreign currency translation	—	—	—	—	28	—	—	28
Issuance of Common Stock upon exercise of options	241	—	—	—	—	—	—	—
Issuance of Common Stock for services	10,239	—	56	—	—	—	—	56
Stock-Based Compensation	—	—	48	—	—	—	—	48
Balance at June 30, 2020	<u>12,142,771</u>	<u>\$ 12</u>	<u>\$ 108,659</u>	<u>\$ (88)</u>	<u>\$ (262)</u>	<u>\$ (1,674)</u>	<u>\$ (75,891)</u>	<u>\$ 30,756</u>
Net Income (loss)	—	—	—	—	—	(32)	1,446	1,414
Foreign currency translation	—	—	—	—	11	—	—	11
Issuance of Common Stock for services	9,592	—	62	—	—	—	—	62
Stock-Based Compensation	—	—	69	—	—	—	—	69
Balance at September 30, 2020	<u>12,152,363</u>	<u>\$ 12</u>	<u>\$ 108,790</u>	<u>\$ (88)</u>	<u>\$ (251)</u>	<u>\$ (1,706)</u>	<u>\$ (74,445)</u>	<u>\$ 32,312</u>
Balance at December 31, 2018	<u>11,944,215</u>	<u>\$ 12</u>	<u>\$ 107,548</u>	<u>\$ (88)</u>	<u>\$ (214)</u>	<u>\$ (1,495)</u>	<u>\$ (79,630)</u>	<u>\$ 26,133</u>
Net loss	—	—	—	—	—	(30)	(672)	(702)
Foreign currency translation	—	—	—	—	12	—	—	12
Issuance of Common Stock for services	24,964	—	60	—	—	—	—	60
Stock-Based Compensation	—	—	48	—	—	—	—	48
Balance at March 31, 2019	<u>11,969,179</u>	<u>\$ 12</u>	<u>\$ 107,656</u>	<u>\$ (88)</u>	<u>\$ (202)</u>	<u>\$ (1,525)</u>	<u>\$ (80,302)</u>	<u>\$ 25,551</u>
Net income (loss)	—	—	—	—	—	(31)	289	258
Foreign currency translation	—	—	—	—	(4)	—	—	(4)
Issuance of Common Stock for services	17,902	—	62	—	—	—	—	62
Stock-Based Compensation	—	—	36	—	—	—	—	36
Issuance of Common Stock with debt	75,000	—	263	—	—	—	—	263
Issuance of warrant with debt	—	—	93	—	—	—	—	93
Balance at June 30, 2019	<u>12,062,081</u>	<u>\$ 12</u>	<u>\$ 108,110</u>	<u>\$ (88)</u>	<u>\$ (206)</u>	<u>\$ (1,556)</u>	<u>\$ (80,013)</u>	<u>\$ 26,259</u>
Net income (loss)	—	—	—	—	—	(29)	1,768	1,739
Foreign currency translation	—	—	—	—	4	—	—	4
Issuance of Common Stock for services	15,337	—	60	—	—	—	—	60
Stock-Based Compensation	—	—	45	—	—	—	—	45
Balance at September 30, 2019	<u>12,077,418</u>	<u>\$ 12</u>	<u>\$ 108,215</u>	<u>\$ (88)</u>	<u>\$ (202)</u>	<u>\$ (1,585)</u>	<u>\$ (78,245)</u>	<u>\$ 28,107</u>

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

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

(Amounts in Thousands)	Nine Months Ended September 30,	
	2020	2019
Cash flows from operating activities:		
Net income	\$ 2,783	\$ 1,295
Less: loss from discontinued operations, net of taxes of \$0	(266)	(424)
	3,049	1,719
Income from continuing operations, net of taxes		
Adjustments to reconcile income from continuing operations to cash provided by (used in) operating activities:		
Depreciation and amortization	1,189	968
Interest on finance lease with purchase option	6	—
Loss on extinguishment of debt	27	—
Amortization of debt issuance/debt discount costs	187	139
Deferred tax (benefit) expense	(2)	26
(Recovery of) provision for bad debt reserves	(94)	147
Loss on disposal of property and equipment	27	3
Issuance of common stock for services	166	182
Stock-based compensation	161	129
Changes in operating assets and liabilities of continuing operations		
Accounts receivable	(170)	(3,193)
Unbilled receivables	(6,382)	(6,140)
Prepaid expenses, inventories and other assets	1,284	500
Accounts payable, accrued expenses and unearned revenue	4,055	2,516
Cash provided by (used in) continuing operations	3,503	(3,004)
Cash used in discontinued operations	(329)	(459)
Cash provided by (used in) operating activities	3,174	(3,463)
Cash flows from investing activities:		
Purchases of property and equipment	(1,488)	(813)
Proceeds from sale of property and equipment	4	1
Cash used in investing activities of continuing operations	(1,484)	(812)
Cash provided by investing activities of discontinued operations	118	100
Cash used in investing activities	(1,366)	(712)
Cash flows from financing activities:		
Repayments of revolving credit borrowings	(72,601)	(38,378)
Borrowing on revolving credit	72,280	37,739
Proceeds from issuance of long-term debt	5,666	2,500
Proceeds from finance leases	—	405
Principal repayments of finance lease liabilities	(411)	(174)
Principal repayments of long term debt	(2,127)	(925)
Payment of debt issuance costs	(85)	(112)
Proceeds from issuance of common stock upon exercise of options	6	—
Cash provided by financing activities of continuing operations	2,728	1,055
Effect of exchange rate changes on cash	(4)	16
Increase (decrease) in cash and finite risk sinking fund (restricted cash)	4,532	(3,104)
Cash and finite risk sinking fund (restricted cash) at beginning of period	11,697	16,781
Cash and finite risk sinking fund (restricted cash) at end of period	\$ 16,229	\$ 13,677
Supplemental disclosure:		
Interest paid	\$ 286	\$ 284
Income taxes paid	34	168
Equipment purchase subject to finance lease	856	29
Equipment purchase subject to financing	27	—
Issuance of Common Stock with debt	—	263
Issuance of Warrant with debt	—	93

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

PERMA-FIX ENVIRONMENTAL SERVICES, INC.
Notes to Consolidated Financial Statements
September 30, 2020
(Unaudited)

Reference is made herein to the notes to consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2019.

1. Basis of Presentation

The 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 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, 2020 are not necessarily indicative of results to be expected for the fiscal year ending December 31, 2020.

The Company suggests that these consolidated financial statements be read in conjunction with the consolidated financial statements and the notes thereto included in the Company’s Annual Report on Form 10-K for the year ended December 31, 2019.

The consolidated financial statements include our accounts, those of our wholly-owned subsidiaries, and our majority-owned Polish subsidiary, Perma-Fix Medical. Additionally, the Company’s financial statements include the account of a variable interest entity (“VIE”), Perma-Fix ERRG for which we are the primary beneficiary (See “Note 14 - VIE” for a discussion of this VIE).

2. Summary of Significant Accounting Policies

Recently Adopted Accounting Standards

In August 2018, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2018-13, “Fair Value Measurement (Topic 820): Disclosure Framework - Changes to the Disclosure Requirements for Fair Value Measurement.” ASU 2018-13 improves the disclosure requirements on fair value measurements. ASU 2018-13 is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. The adoption of ASU No. 2018-13 by the Company effective January 1, 2020 did not have a material impact on the Company’s financial statements or disclosures.

In March 2020, the FASB issued ASU 2020-04, “Reference Rate Reform (“ASU 848”): Facilitation of the Effects of Reference Rate Reform on Financial Reporting.” ASU 2020-04 provides optional expedients and exceptions for applying U.S. GAAP to contract modifications and hedging relationships, subject to meeting certain criteria, that reference London Interbank Offered Rate (“LIBOR”) or another rate that is expected to be discontinued. The amendments in the ASU are effective for all entities as of March 12, 2020 through December 31, 2022. The adoption of ASU 2020-04 on March 12, 2020 by the Company did not have a material impact on the Company’s financial statements. The Company will continue to assess the potential impact of this ASU through the effective period.

Recently Issued Accounting Standards – Not Yet Adopted

In June 2016, the FASB issued ASU No. 2016-13, “Credit Losses (Topic 326) - Measurement of Credit Losses on Financial Instruments and subsequent amendments to the initial guidance: ASU 2018-19 “Codification Improvements to Topic 326, Financial Instruments - Credit Losses,” ASU 2019-04 “Codification Improvements to Topic 326, Financial Instruments - Credit Losses, Topic 815, Derivatives and Hedging, and Topic 825, Financial Instruments,” ASU 2019-05 “Financial Instruments - Credit Losses (Topic 326): Targeted Transition Relief,” ASU 2019-11 “Codification Improvements to Topic 326, Financial Instruments - Credit Losses” and ASU 2020-02, “Financial Instruments—Credit Losses (Topic 326) and Leases (Topic 842)” (collectively, “Topic 326”). Topic 326 introduces an approach, based on expected losses, to estimate credit losses on certain types of financial instruments and modifies the impairment model for available-for-sale debt securities. The new approach to estimating credit losses (referred to as the current expected credit losses model) applies to most financial assets measured at amortized cost and certain other instruments, including trade and other receivables and loans. Entities are required to apply the standard’s provisions as a cumulative-effect adjustment to retained earnings as of the beginning of the first reporting period in which the guidance is adopted. These ASUs are effective January 1, 2023 for the Company as a smaller reporting company. The Company had expected to early adopt these ASUs effective January 1, 2020; however, due to the need for reallocation of the Company’s resources to manage COVID-19 related matters, the Company has deferred adoption of these ASUs effective January 1, 2020 and expect to adopt these ASUs by January 1, 2023.

In December 2019, the FASB issued ASU No. 2019-12, “Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes,” which is intended to simplify various aspects related to accounting for income taxes. ASU 2019-12 removes certain exceptions to the general principles in Topic 740 and also clarifies and amends existing guidance to improve consistent application. This guidance is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2020, with early adoption permitted. The Company does not expect the adoption of this ASU will have a material impact on the Company’s financial statements.

In January 2020, the FASB issued ASU 2020-01, “Investments - Equity Securities (Topic 321), Investments - Equity Method and Joint Ventures (Topic 323), and Derivatives and Hedging (Topic 815), clarifying the Interactions between Topic 321, Topic 323, and Topic 815.” This guidance addresses accounting for the transition into and out of the equity method and provides clarification of the interaction of rules for equity securities, the equity method of accounting, and forward contracts and purchase options on certain types of securities. This standard is effective for fiscal years and interim periods within those fiscal years beginning after December 15, 2020. Early adoption is permitted. The Company does not expect the adoption of this ASU will have a material impact on the Company’s financial statements.

In August 2020, the FASB issued ASU No. 2020-06, “Debt – Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging – Contracts in Entity’s Own Equity.” ASU 2020-06 simplifies the accounting for convertible instruments by removing major separation models and removing certain settlement condition qualifiers for the derivatives scope exception for contracts in an entity’s own equity, and simplifies the related diluted net income per share calculation for both Subtopics. ASU 2020-06 is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2023, for the Company as a smaller reporting company. Early adoption is permitted, but no earlier than fiscal years beginning after December 15, 2020, including interim periods within those fiscal years. The Company is currently evaluating the impact of this ASU on its consolidated financial statements and disclosures.

3. COVID-19 Impact

The spread of COVID-19 continues to result in significant volatility in the U.S. and international markets. The Company continues to closely monitor the impact of the COVID-19 pandemic on all aspects of its business. As previously reported, the COVID-19 pandemic did not result in a material impact to the Company’s first quarter 2020 results of operations. Starting in late March 2020, the Company’s operations were impacted by the shutdown of a number of projects and the delays of certain waste shipments that continued into the second quarter of 2020. Since the latter part of the second quarter of 2020, all of the projects that were previously shutdown within our Services Segment have restarted as stay-at-home orders and certain other restrictions resulting from the pandemic were lifted. Revenues within our Services Segment in the third quarter of 2020 exceeded the corresponding period of 2019 by approximately \$10,652,000. The Company continues to experience delays in waste shipments from certain customers within our Treatment Segment directly related to the impact of COVID-19 including generator shutdowns and limited sustained operations, along with other factors. These waste shipment delays may impact the Company’s results of operations for the fourth quarter of 2020 and potentially the first quarter of 2021.

At this time, the Company believes it has sufficient liquidity on hand to continue business operations during the next twelve months. At September 30, 2020, the Company had cash on hand of approximately \$4,811,000 and borrowing availability under our revolving credit facility of approximately \$16,404,000 based on a percentage of eligible receivables and subject to certain reserves. The Company continues to assess reducing operating costs during this volatile time, which include curtailing capital expenditures, eliminating non-essential expenditures and implementing a hiring freeze as needed.

The Company is closely monitoring our customers' payment performance. However, as a significant portion of our revenues is derived from government related contracts, the Company does not expect its accounts receivable collections to be materially impacted due to COVID-19.

The situation surrounding COVID-19 continues to remain fluid. The potential for a material impact on the Company's business increases the longer COVID-19 impacts the level of economic activities in the United States and globally as our customers may continue to delay waste shipments and project work may shut down again. For this reason, we cannot reasonably estimate with any degree of certainty the future impact COVID-19 may have on our results of operations, financial position, and liquidity which may impact our ability to meet our financial covenant requirements under our credit facility. Given the current economic environment and the market volatility from COVID-19, the Company considered whether these events or changes in circumstances triggered the need for an interim impairment analysis of our long-lived assets and intangible assets. Based on the Company's assessment of the impact of these conditions on our business, the Company determined there was no triggering event as of September 30, 2020. However, as the effects of the COVID-19 pandemic continue to evolve, the Company will continue to assess the need to perform interim impairment tests of our long-lived assets and intangible assets.

The Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act"), as amended by the Paycheck Protection Program Flexibility Act of 2020 (the "Flexibility Act") on June 5, 2020, provides the Company the option to defer the payment of its share of social security taxes beginning on March 27, 2020 through December 31, 2020. The Company elected to defer payment of its shares of social security taxes starting in April 2020 (see "Note 15 – Deferral of Employment Tax Deposits"). The Company also entered into a promissory note ("PPP Loan") with its credit facility lender under the Paycheck Protection Program ("PPP") that was established under the CARES Act, as amended (see "Note 9 – Long Term Debt – PPP Loan" for further detail of this loan).

4. 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			Three Months Ended		
	September 30, 2020			September 30, 2019		
	Treatment	Services	Total	Treatment	Services	Total
Fixed price	\$ 7,066	\$ 10,303	\$ 17,369	\$ 10,081	\$ 5,364	\$ 15,445
Time and materials	—	12,803	12,803	—	7,090	7,090
Total	\$ 7,066	\$ 23,106	\$ 30,172	\$ 10,081	\$ 12,454	\$ 22,535

Revenue by Contract Type

(In thousands)	Nine Months Ended			Nine Months Ended		
	September 30, 2020			September 30, 2019		
	Treatment	Services	Total	Treatment	Services	Total
Fixed price	\$ 24,469	\$ 19,001	\$ 43,470	\$ 30,079	\$ 9,231	\$ 39,310
Time and materials	—	33,609	33,609	—	12,068	12,068
Total	\$ 24,469	\$ 52,610	\$ 77,079	\$ 30,079	\$ 21,299	\$ 51,378

Revenue by generator

(In thousands)	Three Months Ended			Three Months Ended		
	September 30, 2020			September 30, 2019		
	Treatment	Services	Total	Treatment	Services	Total
Domestic government	\$ 5,334	\$ 21,660	\$ 26,994	\$ 7,537	\$ 10,155	\$ 17,692
Domestic commercial	1,598	459	2,057	2,535	475	3,010
Foreign government	134	966	1,100	—	1,804	1,804
Foreign commercial	—	21	21	9	20	29
Total	\$ 7,066	\$ 23,106	\$ 30,172	\$ 10,081	\$ 12,454	\$ 22,535

Revenue by generator

(In thousands)	Nine Months Ended			Nine Months Ended		
	September 30, 2020			September 30, 2019		
	Treatment	Services	Total	Treatment	Services	Total
Domestic government	\$ 19,079	\$ 48,249	\$ 67,328	\$ 21,986	\$ 15,683	\$ 37,669
Domestic commercial	5,256	1,352	6,608	7,809	2,088	9,897
Foreign government	134	2,945	3,079	220	3,465	3,685
Foreign commercial	—	64	64	64	63	127
Total	\$ 24,469	\$ 52,610	\$ 77,079	\$ 30,079	\$ 21,299	\$ 51,378

Contract Balances

The timing of revenue recognition, billings, and cash collections results in accounts receivable and unbilled receivables (contract assets). The Company's contract liabilities consist of deferred revenues which represents advance payment from customers in advance of the completion of our performance obligation.

The following table represents changes in our contract assets and contract liabilities balances:

(In thousands)	September 30, 2020	December 31, 2019	Year-to-date Change (\$)	Year-to-date Change (%)
Contract assets				
Account receivables, net of allowance	\$ 13,442	\$ 13,178	\$ 264	2.0%
Unbilled receivables - current	14,366	7,984	6,382	79.9%
Contract liabilities				
Deferred revenue	\$ 4,806	\$ 5,456	\$ (650)	(11.9)%

During the three and nine months ended September 30, 2020, the Company recognized revenue of \$1,134,000 and \$7,673,000, 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, 2019, the Company recognized revenue of \$1,877,000 and \$9,322,000, 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.

Remaining Performance Obligations

The Company applies the practical expedient in FASB 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.

5. Leases

The Company’s operating lease right-of-use (“ROU”) assets and operating lease liabilities represent primarily leases for office spaces used to conduct our business. These leases have remaining terms of approximately 3 to 10 years which include one or more options to renew (which are included in valuing our ROU assets and liabilities). As most of our operating leases do not provide an implicit rate, the Company uses its incremental borrowing rate as the discount rate when determining the present value of the lease payments. The incremental borrowing rate is determined based on the Company’s secured borrowing rate, lease terms and current economic environment. Lease expense for operating leases is recognized on a straight-line basis over the lease term.

Finance leases primarily consist of processing and transport equipment used by our facilities’ operations. Our finance leases also include a building with land for our waste treatment operations. The Company’s finance leases generally have initial terms between one to six years and some of the leases include options to purchase the underlying assets at fair market value at the conclusion of the lease term. The lease for the building and land has a term of two years with an option to buy at the end of the lease term, which the Company is reasonably certain to exercise.

The Company adopted the policy to not recognize ROU assets and liabilities for short term leases.

The components of lease cost for the Company’s leases for the three and nine months ended September 30, 2020 and 2019 were as follows (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
Operating Leases:				
Lease cost	\$ 114	\$ 114	\$ 342	\$ 342
Finance Leases:				
Amortization of ROU assets	109	20	161	39
Interest on lease liability	47	15	97	40
	156	35	258	79
Short-term lease rent expense	3	41	7	113
Total lease cost	\$ 273	\$ 190	\$ 607	\$ 534

The weighted average remaining lease term and the weighted average discount rate for operating and finance leases at September 30, 2020 were:

	Operating Leases	Finance Leases
Weighted average remaining lease terms (years)	8.2	3.4
Weighted average discount rate	8.0%	7.9%

The following table reconciles the undiscounted cash flows for the operating and finance leases at September 30, 2020 to the operating and finance lease liabilities recorded on the balance sheet (in thousands):

	Operating Leases	Finance Leases
2020 Remainder	\$ 112	\$ 263
2021	450	554
2022	458	272
2023	466	149
2024	342	146
2025 and thereafter	1,457	164
Total undiscounted lease payments	3,285	1,548
Less: Imputed interest	(879)	(158)
Present value of lease payments	\$ 2,406	\$ 1,390

Current portion of operating lease obligations	\$ 265	\$ —
Long-term operating lease obligations, less current portion	\$ 2,141	\$ —
Current portion of finance lease obligations	\$ —	\$ 675
Long-term finance lease obligations, less current portion	\$ —	\$ 715

Supplemental cash flow and other information related to our leases were as follows for the three and nine months ended September 30, 2020 and 2019 (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
Cash paid for amounts included in the measurement of lease liabilities:				
Operating cash flow used in operating leases	\$ 111	\$ 109	\$ 331	\$ 326
Operating cash flow used in finance leases	\$ 47	\$ 15	\$ 97	\$ 40
Financing cash flow used in finance leases	\$ 182	\$ 73	\$ 411	\$ 174
ROU assets obtained in exchange for lease obligations for:				
Finance liabilities	\$ 751	\$ 390	\$ 874	\$ 528
Operating liabilities	\$ —	\$ —	\$ —	\$ 182

6. Intangible Assets

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

Intangibles (amount in thousands)	Weighted Average Amortization Period (Years)	September 30, 2020		Net Carrying Amount	December 31, 2019		Net Carrying Amount
		Gross Carrying Amount	Accumulated Amortization		Gross Carrying Amount	Accumulated Amortization	
Patent	9.7	\$ 785	\$ (375)	\$ 410	\$ 760	\$ (358)	\$ 402
Software	3	414	(410)	4	414	(408)	6
Customer relationships	10	3,370	(2,861)	509	3,370	(2,713)	657
Total		\$ 4,569	\$ (3,646)	\$ 923	\$ 4,544	\$ (3,479)	\$ 1,065

The intangible assets noted above are amortized on a straight-line basis over their useful lives with the exception of customer relationships which are being amortized using an accelerated method.

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

Year	Amount (In thousands)
2020 (remaining)	\$ 56
2021	202
2022	176
2023	135
2024	13

Amortization expense relating to the definite-lived intangible assets as discussed above was \$58,000 and \$167,000 for the three and nine months ended September 30, 2020, respectively, and \$60,000 and \$194,000 for the three and nine months ended September 30, 2019, respectively.

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

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

On August 10, 2020, the Company granted 6,000 NQSOs from the Company’s 2003 Outside Directors Stock Plan (“2003 Plan”) to a new director elected by the Company’s Board of Directors (“Board”) to fill a vacancy on the Board. The options granted were for a contractual term of ten years with a vesting period of six months. The exercise price of the options was \$7.29 per share, which was equal to the Company’s closing stock price per share the day preceding the grant date, pursuant to the 2003 Plan.

On July 22, 2020, the Company granted an aggregate of 12,000 NQSOs from the Company’s 2003 Plan to five of the six re-elected directors at the Company’s Annual Meeting of Stockholders held on July 22, 2020. Dr. Louis F. Centofanti, the Company’s Executive Vice President (“EVP”) of Strategic Initiatives and also a Board member, was not eligible to receive options under the 2003 Plan as an employee of the Company, pursuant to the 2003 Plan. The NQSOs granted were for a contractual term of ten years with a vesting period of six months. The exercise price of the NQSO was \$6.70 per share, which was equal to our closing stock price the day preceding the grant date, pursuant to the 2003 Plan.

On February 4, 2020, the Company granted 6,000 NQSOs from the Company’s 2003 Plan to a new director elected by the Company’s Board to fill a vacancy on the Board. The options granted were for a contractual term of ten years with a vesting period of six months. The exercise price of the options was \$7.00 per share, which was equal to the Company’s closing stock price per share the day preceding the grant date, pursuant to the 2003 Plan.

On August 29, 2019 the Company granted an aggregate of 12,500 ISOs from the 2017 Stock Option Plan (“2017 Plan”) to certain employees. The ISOs granted were for a contractual term of six years with one-fifth vesting annually over a five year period. The exercise price of the ISO was \$3.90 per share, which was equal to the fair market value of the Company’s Common Stock on the date of grant.

On July 25, 2019, the Company granted an aggregate of 12,000 NQSOs from the Company’s 2003 Plan to five of the six re-elected directors at the Company’s Annual Meeting of Stockholders held on July 25, 2019. Dr. Louis F. Centofanti (a Board member) was not eligible to receive options under the 2003 Plan as an employee of the Company, pursuant to the 2003 Plan. The NQSOs granted were for a contractual term of ten years with a vesting period of six months. The exercise price of the NQSO was \$3.31 per share, which was equal to our closing stock price the day preceding the grant date, pursuant to the 2003 Plan.

On January 17, 2019 the Company granted 105,000 ISOs from the 2017 Plan to certain employees, which included an aggregate of 55,000 ISOs to certain of our executive officers. The ISOs granted were for a contractual term of six years with one-fifth vesting annually over a five year period. The exercise price of the ISO was \$3.15 per share, which was equal to the fair market value of the Company’s Common Stock on the date of grant.

The Company granted a NQSO to Robert Ferguson on July 27, 2017 from the Company's 2017 Plan for the purchase of up to 100,000 shares of the Company's Common Stock ("Ferguson Stock Option") in connection with his work as a consultant to the Company's Test Bed Initiative ("TBI") at our Perma-Fix Northwest Richland, Inc. ("PFNWR") facility at an exercise price of \$3.65 per share, which was the fair market value of the Company's Common Stock on the date of grant. The term of the Ferguson Stock Option is seven years from the grant date. The vesting of the Ferguson Stock Option is subject to the achievement of three separate milestones by certain dates. On January 17, 2019, the Company's Compensation and Stock Option Committee ("Compensation Committee") and Board approved an amendment to the Ferguson Stock Option whereby the vesting date for the second milestone for the purchase of up to 30,000 shares of the Company's Common Stock was extended to March 31, 2020 from January 27, 2019. On March 27, 2020, the Compensation Committee and the Board approved another amendment to the Ferguson Stock Option whereby the vesting date for the second milestone was further extended to December 31, 2021 from March 31, 2020 and the vesting date for the third milestone for the purchase of up to 60,000 shares of the Company's Common Stock was extended to December 31, 2022 from January 27, 2021. The 10,000 options under the first milestone were exercised by Robert Ferguson in May 2018. The Company has not recognized compensation costs (fair value of approximately \$262,000 at September 30, 2020) for the remaining 90,000 Ferguson Stock Option under the remaining two milestones since achievement of the performance obligation under each of the two remaining milestones is uncertain at September 30, 2020. All other terms of the Ferguson Stock Option remain unchanged.

The Company estimates fair value of stock options using the Black-Scholes valuation model. Assumptions used to estimate the fair value of stock options granted include the exercise price of the award, the expected term, the expected volatility of the Company's stock over the option's expected term, the risk-free interest rate over the option's expected term, and the expected annual dividend yield. The fair value of the options granted as discussed above and the related assumptions used in the Black-Scholes option model used to value the options granted for the nine months ended September 30, 2020 and 2019 were as follows:

	Employee Stock Option Granted	
	Nine Months Ended September 30,	
	2019	
Weighted-average fair value per share	\$	1.46
Risk -free interest rate ⁽¹⁾		1.4%-2.58%
Expected volatility of stock ⁽²⁾		48.67%-51.38%
Dividend yield		None
Expected option life ⁽³⁾		5.0 years

	Outside Director Stock Option Granted			
	Nine Months Ended September 30,			
	2020		2019	
Weighted-average fair value per share	\$	4.66	\$	2.27
Risk -free interest rate ⁽¹⁾		0.59%-1.61%		2.08%
Expected volatility of stock ⁽²⁾		55.83%-56.68%		54.28%
Dividend yield		None		None
Expected option life ⁽³⁾		10.0 years		10.0 years

(1) The risk-free interest rate is based on the U.S. Treasury yield in effect at the grant date over the expected term of the option.

(2) The expected volatility is based on historical volatility from our traded Common Stock over the expected term of the option.

(3) The expected option life is based on historical exercises and post-vesting data.

The following table summarizes stock-based compensation recognized for the three and nine months ended September 30, 2020 and 2019 for our employee and director stock options.

Stock Options	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
Employee Stock Options	\$ 34,000	\$ 35,000	\$ 99,000	\$ 114,000
Director Stock Options	35,000	10,000	62,000	15,000
Total	\$ 69,000	\$ 45,000	\$ 161,000	\$ 129,000

At September 30, 2020, the Company has approximately \$349,000 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 2.1 years.

The summary of the Company's total Stock Option Plans as of September 30, 2020 and September 30, 2019, and changes during the periods then ended, are presented below. The Company's Plans consist of the 2010 Stock Option Plan, the 2017 Plans and the 2003 Plan:

	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value ⁽⁴⁾
Options outstanding January 1, 2020	681,300	\$ 3.84		
Granted	24,000	\$ 6.92		
Exercised	(12,500)	\$ 3.47		\$ 16,060
Forfeited/expired	(34,400)	\$ 5.52		
Options outstanding end of period ⁽¹⁾	658,400	\$ 3.87	3.7	\$ 2,096,355
Options exercisable at September 30, 2020 ⁽²⁾	340,400	\$ 4.01	3.6	\$ 1,036,255

	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value ⁽⁴⁾
Options outstanding January 1, 2019	616,000	\$ 4.23		
Granted	129,500	\$ 3.24		
Exercised	—	\$ —		
Forfeited/expired	(31,800)	\$ 8.68		
Options outstanding end of period ⁽³⁾	713,700	\$ 3.85	4.4	\$ 611,942
Options exercisable as of September 30, 2019 ⁽³⁾	299,200	\$ 4.30	4.0	\$ 188,082

⁽¹⁾ Options with exercise prices ranging from \$2.79 to \$7.29

⁽²⁾ Options with exercise prices ranging from \$2.79 to \$7.05

⁽³⁾ Options with exercise prices ranging from \$2.79 to \$13.35

⁽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, 2020, the Company issued a total of 24,959 shares of its Common Stock under the 2003 Plan to its outside directors as compensation for serving on our Board. The Company has recorded approximately \$179,000 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, 2020, the Company issued 2,000 shares of its Common Stock resulting from the exercise of options from the Company’s 2017 Plan for total proceeds of \$6,300. Additionally, the Company issued 1,884 shares of its Common Stock from cashless exercises of 8,000 and 2,500 options at \$3.60 per share and \$3.15 per share, respectively.

8. Income Per Share

Basic income per share is calculated based on the weighted-average number of outstanding common shares during the applicable period. Diluted 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 income (loss) and average share amounts used to compute both basic and diluted income per share:

(Amounts in Thousands, Except for Per Share Amounts)	Three Months Ended September 30, (Unaudited)		Nine Months Ended September 30, (Unaudited)	
	2020	2019	2020	2019
Net income attributable to Perma-Fix Environmental Services, Inc., common stockholders:				
Income from continuing operations, net of taxes	\$ 1,481	1,895	3,049	1,719
Net loss attributable to non-controlling interest	(32)	(29)	(87)	(90)
Income from continuing operations attributable to Perma-Fix Environmental Services, Inc. common stockholders	\$ 1,513	\$ 1,924	\$ 3,136	\$ 1,809
Loss from discontinuing operations attributable to Perma-Fix Environmental Services, Inc. common stockholders	(67)	(156)	(266)	(424)
Net income attributable to Perma-Fix Environmental Services, Inc. common stockholders	\$ 1,446	\$ 1,768	\$ 2,870	\$ 1,385
Basic income per share attributable to Perma-Fix Environmental Services, Inc. common stockholders	\$.12	\$.15	\$.24	\$.12
Diluted income per share attributable to Perma-Fix Environmental Services, Inc. common stockholders	\$.12	\$.15	\$.23	\$.11
Weighted average shares outstanding:				
Basic weighted average shares outstanding	12,145	12,070	12,134	12,029
Add: dilutive effect of stock options	201	47	181	29
Add: dilutive effect of warrant	25	6	22	3
Diluted weighted average shares outstanding	12,371	12,123	12,337	12,061
Potential shares excluded from above weighted average share calculations due to their anti-dilutive effect include:				
Stock options	30	159	42	165
Warrant	—	—	—	—

9. Long Term Debt

Long-term debt consists of the following at September 30, 2020 and December 31, 2019:

(Amounts in Thousands)	September 30, 2020	December 31, 2019
Revolving Credit facility dated May 8, 2020, borrowings based upon eligible accounts receivable, subject to monthly borrowing base calculation, balance due on May 15, 2024. Effective interest rate for the first nine months of 2020 was 6.1%. ⁽¹⁾	\$ —	\$ 321
Term Loan dated May 8, 2020, payable in equal monthly installments of principal, balance due on May 15, 2024. Effective interest rate for the first nine months of 2020 was 5.5%. ⁽¹⁾	1,487 ⁽²⁾	1,827 ⁽²⁾
Promissory Note dated April 1, 2019, payable in twelve monthly installments of interest only, starting May 1, 2019 followed with twelve monthly installments of approximately \$208 in principal plus accrued interest. Interest accrues at annual rate of 4.0%. ⁽³⁾	424 ⁽⁴⁾	1,732 ⁽⁴⁾
Promissory Note dated April 14, 2020, subject to loan forgiveness, balance due April 14, 2022. Interest accrues at annual rate of 1.0%. ⁽³⁾	5,318 ⁽⁵⁾	—
Note Payable dated June 10, 2020, payable in 36 monthly installments, starting in July 2020 at annual interest rate of \$5.64%.	25	—
Total debt	7,254	3,880
Less current portion of long-term debt	828 ⁽⁴⁾	1,300 ⁽⁴⁾
Long-term debt	<u>\$ 6,426</u>	<u>\$ 2,580</u>

⁽¹⁾ Our revolving credit facility is collateralized by our accounts receivable and our term loan is collateralized by our property, plant, and equipment. Effective July 1, 2019, monthly installment principal payment on the Term Loan was amended to approximately \$35,500 from approximately \$101,600. See “Revolving Credit and Term Loan Agreement” below for terms of the Company’s credit facility prior to the New Loan Agreement dated May 8, 2020.

⁽²⁾ Net of debt issuance costs of (\$113,000) and (\$92,000) at September 30, 2020 and December 31, 2019, respectively.

⁽³⁾ Uncollateralized note.

⁽⁴⁾ Net of debt discount/debt issuance costs of (\$99,000) and (\$248,000) at September 30, 2020 and December 31, 2019, respectively. The Promissory Note provides for prepayment of principal over the term of the Note without penalty. In 2019, the Company made total prepayment of principal of \$520,000 which was reflected in the current portion of the debt. During the first nine months of 2020, the Company made total principal repayment of \$1,457,000 of which \$416,000 was prepaid. At September 30, 2020, the outstanding balance of the loan is current.

⁽⁵⁾ Entered into with the Company’s credit facility lender under the Paycheck Protection Program (see “PPP Loan” below for further information on this loan).

Revolving Credit and Term Loan Agreement

The Company entered into an Amended and Restated Revolving Credit, Term Loan and Security Agreement, dated October 31, 2011 (“Amended Loan Agreement”), with PNC National Association (“PNC”), acting as agent and lender. The Amended Loan Agreement had been amended from time to time since the execution of the Amended Loan Agreement. The Amended Loan Agreement, as subsequently amended (“Revised Loan Agreement”), provided the Company with the following credit facility with a maturity date of March 24, 2021: (a) up to \$12,000,000 revolving credit (“revolving credit”) and (b) a term loan (“term loan”) of approximately \$6,100,000. The maximum that the Company can borrow under the revolving credit was based on a percentage of eligible receivables (as defined) at any one time reduced by outstanding standby letters of credit and borrowing reductions that our lender may impose from time to time.

Payment of annual rate of interest due on the revolving credit under the Revised Loan Agreement was at prime (3.25% at September 30, 2020) plus 2% and the term loan at prime plus 2.5%.

On May 8, 2020, the Company entered into a Second Amended and Restated Revolving Credit, Term Loan and Security Agreement (the “New Loan Agreement”) with PNC, replacing our previous Revised Loan Agreement with PNC. The New Loan Agreement provides the Company with the following credit facility:

- up to \$18,000,000 revolving credit facility, subject to the amount of borrowings based on a percentage of eligible receivables and subject to certain reserves; and
- a term loan of \$1,741,818, which requires monthly installments of \$35,547.

The New Loan Agreement terminates as of May 15, 2024, unless sooner terminated.

Similar to our Revised Loan Agreement, the New Loan Agreement requires the Company to meet certain customary financial covenants, including, among other things, a minimum Tangible Adjusted Net Worth requirement of \$27,000,000 at all times; maximum capital spending of \$6,000,000 annually; and a minimum fixed charge coverage ratio (“FCCR”) requirement of 1.15:1.

Under the New Loan Agreement, payment of annual rate of interest due on the credit facility is as follows:

- revolving credit at prime plus 2.50% or LIBOR plus 3.50% and the term loan at prime plus 3.00% or LIBOR plus 4.00%. The Company can only elect to use the LIBOR interest payment option after it becomes compliant with meeting the minimum FCCR of 1.15:1; and
- Upon the achievement of a FCCR of greater than 1.25:1, the Company has the option of paying an annual rate of interest due on the revolving credit at prime plus 2.00% or LIBOR plus 3.00% and the term loan at prime plus 2.50% or LIBOR plus 3.50%. The Company met this FCCR in the first, second and third quarters of 2020. Upon meeting the FCCR of 1.25:1, this interest payment option will remain in place in the event that the Company’s future FCCR falls below 1.25:1.

Under the LIBOR option of interest payment noted above, a LIBOR floor of 0.75% shall apply in the event that LIBOR falls below 0.75% at any point in time.

Pursuant to the New Loan Agreement, the Company may terminate the New Loan Agreement upon 90 days’ prior written notice upon payment in full of our obligations under the New Loan Agreement. The Company has agreed to pay PNC 1.0% of the total financing in the event we pay off our obligations on or before May 7, 2021 and 0.5% of the total financing if we pay off our obligations after May 7, 2021 but prior to or on May 7, 2022. No early termination fee shall apply if we pay off our obligations under the New Loan Agreement after May 7, 2022.

In connection with New Loan Agreement, the Company paid its lender a fee of \$50,000 and incurred other direct costs of approximately \$35,000, which are being amortized over the term of the New Loan Agreement as interest expense-financing fees. As a result of the termination of the Revised Loan Agreement, the Company recorded approximately \$27,000 in loss on extinguishment of debt in accordance with ASC 470-50, “Debt – Modifications and Extinguishment.”

At September 30, 2020, the borrowing availability under our revolving credit was approximately \$16,404,000, based on our eligible receivables and includes a reduction in borrowing availability of approximately \$3,026,000 from outstanding standby letters of credit.

The Company’s credit facility under its Revised and New 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 met its FCCR requirement in the first, second and third quarters of 2020. Additionally, the Company met its remaining financial covenant requirements in the first, second and third quarters of 2020.

Loan and Securities Purchase Agreement, Promissory Note and Subordination Agreement

On April 1, 2019, the Company completed a lending transaction with Robert Ferguson (the “Lender”), whereby the Company borrowed from the Lender the sum of \$2,500,000 pursuant to the terms of a Loan and Security Purchase Agreement and promissory note (the “Loan”). The Lender is a shareholder of the Company and also serves as a consultant to the Company in connection with the Company’s TBI at its PFNWR subsidiary. The proceeds from the Loan were used for general working capital purposes. The Loan is unsecured, with a term of two years with interest payable at a fixed interest rate of 4.00% per annum. The Loan provides for monthly payments of accrued interest only during the first year of the Loan, with the first interest payment due May 1, 2019 and monthly payments of approximately \$208,333 in principal plus accrued interest starting in the second year of the Loan. The Loan also allows for prepayment of principal payments over the term of the Loan without penalty with such prepayment of principal payments to be applied to the second year of the loan payments at the Company’s discretion. Since inception of the loan, the Company has made total prepayments in principal of \$936,000, of which \$416,000 was made in the first nine months of 2020. In connection with the above Loan, the Lender agreed under the terms of the Loan and a Subordination Agreement with our credit facility lender, to subordinate payment under the Loan, and agreed that the Loan will be junior in right of payment to the credit facility in the event of default or bankruptcy or other insolvency proceeding by us. In connection with this capital raise transaction described above and consideration for us receiving the Loan, the Company issued a Warrant (the “Warrant”) to the Lender to purchase up to 60,000 shares of our Common Stock at an exercise price of \$3.51 per share, which was the closing bid price for a share of our Common Stock on NASDAQ.com immediately preceding the execution of the Loan and Warrant. The Warrant expires on April 1, 2024 and remains outstanding as of September 30, 2020. As further consideration for this capital raise transaction relating to the Loan, the Company also issued 75,000 shares of its Common Stock to the Lender. The fair value of the Warrant and Common Stock and the related closing fees incurred from the transaction totaled approximately \$398,000 and was recorded as debt discount/debt issuance costs, which is being amortized over the term of the loan as interest expense – financing fees. The 75,000 shares of Common Stock, the Warrant and the 60,000 shares of Common Stock that may be purchased under the Warrant were and will be issued in a private placement that was and will be exempt from registration under Rule 506 and/or Sections 4(a)(2) and 4(a)(5) of the Securities Act of 1933, as amended (the “Act”) and bear a restrictive legend against resale except in a transaction registered under the Act or in a transaction exempt from registration thereunder.

Upon default, the Lender will have the right to elect to receive in full and complete satisfaction of the Company’s obligations under the Loan either: (a) the cash amount equal to the sum of the unpaid principal balance owing under the loan and all accrued and unpaid interest thereon (the “Payoff Amount”) or (b) upon meeting certain conditions, the number of whole shares of the Company’s Common Stock (the “Payoff Shares”) determined by dividing the Payoff Amount by the dollar amount equal to the closing bid price of our Common Stock on the date immediately prior to the date of default, as reported or quoted on the primary nationally recognized exchange or automated quotation system on which our Common Stock is listed; provided however, that the dollar amount of such closing bid price shall not be less than \$3.51, the closing bid price for our Common Stock as disclosed on NASDAQ.com immediately preceding the signing of this loan agreement.

If issued, the Payoff Shares will not be registered and the Lender will not be entitled to registration rights with respect to the Payoff Shares. The aggregate number of shares, warrant shares, and Payoff Shares that are or will be issued to the Lender pursuant to the Loan, together with the aggregate shares of the Company’s Common Stock and other voting securities of the Company owned by the Lender or which may be acquired by the Lender as of the date of issuance of the Payoff Shares, shall not exceed the number of shares of the Company’s Common Stock equal to 14.9% of the number of shares of the Company’s Common Stock issued and outstanding as of the date immediately prior to the default, less the number of shares of the Company’s Common Stock owned by the Lender immediately prior to the date of such default plus the number of shares of our Common Stock that may be acquired by the Lender under warrants and/or options outstanding immediately prior to the date of such default.

PPP Loan

On April 14, 2020, the Company entered into a promissory note with PNC, our credit facility lender, in the amount of approximately \$5,666,000 (“PPP Loan”) under the PPP. The PPP was established under the CARES Act and is administered by the U.S. Small Business Administration (“SBA”). On June 5, 2020, the Flexibility Act was signed into law which amended the CARES Act. The note evidencing the PPP Loan contains events of default relating to, among other things, payment defaults, breach of representations and warranties, and provisions of the promissory note. During the third quarter of 2020, the Company repaid approximately \$348,000 of the PPP Loan to PNC resulting from clarification made in the loan calculation at the time of the loan origination.

Under the terms of the Flexibility Act, the Company can apply for and be granted forgiveness for all or a portion of the PPP Loan. Such forgiveness will be determined, subject to limitations, based on the use of loan proceeds by the Company for eligible payroll costs, mortgage interest, rent and utility costs and the maintenance of employee and compensation levels for the covered period (which is defined as a 24 week period, beginning April 14, 2020, the date in which proceeds from the PPP Loan was disbursed to the Company by PNC). At least 60% of such forgiven amount must be used for eligible payroll costs. On October 5, 2020, the Company applied for forgiveness on repayment of the loan balance as permitted under the program, which is subject to the review and approval of our lender and the SBA. The approval of the loan forgiveness allows for a maximum period of 150 days from the submittal of a complete loan forgiveness application. If all or a portion of the PPP Loan is not forgiven, all or the remaining portion of the loan will be for a term of two years but can be prepaid at any time prior to maturity without any prepayment penalties. The annual interest rate on the PPP Loan is 1.0% and no payments of principal or interest are due until the date that the SBA remits the loan forgiveness amount to our lender. While the Company’s PPP Loan currently has a two year maturity, the Flexibility Act permits the Company to request a five year maturity with our lender which the Company does not expect to request at this time.

10. Commitments and Contingencies

Hazardous Waste

In connection with our waste management services, we process both hazardous and non-hazardous waste, which we transport to our own, or other, facilities for destruction or disposal. As a result of disposing of hazardous substances, in the event any cleanup is required, we 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, we are involved in various litigation. We are not a party to any litigation or governmental proceeding which our management believes could result in any judgments or fines against us that could would have a material adverse effect on our financial position, liquidity or results of future operations.

During July 2020, Tetra Tech EC, Inc. (“Tetra Tech”) filed a complaint in the United States District Court for the Northern District of California against CH2M Hill, Inc. (“CH2M”) and four subcontractors of CH2M, including the Company (“defendants”). The complaint alleges claims for negligence, negligent misrepresentation and equitable indemnification 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 complaint alleges that the subject draft reports were prepared negligently and in a biased manner, made public, and caused damage to Tetra Tech's reputation; triggering related lawsuits and costing it opportunities for both government and commercial contracts.

At this time, the Company does not believe it has any liability to Tetra Tech. The Company has provided notice of this lawsuit to our insurance carrier. Our 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.

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 \$19,651,000 at September 30, 2020. At September 30, 2020 and December 31, 2019, 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 Consolidated Balance Sheets totaled \$11,418,000 and \$11,307,000, respectively, which included interest earned of \$1,947,000 and \$1,836,000 on the finite risk sinking funds as of September 30, 2020 and December 31, 2019, respectively. Interest income for the three and nine months ended September 30, 2020 was approximately \$28,000 and \$111,000, respectively. Interest income for the three and nine months ended September 30, 2019 was approximately \$77,000 and \$265,000, respectively. If the Company so elects, AIG is obligated to pay us an amount equal to 100% of the finite risk sinking fund account balance in return for complete release of liability from both us 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, 2020, the total amount of standby letters of credit outstanding was approximately \$3,026,000 and the total amount of bonds outstanding was approximately \$45,814,000.

11. Discontinued Operations

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

The Company's discontinued operations had net losses of \$67,000 and \$156,000 for the three months ended September 30, 2020 and 2019, respectively (net of taxes of \$0 for each period) and net losses of \$266,000 and \$424,000 for the nine months ended September 30, 2020 and 2019, respectively, (net of taxes of \$0 for each period). The losses were primarily due to costs incurred in the administration and continued monitoring of our discontinued operations. The Company's discontinued operations had no revenues for any of the periods noted above.

The following table presents the major class of assets of discontinued operations at September 30, 2020 and December 31, 2019. No assets and liabilities were held for sale at each of the periods noted.

(Amounts in Thousands)	September 30, 2020	December 31, 2019
Current assets		
Other assets	\$ 17	\$ 104
Total current assets	17	104
Long-term assets		
Property, plant and equipment, net ⁽¹⁾	81	81
Other assets	—	36
Total long-term assets	81	117
Total assets	\$ 98	\$ 221
Current liabilities		
Accounts payable	\$ 8	\$ 8
Accrued expenses and other liabilities	167	169
Environmental liabilities	744	817
Total current liabilities	919	994
Long-term liabilities		
Closure liabilities	140	134
Environmental liabilities	110	110
Total long-term liabilities	250	244
Total liabilities	\$ 1,169	\$ 1,238

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

The Company's discontinued operations included a note receivable in the original amount of approximately \$375,000 recorded in May 2016 resulting from the sale of property at our Perma-Fix of Michigan, Inc. ("PFMI") subsidiary. This note required 60 equal monthly installment payments by the buyer of approximately \$7,250 (which includes interest). On July 24, 2020, the purchaser of the property paid off the outstanding note receivable balance of approximately \$105,000.

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 chief operating decision maker ("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.

Our reporting segments are defined as 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 three uniquely licensed and permitted treatment and storage facilities; and
- R&D activities to identify, develop and implement innovative waste processing techniques for problematic waste streams.

SERVICES SEGMENT, which includes:

- Technical services, which include:
 - professional radiological measurement and site survey of large government and commercial installations using advanced methods, technology and engineering;
 - integrated Occupational Safety and Health services including 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 OSHA citation assistance;

- 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
 - on-site waste management services to commercial and governmental customers.
- Nuclear services, which include:
 - technology-based services including engineering, decontamination and decommissioning (“D&D”), specialty services and construction, logistics, transportation, processing and disposal;
 - 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 NIOSH instrumentation.
 - A company owned gamma spectroscopy laboratory for the analysis of oil and gas industry solids and liquids.

MEDICAL SEGMENT, which includes: R&D of the Company’s medical isotope production technology by our majority-owned Polish subsidiary, Perma-Fix of Medical or the Medical Segment. The Medical Segment has not generated any revenues and all costs incurred are reflected within R&D in the accompanying consolidated financial statements. As previously disclosed, the Medical Segment has substantially reduced its R&D costs and activities due to the need for capital to fund these activities. The Company anticipates that the Medical Segment will not resume full R&D activities until the necessary capital is obtained through its own credit facility or additional equity raise, or obtains partners willing to provide funding for its R&D.

Our reporting segments exclude our corporate headquarters and our discontinued operations (see “Note 11 – 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, 2020 and 2019 (in thousands).

Segment Reporting for the Quarter Ended September 30, 2020

	Treatment	Services	Medical	Segments Total	Corporate (1)	Consolidated Total
Revenue from external customers	\$ 7,066	\$ 23,106	—	\$ 30,172	\$ —	\$ 30,172
Intercompany revenues	226	6	—	232	—	—
Gross profit	1,094	3,656	—	4,750	—	4,750
Research and development	49	7	81	137	20	157
Interest income	—	—	—	—	28	28
Interest expense	(34)	(3)	—	(37)	(50)	(87)
Interest expense-financing fees	—	—	—	—	(58)	(58)
Depreciation and amortization	373	97	—	470	8	478
Segment income (loss) before income taxes	280	2,813	(81)	3,012	(1,664)	1,348
Income tax (benefit) expense	(170)	2	—	(168)	35	(133)
Segment income (loss)	450	2,811	(81)	3,180	(1,699)	1,481
Expenditures for segment assets	95	24	—	119	3	122(2)

Segment Reporting for the Quarter Ended September 30, 2019

	Treatment	Services	Medical	Segments Total	Corporate (1)	Consolidated Total
Revenue from external customers	\$ 10,081	\$ 12,454	—	\$ 22,535	\$ —	\$ 22,535
Intercompany revenues	75	38	—	113	—	—
Gross profit	3,338	1,819	—	5,157	—	5,157
Research and development	85	—	74	159	6	165
Interest income	—	—	—	—	77	77
Interest expense	(19)	(5)	—	(24)	(75)	(99)
Interest expense-financing fees	—	—	—	—	(69)	(69)
Depreciation and amortization	243	79	—	322	6	328
Segment income (loss) before income taxes	2,244	1,193	(74)	3,363	(1,413)	1,950
Income tax expense	55	—	—	55	—	55
Segment income (loss)	2,189	1,193	(74)	3,308	(1,413)	1,895
Expenditures for segment assets	470	31	—	501	—	501(3)

Segment Reporting for the Nine Months Ended September 30, 2020

	Treatment	Services	Medical	Segments Total	Corporate (1)	Consolidated Total
Revenue from external customers	\$ 24,469	\$ 52,610	—	\$ 77,079	\$ —	\$ 77,079
Intercompany revenues	879	19	—	898	—	—
Gross profit	5,533	7,167	—	12,700	—	12,700
Research and development	194	119	221	534	64	598
Interest income	1	—	—	1	111	112
Interest expense	(80)	(13)	—	(93)	(213)	(306)
Interest expense-financing fees	—	—	—	—	(187)	(187)
Depreciation and amortization	912	259	—	1,171	18	1,189
Segment income (loss) before income taxes	2,577	5,162	(221)	7,518	(4,597)	2,921
Income tax (benefit) expense	(165)	2	—	(163)	35	(128)
Segment income (loss)	2,742	5,160	(221)	7,681	(4,632)	3,049
Expenditures for segment assets	1,095	385	—	1,480	8	1,488(2)

Segment Reporting for the Nine Months Ended September 30, 2019

	Treatment	Services	Medical	Segments Total	Corporate (1)	Consolidated Total
Revenue from external customers	\$ 30,079	\$ 21,299	—	\$ 51,378	\$ —	\$ 51,378
Intercompany revenues	83	101	—	184	—	—
Gross profit	8,921	2,008	—	10,929	—	10,929
Research and development	367	—	228	595	20	615
Interest income	—	—	—	—	265	265
Interest expense	(66)	(18)	—	(84)	(209)	(293)
Interest expense-financing fees	—	—	—	—	(139)	(139)
Depreciation and amortization	713	236	—	949	19	968
Segment income (loss) before income taxes	5,731	318	(228)	5,821	(4,003)	1,818
Income tax expense	99	—	—	99	—	99
Segment income (loss)	5,632	318	(228)	5,722	(4,003)	1,719
Expenditures for segment assets	764	49	—	813	—	813(3)

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

(2) Net of financed amount of \$751,000 and \$883,000 for the three and nine months ended September 30, 2020, respectively.

(3) Net of financed amount of \$6,000 and \$29,000 for the three and nine months ended September 30, 2019, respectively.

13. Income Taxes

The Company had an income tax benefit of \$133,000 and income tax expense of \$55,000 for continuing operations for the three months ended September 30, 2020 and 2019, respectively and an income tax benefit of \$128,000 and income tax expense of \$99,000 for the nine months ended September 30, 2020 and 2019, respectively. Our effective tax rates were approximately 9.9% and 2.8% for the three months ended September 30, 2020 and 2019, respectively, and 4.4% and 5.4% for the nine months ended September 30, 2020 and 2019, respectively. The tax benefit and expense for the periods above were comprised of state tax benefit and expense for separate company filing states. The Company's tax rate for each of the periods discussed above was impacted by the Company's full valuation on its net deferred tax assets. The income tax benefit for the three and nine months ended September 30, 2020 included refunds from amended state returns filed in separate company filing states.

14. Variable Interest Entities ("VIE")

On May 24, 2019, the Company and Engineering/Remediation Resources Group, Inc. ("ERRG") entered into an unpopulated joint venture agreement for project work bids within the Company's Services Segment. The joint venture is doing business as Perma-Fix ERRG, a general partnership. The Company has a 51% partnership interest in the joint venture and ERRG has a 49% partnership interest in the joint venture. Activities under Perma-Fix ERRG did not commence until the first quarter of 2020.

The Company determines whether joint ventures in which it has invested meet the criteria of a VIE at the start of each new venture and when a reconsideration event has occurred. A VIE is a legal entity that satisfies any of the following characteristics: (a) the legal entity does not have sufficient equity investment at risk; (b) the equity investors at risk as a group, lack the characteristics of a controlling financial interest; or (c) the legal entity is structured with disproportionate voting rights.

The Company consolidates a VIE if it is determined to be the primary beneficiary of the VIE. The primary beneficiary has both the power to direct the activities of the VIE that most significantly impact the entity's economic performance and the obligation to absorb losses or the right to receive benefits from the VIE that could potentially be significant to the VIE.

Based on the Company's evaluation of Perma-Fix ERRG and related agreements with Perma-Fix ERRG, the Company determined that Perma-Fix ERRG is a VIE in which we are the primary beneficiary. At September 30, 2020, Perma-Fix ERRG had total assets of \$5,302,000 and total liabilities of \$5,302,000 which are all recorded as current.

15. Deferral of Employment Tax Deposits

The CARES Act, as amended by the Flexibility Act which was signed into law on June 5, 2020, provides employers the option to defer the payment of an employer's share of social security taxes beginning on March 27, 2020 through December 31, 2020 with 50% of the amount of social security taxes deferred to become due on December 31, 2021 with the remaining 50% due on December 31, 2022. The Company elected to defer such taxes starting in mid-April 2020. The Company estimates the remaining payment of approximately \$1,225,000 of social security taxes otherwise due in 2020 will be deferred with 50% due by December 31, 2021 and the remaining 50% due by December 31, 2022. At September 30, 2020, the Company has deferred payment of approximately \$838,000 in its share of social security taxes, which amount has been included in "other long-term liabilities" in the Company's Consolidated Balance Sheet at September 30, 2020.

16. Employment Agreements and Management Incentive Plan (“MIP”)

On July 22, 2020, the Company’s Board appointed Richard Grondin to the position of EVP of Waste Treatment Operations and an executive officer of the Company. Mr. Grondin previously held the position of Vice President of Western Operations within our Treatment Segment. Immediately after the appointment of Richard Grondin to the position of EVP of Waste Treatment Operations and an executive officer of the Company, the Company’s Compensation Committee and the Board approved, and the Company entered into, an employment agreement with each of Mark Duff, CEO (the “CEO Employment Agreement”), Dr. Louis Centofanti, EVP of Strategic Initiatives (the “EVP of Strategic Initiatives Employment Agreement”), Ben Naccarato, CFO (the “CFO Employment Agreement”), Andrew Lombardo, EVP of Nuclear and Technical Services (the “EVP of Nuclear and Technical Services Employment Agreement”), and Richard Grondin, EVP of Waste Treatment Operations (the “EVP of Waste Treatment Operations Employment Agreement”), collectively with the CEO Employment Agreement, the EVP of Strategic Initiative Employment Agreement, the CFO Employment Agreement, the EVP of Nuclear and Technical Services Employment Agreement and the EVP of Waste Treatment Operations Employment Agreement, the “New Employment Agreements” and each individually the “New Employment Agreement”. The Company had previously entered into an employment agreement with each of Mark Duff, Dr. Louis Centofanti and Ben Naccarato on September 8, 2017, all three of which were due to expire on September 8, 2020. These three employment agreements dated September 8, 2017 were terminated effective July 22, 2020.

Pursuant to New Employment Agreements, which are effective July 22, 2020, each of these executive officers is provided an annual salary, which annual salary may be increased, but not reduced, from time to time as determined by the Compensation Committee. As a result of Richard Grondin’s promotion to EVP of Waste Treatment and an executive officer of the Company, his annual salary was increased from \$208,000 as Vice President of Western Operations within our Treatment Segment to \$240,000, effective July 22, 2020. No change was made to the salary of the remaining executive officers for fiscal year 2020. In addition, each of these executive officers is entitled to participate in the Company’s broad-based benefits plans and to certain performance compensation payable under separate Management Incentive Plans (“MIP”) as approved by the Company’s Compensation Committee and the Company’s Board. The Company’s Compensation Committee and the Board approved individual 2020 MIP on January 16, 2020 (which are effective January 1, 2020) for each Mark Duff, Dr. Louis Centofanti, Ben Naccarato and Andrew Lombardo which remains effective for fiscal year 2020. See “MIP” below for the MIP approved by the Compensation Committee and the Board for Richard Grondin.

Each of the New Employment Agreements is effective for three years from July 22, 2020 (the “Initial Term”) unless earlier terminated by the Company or by the executive officer. At the end of the Initial Term of each New Employment Agreement, each New Employment Agreement will automatically be extended for one additional year, unless at least six months prior to the expiration of the Initial Term, the Company or the executive officer provides written notice not to extend the terms of the New Employment Agreement.

Pursuant to the New Employment Agreements, if the executive officer’s employment is terminated due to death/disability or for cause (as defined in the agreements), the Company will pay to the executive officer or to his estate an amount equal to the sum of any unpaid base salary and accrued unused vacation time through the date of termination and any benefits due to the executive officer under any employee benefit plan (the “Accrued Amounts”) plus any performance compensation payable pursuant to the MIP with respect to the fiscal year immediately preceding the date of termination.

If the executive officer terminates his employment for “good reason” (as defined in the agreements) or is terminated by the Company without cause (including any such termination for “good reason” or without cause within 24 months after a Change in Control (as defined in the agreement)), the Company will pay the executive officer the Accrued Amounts, two years of full base salary, and two times the performance compensation (under the MIP) earned with respect to the fiscal year immediately preceding the date of termination provided the performance compensation earned with respect to the fiscal year immediately preceding the date of termination has not been paid. If performance compensation earned with respect to the fiscal year immediately preceding the date of termination has been made to the executive officer, the executive officer will be paid an additional year of the performance compensation earned with respect to the fiscal year immediately preceding the date of termination. If the executive terminates his employment for a reason other than for good reason, the Company will pay to the executive an amount equal to the Accrued Amounts plus any performance compensation payable pursuant to the MIP with respect to the fiscal year immediately preceding the date of termination.

If there is a Change in Control (as defined in the agreements), all outstanding stock options to purchase common stock held by the executive officer will immediately become exercisable in full commencing on the date of termination through the original term of the options. In the event of the death of an executive officer, all outstanding stock options to purchase common stock held by the executive officer will immediately become exercisable in full commencing on the date of death, with such options exercisable for the lesser of the original option term or twelve months from the date of the executive officer’s death. In the event an executive officer terminates his employment for “good reason” or is terminated by the Company without cause, all outstanding stock options to purchase common stock held by the executive officer will immediately become exercisable in full commencing on the date of termination, with such options exercisable for the lesser of the original option term or within 60 days from the date of the executive’s date of termination. Severance benefits payable with respect to a termination (other than Accrued Amounts) shall not be payable until the termination constitutes a “separation from service” (as defined under Treasury Regulation Section 1.409A-1(h)).

On July 22, 2020, upon the approval of the EVP of Waste Treatment Operations Employment Agreement as discussed above, the Company’s Board and the Company’s Compensation Committee approved a MIP for Richard Grondin effective January 1, 2020, applicable for fiscal 2020. The MIP provides guidelines for the calculation of annual cash incentive-based compensation, subject to Compensation Committee oversight and modification. The MIP awards cash compensation based on achievement of performance thresholds, with the amount of such compensation established as a percentage of the Mr. Grondin’s 2020 annual base salary as the EVP of Waste Treatment Operations. The potential target performance compensation ranges from 5% to 100% (\$12,000 to \$240,000) of the base salary for the EVP of Waste Treatment Operations, which became effective on July 22, 2020.

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 Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended (collectively, 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;
- R&D activity of our Medical Segment;
- reducing operating costs;
- expect to meet our loan covenant requirements in the next twelve months;
- cash flow requirements;
- funding our business;
- sufficient liquidity to continue business;
- PPP Loan forgiveness;
- request maturity extension on PPP Loan;

- furlough or layoff eligible employees;
- future results of operations and liquidity;
- effect of economic disruptions on our business;
- curtail capital expenditures;
- government funding for our services;
- may not have liquidity to repay debt if our lender accelerates payment of our borrowings;
- manner in which the applicable government will be required to spend funding to remediate various sites;
- funding operations;
- fund capital expenditures from cash from operations and/or financing;
- impact from COVID-19;
- waste shipments;
- fund remediation expenditures for sites from funds generated internally;
- compliance with environmental regulations;
- potential effect of being a PRP;
- potential sites for violations of environmental laws and remediation of our facilities;
- continuation of contracts with federal government;
- loss of contracts;
- fourth quarter 2020 and first quarter 2021 financial results due to impact of COVID-19;
- partial or full shutdown of any of our facilities;
- liability from Tetra Tech claims;
- shutdown of projects and continued waste shipments delays by clients; and
- necessary capital for Medical Segment.

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;
- public not accepting our new technology;
- 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;
- requirements to obtain permits for TSD activities or licensing requirements to handle low level radioactive materials are limited or lessened;
- potential increases in equipment, maintenance, operating or labor costs;
- management retention and development;

- financial valuation of intangible assets is substantially more/less than expected;
- the requirement to use internally generated funds for purposes not presently anticipated;
- inability to continue to be profitable on an annualized basis;
- inability of the Company to maintain the listing of its Common Stock on the NASDAQ;
- terminations of contracts with government agencies (domestic and foreign) or subcontracts involving government agencies (domestic or foreign), or reduction in amount of waste delivered to the Company under the contracts or subcontracts;
- renegotiation of contracts involving government agencies (domestic and foreign);
- federal government's inability or failure to provide necessary funding to remediate contaminated federal sites;
- 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;
- impact of the COVID-19;
- audit of our PPP Loan (as discussed below);
- new governmental regulations;
- lender refuses to waive non-compliance or revise our covenant so that we are in compliance; and
- risk factors and other factors set forth in "Special Note Regarding Forward-Looking Statements" contained in the Company's 2019 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") of the first and second quarter 2020 Form 10-Qs and this third quarter 2020 Form 10-Q.

COVID-19 Impact

Since the outbreak of COVID-19, we have remained focused on keeping our employees working and, at the same time, focusing on protecting the health and wellbeing of our employees and the communities in which we operate while assuring the continuity of our business operations.

Our management team has proactively implemented our business continuity and safety plans and has taken a variety of measures to ensure the ongoing availability of our waste treatment and remediation services, while taking health and safety measures, including separating employee and customer contact, social distancing between employees, implementing enhanced cleaning and hygiene protocols in all of our facilities, and implementing remote work policies, when necessary.

The COVID-19 pandemic presents potential new risks to our business and results in significant volatility in the U.S. and international markets. We continue to closely monitor the impact of the COVID-19 pandemic on all aspects of our business. As previously reported, the COVID-19 pandemic did not result in a material impact to the Company's first quarter 2020 results of operations. Starting in late March 2020, our operations were impacted by the shutdown of a number of projects and the delays of certain waste shipments that continued into the second quarter of 2020. Since the latter part of the second quarter of 2020, all of the projects that were previously shutdown within our Services Segment have restarted as stay-at-home orders and certain other restrictions resulting from the pandemic were lifted. Revenues within our Services Segment in the third quarter of 2020 exceeded the corresponding period of 2019 by approximately \$10,652,000. We continue to experience delays in waste shipments from certain customers within our Treatment Segment directly related to the impact of COVID-19 including generator shutdowns and limited sustained operations, along with other factors. These waste shipment delays may impact our results of operations for the fourth quarter of 2020 and potentially the first quarter of 2021.

At this time, we believe we have sufficient liquidity on hand to continue business operations during the next twelve months. At September 30, 2020, we had cash on hand of approximately \$4,811,000 and borrowing availability under our revolving credit facility of approximately \$16,404,000 based on a percentage of eligible receivables and subject to certain reserves. In April 2020, we entered into a promissory note (“PPP Loan”) with our credit facility lender in the amount of approximately \$5,666,000 under the Paycheck Protection Program (“PPP”) that was established under the Coronavirus Aid, Relief, and Economic Security Act (the “CARES Act”). On June 5, 2020, the Paycheck Protection Program Flexibility Act of 2020 (the “Flexibility Act”) was signed into law, amending the CARES Act (see “CARES Act – PPP Loan” under “Liquidity and Capital Resources” below for a discussion of the PPP Loan). During the third quarter of 2020, we repaid approximately \$348,000 of the PPP Loan resulting from clarification in the loan calculation at the time of the loan origination. On October 5, 2020, we applied for forgiveness on the entire PPP Loan balance as permitted under the program, which is subject to the review and approval of our lender and Small Business Administration (“SBA”). Proceeds from the PPP Loan have allowed us to avoid having to furlough or layoff certain eligible employees as a result of the COVID-19 pandemic, although there are no assurances that such will not be required. We continue to assess reducing operating costs during this volatile time, which include curtailing capital expenditures, eliminating non-essential expenditures and implementing a hiring freeze as needed. We have elected to defer payment of our share of social security taxes as permitted under the CARES Act, as amended (see “CARES Act – Deferral of Employment Tax Deposits” within this MD&A for a discussion of this deferral).

We are closely monitoring our customers’ payment performance. However, since a significant portion of our revenues is derived from government related contracts, we do not expect our accounts receivable collections to be materially impacted due to COVID-19.

The situation surrounding COVID-19 continues to remain fluid. The potential for a material impact on our business increases the longer COVID-19 impacts the level of economic activities in the United States and globally as our customers may continue to delay waste shipments and project work may shut down again. For this reason, we cannot reasonably estimate with any degree of certainty the future impact COVID-19 may have on our results of operations, financial position, and liquidity during the next twelve months. As of the date of this report, we believe that our cash on hand and our credit facility should provide sufficient liquidity to continue business operations during the next twelve months. Based on our current projection, we believe that we will be able to meet the current covenant requirements under our loan agreement for the next twelve months despite the impact of COVID-19.

Overview

Revenue increased \$7,637,000 or 33.9% to \$30,172,000 for the three months ended September 30, 2020 from \$22,535,000 for the corresponding period of 2019. The increase was entirely within our Services Segment where revenue increased \$10,652,000 or 85.5% from increased projects. Our Treatment Services revenue decreased by \$3,015,000 or 29.9% primarily due to continued delays in waste shipments from certain customers resulting from the impact of COVID-19 as discussed above. The delays in waste shipments were also partly attributed to the transition of new prime contractors at certain DOE sites. Additionally, lower averaged price waste from revenue mix contributed to the decrease in revenue within the Treatment Segment. Gross profit decreased \$407,000 or 7.9% primarily due to the decrease in revenues in the Treatment Segment. Selling, General, and Administrative (“SG&A”) expenses increased by approximately \$363,000 or 12.3% for the three months ended September 30, 2020 as compared to the corresponding period of 2019.

Revenue increased \$25,701,000 or 50.0% to \$77,079,000 for the nine months ended September 30, 2020 from \$51,378,000 for the corresponding period of 2019. The increase was entirely within our Services Segment where revenue increased \$31,311,000 or 147.0% from increased projects. Our Services Segment experienced this increase in revenue despite a number of our projects being shut down during part of the second quarter 2020. These previously shut down projects have since restarted. Our Treatment Services revenue decreased by \$5,610,000 or 18.7% primarily due to continued delays in waste shipments from certain customers resulting from the impact of COVID-19 as discussed above. The delays in waste shipments were also partly attributed to the transition of new prime contractors at certain DOE sites. Total gross profit increased \$1,771,000 or 16.2% for the nine months ended September 30, 2020 as compared to the corresponding period of 2019. Total SG&A expenses increased \$387,000 or 4.5% for the nine months ended September 30, 2020 as compared to the corresponding period of 2019.

Our working capital was \$7,020,000 at September 30, 2020 as compared to working capital of \$26,000 at December 31, 2019.

Business Environment and Outlook

Our Treatment and Services Segments' business continues to be heavily dependent on services that we provide to governmental clients directly as the contractor or indirectly as a subcontractor. 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/or the impact resulting from COVID-19 as discussed above. In addition, our governmental contracts and subcontracts relating to activities at governmental sites in the United States are generally subject to termination or renegotiation on 30 days' notice at the government's option, and our governmental contracts/task orders with the Canadian government authorities allow the authorities to terminate the contract/task orders at any time for convenience. 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. As previously disclosed, our Medical Segment continues to evaluate strategic options to commercialize its medical isotope production technology. These options generally require substantial capital to fund R&D requirements, in addition to start-up and production costs. Our Medical Segment has substantially reduced its R&D costs and activities due to the need for capital to fund such activities. We anticipate that our Medical Segment will not resume full R&D activities until it obtains the necessary funding through obtaining its own credit facility or additional equity raise or obtaining new partners willing to fund its R&D activities. If the Medical Segment is unable to raise the necessary capital, the Medical Segment could be required to further reduce, delay or eliminate its R&D program.

We are continually reviewing methods to raise additional capital to supplement our liquidity requirements, when needed, and reducing our operating costs. 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 three reportable segments: The Treatment, Services, and Medical Segments. Our Medical Segment has not generated any revenue and all costs incurred are included within R&D. Our results of operations for the balance of 2020 could be further subjected to the impact of COVID-19 as discussed above under "COVID-19 Impact."

Summary – Three and Nine Months Ended September 30, 2020 and 2019

Consolidated (amounts in thousands)	Three Months Ended September 30,				Nine Months Ended September 30,			
	2020	%	2019	%	2020	%	2019	%
Net revenues	\$ 30,172	100.0	\$ 22,535	100.0	\$ 77,079	100.0	\$ 51,378	100.0
Cost of goods sold	25,422	84.3	17,378	77.1	64,379	83.5	40,449	78.7
Gross profit	4,750	15.7	5,157	22.9	12,700	16.5	10,929	21.3
Selling, general and administrative	3,308	11.0	2,945	13.1	8,935	11.6	8,548	16.6
Research and development	157	.4	165	.7	598	.8	615	1.3
Loss on disposal of property and equipment	—	—	4	—	27	—	3	—
Income from operations	1,285	4.3	2,043	9.1	3,140	4.1	1,763	3.4
Interest income	28	.1	77	.3	112	.1	265	.5
Interest expense	(87)	(.3)	(99)	(.4)	(306)	(.4)	(293)	(.6)
Interest expense-financing fees	(58)	(.2)	(69)	(.3)	(187)	(.2)	(139)	(.3)
Other	180	.6	(2)	—	189	.2	222	.5
Loss on extinguishment of debt	—	—	—	—	(27)	—	—	—
Income from continuing operations before taxes	1,348	4.5	1,950	8.7	2,921	3.8	1,818	3.5
Income tax (benefit) expense	(133)	(.4)	55	.3	(128)	(.2)	99	.2
Income from continuing operations, net of taxes	\$ 1,481	4.9	\$ 1,895	8.4	\$ 3,049	4.0	\$ 1,719	3.3

Revenues

Consolidated revenues increased \$7,637,000 for the three months ended September 30, 2020, compared to the three months ended September 30, 2019, as follows:

(In thousands)	2020	% Revenue	2019	% Revenue	Change	% Change
Treatment						
Government waste	\$ 4,950	16.4	\$ 7,077	31.4	\$ (2,127)	(30.1)
Hazardous/non-hazardous ⁽¹⁾	964	3.2	1,309	5.8	(345)	(26.4)
Other nuclear waste	1,152	3.8	1,695	7.5	(543)	(32.0)
Total	7,066	23.4	10,081	44.7	(3,015)	(29.9)
Services						
Nuclear services	22,647	75.1	11,979	53.2	10,668	89.1
Technical services	459	1.5	475	2.1	(16)	(3.4)
Total	23,106	76.6	12,454	55.3	10,652	85.5
Total	\$ 30,172	100.0	\$ 22,535	100.0	\$ 7,637	33.9

⁽¹⁾ Includes wastes generated by government clients of \$518,000 and \$460,000 for the three month ended September 30, 2020 and the corresponding period of 2019, respectively.

Treatment Segment revenue decreased \$3,015,000 or 29.9 % for the three months ended September 30, 2020 over the same period in 2019. The decrease in Treatment Segment revenue was the result of lower waste volume as certain of our customers continue to delay waste shipments since the latter part of the first quarter of 2020 due to the impact of COVID-19. The delays in waste shipments were also partly attributed to the transition of new prime contractors at certain DOE sites. Additionally, lower averaged price waste from revenue mix contributed to the decrease in revenue. Services Segment revenue increased by \$10,652,000 or 85.5% in the three months ended September 30, 2020 from the corresponding period of 2019. The increase in our Services Segment revenue was primarily due to the increase in number of projects. Our Services Segment revenues are project based; as such, the scope, duration and completion of each project vary. As a result, our Services Segment revenues are subject to differences relating to timing and project value.

Consolidated revenues increased \$25,701,000 for the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019, as follows:

(In thousands)	2020	% Revenue	2019	% Revenue	Change	% Change
Treatment						
Government waste	\$ 17,576	22.8	\$ 20,478	39.8	\$ (2,902)	(14.2)
Hazardous/non-hazardous ⁽¹⁾	3,426	4.4	4,616	9.0	(1,190)	(25.8)
Other nuclear waste	3,467	4.5	4,985	9.7	(1,518)	(30.5)
Total	24,469	31.7	30,079	58.5	(5,610)	(18.7)
Services						
Nuclear services	51,257	66.5	19,211	37.4	32,046	166.8
Technical services	1,353	1.8	2,088	4.1	(735)	(35.2)
Total	52,610	68.3	21,299	41.5	31,311	147.0
Total	\$ 77,079	100.0	\$ 51,378	100.0	\$ 25,701	50.0

⁽¹⁾ Includes wastes generated by government clients of \$1,637,000 and \$1,728,000 for the nine month ended September 30, 2020 and the corresponding period of 2019, respectively.

Treatment Segment revenue decreased \$5,610,000 or 18.7 % for the nine months ended September 30, 2020 over the same period in 2019. The revenue decrease was primarily due to lower revenue generated from lower waste volume resulting from continued waste shipment delays since late March 2020 from certain of our customers due to the impact of COVID-19 as discussed above. The delays in waste shipments were also partly attributed to the transition of new prime contractors at certain DOE sites. Our Services Segment revenue increased \$31,311,000 or 147.0% due to the increase in number of projects. Our Services Segment experienced this increase in revenue despite a number of our projects being shut down during part of the second quarter 2020. These previously shut down projects in the Services Segment have since restarted. Additionally, our Services Segment revenues are project based; as such, the scope, duration and completion of each project vary. As a result, our Services Segment revenues are subject to differences relating to timing and project value.

Cost of Goods Sold

Cost of goods sold increased \$8,044,000 for the quarter ended September 30, 2020, as compared to the quarter ended September 30, 2019, as follows:

(In thousands)	2020	% Revenue	2019	% Revenue	Change
Treatment	\$ 5,972	84.5	\$ 6,743	66.9	\$ (771)
Services	19,450	84.2	10,635	85.4	8,815
Total	<u>\$ 25,422</u>	84.3	<u>\$ 17,378</u>	77.1	<u>\$ 8,044</u>

Cost of goods sold for the Treatment Segment decreased approximately \$771,000 or 11.4% primarily due to the decrease in revenue. Treatment Segment variable costs decreased by approximately \$1,207,000 primarily in disposal, transportation, material and supplies and outside services costs due to lower revenues. Our overall fixed costs were higher by approximately \$436,000 resulting from the following: maintenance expenses were higher by \$152,000; regulatory expenses were higher by approximately \$105,000; depreciation expenses were higher by approximately \$134,000 primarily due to financed leases that we did not have in the third quarter of 2019; general expenses were by \$99,000 higher in various categories; and salaries and payroll costs were lower by approximately \$54,000. Services Segment cost of goods sold increased \$8,815,000 or 82.9% primarily due to increased revenue as discussed above. The increase in cost of goods sold was primarily due to higher salaries and payroll costs, travel, and outside services expenses totaling approximately \$7,412,000, higher material and supplies, regulatory and disposal costs totaling approximately \$1,243,000, and higher general expenses of \$160,000 in various categories. Payroll costs within our Services Segment included higher expenses for project related incentives. Included within cost of goods sold is depreciation and amortization expense of \$469,000 and \$317,000 for the three months ended September 30, 2020, and 2019, respectively.

Cost of goods sold increased \$23,930,000 for the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019, as follows:

(In thousands)	2020	% Revenue	2019	% Revenue	Change
Treatment	\$ 18,936	77.4	\$ 21,158	70.3	\$ (2,222)
Services	45,443	86.4	19,291	90.6	26,152
Total	<u>\$ 64,379</u>	83.5	<u>\$ 40,449</u>	78.7	<u>\$ 23,930</u>

Cost of goods sold for the Treatment Segment decreased approximately \$2,222,000 or 10.5%. Treatment Segment costs of goods sold for the nine months ended September 30, 2019 included additional closure costs recorded in the amount of \$330,000 for our East Tennessee Materials and Energy Corporation ("M&EC") facility due to finalization of closure requirements in connection with the closure of the facility. Excluding the closure costs recorded in the nine months of 2019, Treatment Segment cost of goods sold decreased \$1,892,000 or 9.1% primarily due to the decrease in revenue. Excluding the closure costs recorded in the nine months ended September 30, 2019, Treatment Segment variable costs decreased by approximately \$2,491,000 primarily due to lower disposal, transportation, material and supplies and outside services costs. Our overall fixed costs were higher by approximately \$599,000 resulting from the following: maintenance expenses were higher by \$380,000; regulatory expenses were higher by approximately \$155,000; depreciation expenses were higher by approximately \$212,000 primarily due to more financed leases; general expenses were lower by approximately \$131,000 higher in various categories; and salaries and payroll costs were lower by approximately \$17,000. Services Segment cost of goods sold increased \$26,152,000 or 135.6% primarily due to the increase in revenue. The increase in cost of goods sold within our Services Segment was primarily due to higher salaries and payroll costs, travel, and outside services expenses totaling approximately \$22,810,000, higher material and supplies, regulatory and disposal costs totaling approximately \$2,688,000, and higher general expenses of \$654,000 in various categories. Payroll costs within our Services Segment included higher expenses for project related incentives. Included within cost of goods sold is depreciation and amortization expense of \$1,169,000 and \$934,000 for the nine months ended September 30, 2020, and 2019, respectively.

Gross Profit

Gross profit for the quarter ended September 30, 2020 decreased \$407,000 over the same period of 2019, as follows:

(In thousands)	2020	% Revenue	2019	% Revenue	Change
Treatment	\$ 1,094	15.5	\$ 3,338	33.1	\$ (2,244)
Services	3,656	15.8	1,819	14.6	1,837
Total	<u>\$ 4,750</u>	<u>15.7</u>	<u>\$ 5,157</u>	<u>22.9</u>	<u>\$ (407)</u>

Treatment Segment gross profit decreased by \$2,244,000 or 67.2% and gross margin decreased to 15.5% from 33.1% primarily due to lower revenue from lower waste volume and lower averaged price waste from revenue mix. The increases in gross profit in the Services Segment of \$1,837,000 or 101.0% and gross margin from 14.6% to 15.8% was primarily due to the increase in revenue as discussed above. Additionally, 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, 2020 increased \$1,771,000 over the same period in 2019, as follows:

(In thousands)	2020	% Revenue	2019	% Revenue	Change
Treatment	\$ 5,533	22.6	\$ 8,921	29.7	\$ (3,388)
Services	7,167	13.6	2,008	9.4	5,159
Total	<u>\$ 12,700</u>	<u>16.5</u>	<u>\$ 10,929</u>	<u>21.3</u>	<u>\$ 1,771</u>

Treatment Segment gross profit decreased \$3,388,000 or 38.0% and gross margin decreased to 22.6% from 29.7%. Excluding the additional closure costs of \$330,000 recorded in the nine months ended September 30, 2019 in connection with the closure of our M&EC facility as discussed previously, gross profit decreased \$3,718,000 or 40.2% and gross margin decreased to 22.6% from 30.8% primarily due lower revenue from lower waste volume. In the Services Segment, gross profit increased \$5,159,000 or 256.9% and gross margin increased from 9.4% to 13.6% primarily due to the increase in revenue. 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 increased \$363,000 for the three months ended September 30, 2020, as compared to the corresponding period for 2019, as follows:

(In thousands)	2020	% Revenue	2019	% Revenue	Change
Administrative	\$ 1,564	—	\$ 1,340	—	\$ 224
Treatment	910	12.9	988	9.8	(78)
Services	834	3.6	617	5.0	217
Total	<u>\$ 3,308</u>	<u>11.0</u>	<u>\$ 2,945</u>	<u>13.1</u>	<u>\$ 363</u>

Our Administrative SG&A was higher primarily due to the following: general expenses were higher by approximately \$34,000 in various categories; director stock option expenses were higher by approximately \$25,000 due to options granted to new directors in addition to higher fair value of options granted to re-elected directors; salaries and payroll expenses were higher by approximately \$121,000 which included higher estimated progress expenses related to the Company's incentive plans; outside services expense was higher by approximately \$69,000 resulting from more consulting/subcontract matters; and travel expense was lower by approximately \$25,000 due to restrictions implemented resulting from the impact of COVID-19. Our Treatment Segment SG&A was lower primarily due to the following: travel expense were lower by approximately \$36,000 due to restrictions implemented resulting from the impact of COVID-19; general expenses were lower by \$22,000 in various categories; and bad debt expenses were lower by approximately \$20,000. The higher SG&A costs within our Services Segment was primarily due to the following: salaries and payroll expenses were higher by approximately \$268,000; general expenses were higher by approximately \$25,000 in various categories; outside services expenses were higher by \$23,000; travel expense was lower by approximately \$24,000 due to restrictions implemented resulting from the impact of COVID-19; and bad debt expenses were lower by approximately \$75,000. Included in SG&A expenses is depreciation and amortization expense of \$9,000 and \$11,000 for the three months ended September 30, 2020, and 2019, respectively.

SG&A expenses increased \$387,000 for the nine months ended September 30, 2020, as compared to the corresponding period for 2019, as follows:

(In thousands)	2020	% Revenue	2019	% Revenue	Change
Administrative	\$ 4,219	—	\$ 3,905	—	\$ 314
Treatment	2,838	11.6	2,966	9.9	(128)
Services	1,878	3.6	1,677	7.9	201
Total	<u>\$ 8,935</u>	<u>11.6</u>	<u>\$ 8,548</u>	<u>16.6</u>	<u>\$ 387</u>

The increase in Administrative SG&A was primarily due to the following: general expenses were higher by approximately \$73,000 in various categories; director stock option expenses were higher by approximately \$47,000 due to options granted to new directors in addition to higher fair value of options granted to re-elected directors; salaries and payroll expenses were higher by approximately \$161,000 which included higher estimated progress expenses related to the Company's incentive plans; outside services expense was higher by approximately \$73,000 resulting from more consulting/subcontract matters; and travel expense was lower by approximately \$40,000 due to restrictions implemented resulting from the impact of COVID-19. Treatment SG&A was lower primarily due to the following: travel expenses were lower by approximately \$61,000 due to restrictions implemented resulting from the impact of COVID-19; general expenses were lower by \$11,000 in various categories; bad debt expenses were lower by approximately \$76,000; outside services costs were slightly higher by \$6,000 and salaries and payroll expenses were higher by approximately \$14,000. Services Segment SG&A increased by \$201,000 primarily due to the following: general expenses were higher by approximately \$48,000 in various categories; salaries and payroll expenses were higher by approximately \$393,000; outside services expenses were higher by approximately \$13,000; travel expenses were lower by approximately \$88,000 due to restrictions implemented resulting from the impact of COVID-19; and bad debt expenses were lower by approximately \$165,000 as certain customer accounts which we had previously reserved for were collected in the first nine months of 2020. Included in SG&A expenses is depreciation and amortization expense of \$20,000 and \$34,000 for the nine months ended September 30, 2020 and 2019, respectively.

R&D

R&D expenses decreased \$8,000 and \$17,000 for the three and nine months ended September 30, 2020, respectively, as compared to the corresponding period of 2019.

(In thousands)	Three Months Ended September 30,			Nine Months Ended September 30,		
	2020	2019	Change	2020	2019	Change
Administrative	\$ 20	\$ 6	\$ 14	\$ 64	\$ 20	\$ 44
Treatment	49	85	(36)	194	367	(173)
Services	7	—	7	119	—	119
PF Medical	81	74	7	221	228	(7)
Total	\$ 157	\$ 165	\$ (8)	\$ 598	\$ 615	\$ (17)

R&D costs consist primarily of employee salaries and benefits, laboratory costs, third party fees, and other related costs associated with the development of new technologies and technological enhancement of new potential waste treatment processes.

Interest Income

Interest income decreased by approximately \$49,000 and \$153,000 for the three and nine months ended September 30, 2020, respectively, as compared to the corresponding period of 2019. The decrease was primarily due to lower interest earned on the finite risk sinking funds from lower interest rate. The decrease in interest income was also attributed to lower interest earned from lower finite risk sinking fund balance resulting from the release of \$5,000,000 in finite risk sinking funds by AIG Specialty Insurance Company (“AIG”) to us at the end of July 2019 in connection with the closure of our M&EC facility. The \$5,000,000 in finite sinking funds represented a partial release of the total collateral held under our finite risk insurance policy.

Interest Expense

Interest expense decreased by approximately \$12,000 and increased by \$13,000 for the three and nine months ended September 30, 2020, respectively, as compared to the corresponding period of 2019. The decrease in interest expense for the three months ended September 30, 2020 was primarily due to lower interest expense from our declining term loan balance outstanding and lower interest rate. Also, interest expense was lower from declining loan balance outstanding on the \$2,500,000 loan that we entered into with Robert Ferguson on April 1, 2019. The overall decrease in interest expense was partially offset by higher interest expense from more finance leases and interest accrued for the PPP Loan. The increase in interest expense for the nine months ended September 30, 2020 as compared to the corresponding period was primarily due to higher interest expense from more finance leases and interest accrued for the PPP Loan. The higher interest expense was offset by lower interest from our declining loan balances on the term loan and the Ferguson loan as discussed above.

Interest Expense- Financing Fees

Interest expense-financing fees decreased approximately \$11,000 and increased \$48,000 for the three and nine months ended September 30, 2020, respectively, as compared to the corresponding period of 2019. The decrease in interest expense-financing fees in the third quarter of 2020 was primarily due to lower amortization of debt issuance costs in connection with our new credit facility dated May 8, 2020 as compared to our previous credit facility. On May 8, 2020, we entered into a new credit facility with our lender which resulted in a loss on debt extinguishment of approximately \$27,000. The increase in interest expense-financing fees of approximately \$48,000 for the nine months ended September 30, 2020 was primarily due to debt discount/debt issuance costs amortized as financing fees in connection with the issuance of our Common Stock and a purchase Warrant as consideration for the Company receiving the \$2,500,000 loan from Robert Ferguson on April 1, 2019 (See “Liquidity and Capital Resources – Financing Activities” for further information of this debt discount and the new credit facility dated May 8, 2020).

Income Taxes

We had an income tax benefit of \$133,000 and income tax expense of \$55,000 for continuing operations for the three months ended September 30, 2020 and 2019, respectively and an income tax benefit of \$128,000 and income tax expense of \$99,000 for the nine months ended September 30, 2020 and 2019, respectively. Our effective tax rates were approximately 9.9% and 2.8% for the three months ended September 30, 2020 and 2019, respectively, and 4.4% and 5.4% for the nine months ended September 30, 2020 and 2019, respectively. The tax benefit and expense for the periods above were comprised of state tax benefit and expense for separate company filing states. Our tax rate for each of the periods discussed above was impacted by our full valuation on our net deferred tax assets. The income tax benefit for the three and nine months ended September 30, 2020 included refunds from amended state returns filed in separate company filing states.

Discontinued Operations and Divestitures

Our discontinued operations consist of all our subsidiaries included in our Industrial Segment which encompasses subsidiaries divested in 2011 and prior and three previously closed locations.

Our discontinued operations had no revenue for the three and nine months ended September 30, 2020 and the corresponding period of 2019. We incurred net losses of \$67,000 and \$266,000 for our discontinued operations for the three and nine months ended September 30, 2020, respectively. We incurred net losses of \$156,000 and \$424,000 for our discontinued operations for the three and nine months ended September 30, 2019, respectively.

Liquidity and Capital Resources

Our cash flow requirements during the nine months ended September 30, 2020 were primarily financed by our operations, credit facility availability, and the PPP Loan that we received under the CARES Act as discussed below (see "CARES Act – PPP Loan"). We generated approximately \$3,503,000 cash from our continuing operations. Subject to the impact of COVID-19 as discussed above, 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, and planned capital expenditures. We plan to fund these requirements from our operations, credit facility availability, and cash on hand which was approximately \$4,811,000 at September 30, 2020. We continue to explore all sources of increasing our capital to supplement our liquidity requirements, when needed, and to improve our revenue and working capital. 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, when necessary. At this time, we believe that our cash flows from operations, our available liquidity from our credit facility, and our cash on hand should be sufficient to fund our operations for the next twelve months. However, due to the uncertainty of COVID-19, there are no assurances such will be the case in the events that certain of our customers continue to delay waste shipments and/or elect to shut down projects again due to continue surge in outbreak of COVID-19. As previously disclosed, our Medical Segment substantially reduced its R&D costs and activities due to the need for capital to fund such activities. We continue to seek various sources of potential funding for our Medical Segment. We anticipate that our Medical Segment will not resume full R&D activities until it obtains the necessary funding through obtaining its own credit facility or additional equity raise or obtaining new partners willing to fund its R&D activities. If the Medical Segment is unable to raise the necessary capital, the Medical Segment could be required to further reduce, delay or eliminate its R&D program.

We are aware that PPP loans in excess of \$2,000,000 may be subject to being audited by the appropriate governmental authority. If our PPP Loan is audited, it is currently unknown how our PPP Loan could be affected by an audit. An audit could result, among other things, in us being required to return all or a portion of our PPP Loan (see discussion below as to the PPP Loan under "The CARES Act – PPP Loan").

The following table reflects the cash flow activities during the first nine months of 2020:

<u>(In thousands)</u>	
Cash provided by operating activities of continuing operations	\$ 3,503
Cash used in operating activities of discontinued operations	(329)
Cash used in investing activities of continuing operations	(1,484)
Cash provided by investing activities of discontinued operations	118
Cash provided by financing activities of continuing operations	2,728
Effect of exchange rate changes in cash	(4)
Increase in cash and finite risk sinking fund (restricted cash)	<u>\$ 4,532</u>

At September 30, 2020, we were in a positive cash position with no revolving credit balance. At September 30, 2020, we had cash on hand of approximately \$4,811,000, which includes account balances of our foreign subsidiaries totaling approximately \$157,000.

Operating Activities

Accounts receivable, net of allowances for doubtful accounts, totaled \$13,442,000 at September 30, 2020, an increase of \$264,000 from the December 31, 2019 balance of \$13,178,000. The increase was primarily due to timing of invoicing which was reflective of the increase in our unbilled receivables and timing of our accounts receivable collection. We provide a variety of payment terms to our customers; therefore, our accounts receivable are impacted by these terms and the related timing of accounts receivable collections. The amount of our accounts receivables and collection could be materially impacted the longer COVID-19 persists.

Accounts payable, totaled \$14,652,000 at September 30, 2020, an increase of \$5,375,000 from the December 31, 2019 balance of \$9,277,000. The increase in accounts payable was attributed to an increase in costs within our Services Segment resulting from the significant increase in revenue. 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 all segments.

We had working capital of \$7,020,000 (which included working capital of our discontinued operations) at September 30, 2020, as compared to working capital of \$26,000 at December 31, 2019. The improvement in our working capital was primarily due to the proceeds that we received from the PPP Loan under the Paycheck Protection Program (see "PPP Loan" under "CARES Act" below for a discussion of this loan) and the increase in our unbilled receivables from the significant increase in revenues within the Services Segment. The improvement in our working capital was partially offset by the increase in our accounts payable.

Investing Activities

For the nine months ended September 30, 2020, our purchases of capital equipment totaled approximately \$2,371,000, of which \$883,000 was subject to financing, with the remaining funded from cash from operations and our credit facility. We have budgeted approximately \$2,000,000 for 2020 capital expenditures (net of financed amounts) for our Treatment and Services Segments to maintain operations and regulatory compliance requirements and support revenue growth. Certain of these budgeted projects may either be delayed until later years or deferred altogether. We plan to fund our capital expenditures from cash from operations and/or financing. The initiation and timing of projects are also determined by financing alternatives or funds available for such capital projects, especially in light of the uncertainties that COVID-19 may impact the economy which may have an adverse impact to our results of operations and liquidity.

Financing Activities

We entered into an Amended and Restated Revolving Credit, Term Loan and Security Agreement, dated October 31, 2011 ("Amended Loan Agreement"), with PNC National Association ("PNC"), acting as agent and lender. The Amended Loan Agreement had been amended from time to time since the execution of the Amended Loan Agreement. The Amended Loan Agreement, as subsequently amended ("Revised Loan Agreement"), provided us with the following credit facility with a maturity date of March 24, 2021: (a) up to \$12,000,000 revolving credit ("revolving credit") and (b) a term loan ("term loan") of approximately \$6,100,000. The maximum that we can borrow under the revolving credit was based on a percentage of eligible receivables (as defined) at any one time reduced by outstanding standby letters of credit and borrowing reductions that our lender may impose from time to time.

Payment of annual rate of interest due on the revolving credit under the Revised Loan Agreement was at prime (3.25% at September 30, 2020) plus 2% and the term loan at prime plus 2.5%.

On May 8, 2020, we entered into a Second Amended and Restated Revolving Credit, Term Loan and Security Agreement (the "New Loan Agreement") with PNC, replacing our previous Revised Loan Agreement with PNC. The New Loan Agreement provides us with the following credit facility:

- up to \$18,000,000 revolving credit facility, subject to the amount of borrowings based on a percentage of eligible receivables and subject to certain reserves; and
- a term loan of \$1,741,818, which requires monthly installments of \$35,547.

The New Loan Agreement terminates as of May 15, 2024, unless sooner terminated.

Similar to our Revised Loan Agreement, the New Loan Agreement requires us to meet certain customary financial covenants, including, among other things, a minimum Tangible Adjusted Net Worth requirement of \$27,000,000 at all times; maximum capital spending of \$6,000,000 annually; and a minimum fixed charge coverage ratio ("FCCR") requirement of 1.15:1.

Under the New Loan Agreement, payment of annual rate of interest due on the credit facility is as follows:

- revolving credit at prime plus 2.50% or London InterBank Offer Rate ("LIBOR") plus 3.50% and the term loan at prime plus 3.00% or LIBOR plus 4.00%. We can only elect to use the LIBOR interest payment option after we become compliant with meeting the minimum FCCR of 1.15:1; and
- Upon the achievement of a FCCR of greater than 1.25:1, we have the option of paying an annual rate of interest due on the revolving credit at prime plus 2.00% or LIBOR plus 3.00% and the term loan at prime plus 2.50% or LIBOR plus 3.50%. We met this FCCR in the first, second and third quarters of 2020. Upon meeting the FCCR of 1.25:1, this interest payment option will remain in place in the event that our future FCCR falls below 1.25:1.

Under the LIBOR option of interest payment noted above, a LIBOR floor of 0.75% shall apply in the event that LIBOR falls below 0.75% at any point in time.

Pursuant to the New Loan Agreement, we may terminate the New Loan Agreement upon 90 days' prior written notice upon payment in full of our obligations under the New Loan Agreement. We have agreed to pay PNC 1.0% of the total financing in the event we pay off our obligations on or before May 7, 2021 and 0.5% of the total financing if we pay off our obligations after May 7, 2021 but prior to or on May 7, 2022. No early termination fee shall apply if we pay off our obligations under the New Loan Agreement after May 7, 2022.

At September 30, 2020, the borrowing availability under our revolving credit was approximately \$16,404,000, based on our eligible receivables and includes a reduction in borrowing availability of approximately \$3,026,000 from outstanding standby letters of credit.

Our credit facility under our Revised and New 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 met our FCCR requirement in the first, second and third quarters of 2020. Additionally, we met our remaining financial covenant requirements in the first, second and third quarters of 2020. We expect to meet our financial covenant requirements in the next twelve months; however, if we fail to meet any of our financial covenant requirements and our lender does not further waive the non-compliance or revise our covenant so that we are in compliance, our lender could accelerate the repayment of borrowings under our credit facility. In the event that our lender accelerates the payment of our borrowings, we may not have sufficient liquidity to repay our debt under our credit facility and other indebtedness.

As previously disclosed, on April 1, 2019, we completed a lending transaction with Robert Ferguson (the “Lender”), whereby we borrowed from the Lender the sum of \$2,500,000 pursuant to the terms of a Loan and Security Purchase Agreement and promissory note (the “Loan”). The Lender is a shareholder of ours and also serves as a consultant to us in connection with our Test Bed Initiative (“TBI”) at our Perma-Fix Northwest Richland, Inc. (“PFNWR”) subsidiary. The proceeds from the Loan were used for general working capital purposes. The Loan is unsecured, with a term of two years with interest payable at a fixed interest rate of 4.00% per annum. The Loan provides for monthly payments of accrued interest only during the first year of the Loan, with the first interest payment due May 1, 2019 and monthly payments of approximately \$208,333 in principal plus accrued interest starting in the second year of the Loan. The Loan also allows for prepayment of principal payments over the term of the Loan without penalty with such prepayment of principal payments to be applied to the second year of the loan payments at our discretion. Since inception of the loan, we have made total prepayments in principal of \$936,000, of which \$416,000 was made in the first nine months of 2020. In connection with this capital raise transaction described above and consideration for us receiving the Loan, we issued a Warrant (the “Warrant”) to the Lender to purchase up to 60,000 shares of our Common Stock at an exercise price of \$3.51 per share, which was the closing bid price for a share of our Common Stock on NASDAQ.com immediately preceding the execution of the Loan and Warrant. The Warrant expires on April 1, 2024 and remains outstanding at September 30, 2020. As further consideration for this capital raise transaction relating to the Loan, we also issued 75,000 shares of its Common Stock to the Lender. The fair value of the Warrant and Common Stock and the related closing fees incurred from the transaction totaled approximately \$398,000 and was recorded as debt discount/debt issuance costs, which is being amortized over the term of the loan as interest expense – financing fees. The 75,000 shares of Common Stock, the Warrant and the 60,000 shares of Common Stock that may be purchased under the Warrant were and will be issued in a private placement that was and will be exempt from registration under Rule 506 and/or Sections 4(a)(2) and 4(a)(5) of the Securities Act of 1933, as amended (the “Act”) and bear a restrictive legend against resale except in a transaction registered under the Act or in a transaction exempt from registration thereunder.

The CARES Act

PPP Loan

On April 14, 2020, we entered into a promissory note with PNC, our credit facility lender, in the amount of approximately \$5,666,000 under the PPP (the “PPP Loan”). The PPP was established under the CARES Act and is administered by the SBA. On June 5, 2020, the Paycheck Protection Program Flexibility Act of 2020 (“Flexibility Act”) was signed into law which amended the CARES Act. The note evidencing the PPP Loan contains events of default relating to, among other things, payment defaults, breach of representations and warranties, and provisions of the promissory note. During the third quarter of 2020, we repaid approximately \$348,000 of the PPP Loan to PNC resulting from clarification in the loan calculation at the time of the loan origination.

Under the terms of the Flexibility Act, we can apply for and be granted forgiveness for all or a portion of the PPP Loan. Such forgiveness will be determined, subject to limitations, based on the use of loan proceeds by us for eligible payroll costs, mortgage interest, rent and utility costs and the maintenance of employee and compensation levels for the covered period (which is defined as a 24 week period, beginning April 14, 2020, the date in which proceeds from the PPP Loan was disbursed to us by PNC). At least 60% of such forgiven amount must be used for eligible payroll costs. On October 5, 2020, we applied for forgiveness on repayment of the loan balance as permitted under the program, which is subject to the review and approval of our lender and the SBA. The approval of the loan forgiveness allows for a maximum period of 150 days from the submittal of a complete loan forgiveness application. If all or a portion of the PPP Loan is not forgiven, all or the remaining portion of the loan will be for a term of two years but can be prepaid at any time prior to maturity without any prepayment penalties. The annual interest rate on the PPP Loan is 1.0% and no payments of principal or interest are due until the date that the SBA remits the loan forgiveness amount to our lender. While our PPP Loan currently has a two year maturity, the Flexibility Act permits us to request a five year maturity with our lender which we do not expect to request at this time.

Deferral of Employment Tax Deposits

The CARES Act, as amended by the Flexibility Act, provides employers the option to defer the payment of an employer's share of social security taxes beginning on March 27, 2020 through December 31, 2020, with 50% of the amount of social security taxes deferred to become due on December 31, 2021 with the remaining 50% due on December 31, 2022. We elected to defer such taxes starting in mid-April 2020. We estimate the remaining payment of approximately \$1,225,000 of social security taxes otherwise due in 2020 will be deferred with 50% due by December 31, 2021 and the remaining 50% due by December 31, 2022. At September 30, 2020, we have deferred payment of \$838,000 in our share of social security taxes, which amount has been included in "other long-term liabilities" in our Consolidated Balance Sheet at September 30, 2020.

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, 2020, the total amount of standby letters of credit outstanding totaled approximately \$3,026,000 and the total amount of bonds outstanding totaled approximately \$45,814,000. 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, 2020, the closure and post-closure requirements for these facilities were approximately \$19,651,000.

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, 2019.

Recent Accounting Pronouncements

See "Note 2 – Summary of Significant Accounting Policies" in the "Notes to Consolidated Financial Statements" for the recent accounting pronouncements that have been adopted during the first nine months of 2020, or will be adopted in future periods.

Known Trends and Uncertainties

Significant Customers. Our Treatment and Services Segments have significant relationships with the U.S and Canadian governmental authorities, and continue to enter into contracts, directly as the prime contractor or indirectly for others as a subcontractor to government authorities. Our inability to continue under existing contracts that we have with the U.S federal government and Canadian 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. In addition, our U.S. governmental contracts and subcontracts relating to activities at governmental sites are generally subject to termination or renegotiation on 30 days notice at the government's option. The Task Order Agreements ("TOAs") with the Canadian government generally provide that the government may terminate a TOA at any time for convenience.

We performed services relating to waste generated by government clients (domestic and foreign (primarily Canadian)), either directly as a prime contractor or indirectly for others as a subcontractor to government entities, representing approximately \$28,094,000 or 93.1% and \$70,407,000 or 91.3% of our total revenues generated during the three and nine months ended September 30, 2020, respectively, as compared to \$19,496,000 or 86.5% and \$41,354,000 or 80.5% of our total revenues generated during the three and nine months ended September 30, 2019, respectively.

Coronavirus Impact. The extent of the impact of the COVID-19 pandemic on our business is uncertain and difficult to predict, as the responses to the pandemic continue to evolve rapidly, especially in light of the recent surge in COVID-19 cases around certain parts of the country. Since the latter part of the second quarter of 2020, all of the projects within our Services Segment that were previously shutdown have restarted as stay-at-home orders and certain other restrictions resulting from the pandemic were lifted. At this time, we continue to experience delays in waste shipment from certain customers within our Treatment Segment directly related to the impact of COVID-19 including generator shutdowns and limited sustained operations, along with other factors. Furthermore, capital markets and economies worldwide continue to be negatively impacted by the COVID-19 pandemic. Such economic disruption could have a material adverse effect on our business as our customers could curtail and reduce capital and overall spending.

The severity of the impact the COVID-19 pandemic on our business will depend on a number of factors, including, but not limited to, the duration and severity of the pandemic, the extent and severity of the impact on our customers, the impact on governmental programs and budgets, the development/approval of treatments or vaccines, and how quickly and to what extent normal economic and operating conditions resume, all of which are uncertain and cannot be predicted with any accuracy or confidence at this time. Our future results of operations and liquidity could be adversely impacted by continued delays in waste shipments and/or the recurrence of project work shut downs as well as potential partial/full shutdown of any of our facilities due to COVID-19.

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 potentially responsible party ("PRP") at a remedial action site, which could have a material adverse effect.

Our subsidiaries where remediation expenditures will be made are at three sites within our discontinued operations. While no assurances can be made that we will be able to do so, we expect to fund the expenses to remediate these sites from funds generated from operations.

At September 30, 2020, we had total accrued environmental remediation liabilities of \$854,000, a decrease of \$73,000 from the December 31, 2019 balance of \$927,000. The decrease represents payments made on remediation projects for our Perma-Fix of South Georgia, Inc. and Perma-Fix of Dayton, Inc. subsidiaries. At September 30, 2020, \$744,000 of the total accrued environmental liabilities was recorded as current.

Item 3. Quantitative and Qualitative Disclosures about Market Risks

Not applicable

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 effective as of September 30, 2020

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

There was no other change 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 has materially affected, or is 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, 2019 and Part II – Other Information – Item 1 of our Form 10-Q for the quarter ended March 31, 2020. Additionally, there has been no other material change in legal proceedings previously disclosed in Part II – Other Information – Item 1 of our Form 10-Q for the quarter ended June 30, 2020 except the following:

During July 2020, Tetra Tech EC, Inc. (“Tetra Tech”) filed a complaint in the United States District Court for the Northern District of California against CH2M Hill, Inc. (“CH2M”) and four subcontractors of CH2M, including the Company (“defendants”). The complaint alleges claims for negligence, negligent misrepresentation and equitable indemnification 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 complaint alleges that the subject draft reports were prepared negligently and in a biased manner, made public, and caused damage to Tetra Tech’s reputation; triggering related lawsuits and costing it opportunities for both government and commercial contracts.

At this time, we do not believe we have any liability to Tetra Tech. We have provided notice of this lawsuit to our insurance carrier. Our 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.

Item 1A. Risk Factors

There has been no other material change from the risk factors previously disclosed in our Form 10-K for the year ended December 31, 2019 and Form 10-Q for the quarters ended March 31, 2020 and June 30, 2020.

Item 6. Exhibits

(a) Exhibits

- 4.1 [Second Amended and Restated Revolving Credit, Term Loan and Security Agreement between Perma-Fix Environmental Services, Inc. and PNC Bank, National Association \(as Lender and as Agent\), as incorporated by reference from Exhibit 4.1 to the Company's Form 10-Q filed on May 12, 2020.](#)
- 4.2 [Payment Protection Program Term Note dated April 11, 2020, by and between Perma-Fix Environmental Services, Inc. and PNC Bank, National Association, as incorporated by reference from Exhibit 99.1 to the Company's Form 8-K filed on April 15, 2020.](#)
- 10.1 [Employment Agreement dated July 22, 2020 between Mark Duff, Chief Executive Officer, and Perma-Fix Environmental Services, Inc., which is incorporated by reference from Exhibit 99.1 to the Company's Form 8-K filed on July 27, 2020.](#)
- 10.2 [Employment Agreement dated July 22, 2020 between Louis Centofanti, EVP of Strategic Initiatives, and Perma-Fix Environmental Services, Inc., which is incorporated by reference from Exhibit 99.2 to the Company's Form 8-K filed on July 27, 2020.](#)
- 10.3 [Employment Agreement dated July 22, 2020 between Ben Naccarato, Chief Financial Officer, and Perma-Fix Environmental Services, Inc., which is incorporated by reference from Exhibit 99.3 to the Company's Form 8-K filed on July 27, 2020.](#)
- 10.4 [Employment Agreement dated July 22, 2020 between Andrew Lombardo, EVP of Nuclear and Technical Services, and Perma-Fix Environmental Services, Inc., which is incorporated by reference from Exhibit 99.4 to the Company's Form 8-K filed on July 27, 2020.](#)
- 10.5 [Employment Agreement dated July 22, 2020 between Richard Grondin, EVP of Waste Treatment Operations, and Perma-Fix Environmental Services, Inc., which is incorporated by reference from Exhibit 99.5 to the Company's Form 8-K filed on July 27, 2020.](#)
- 10.6 [2020 Incentive Compensation Plan for Richard Grondin, our new EVP of Treatment Waste Operations, effective January 1, 2020, as incorporated by reference from Exhibit 99.6 to the Company's Form 8-K filed on July 27, 2020.](#)
- 10.7 [2020 Incentive Compensation Plan for Chief Executive Officer, effective January 1, 2020, as incorporated by reference from Exhibit 99.1 to the Company's Form 8-K filed on January 22, 2020.](#)
- 10.8 [2020 Incentive Compensation Plan for Chief Financial Officer, effective January 1, 2020, as incorporated by reference from Exhibit 99.2 to the Company's Form 8-K filed on January 22, 2020.](#)
- 10.9 [2020 Incentive Compensation Plan for Executive Vice President of Strategic Initiatives, effective January 1, 2020, as incorporated by reference from Exhibit 99.3 to the Company's Form 8-K filed on January 22, 2020.](#)
- 10.10 [2020 Incentive Compensation Plan for Executive Vice President of Nuclear and Technical Services, effective January 1, 2020, as incorporated by reference from Exhibit 99.4 to the Company's Form 8-K filed on January 22, 2020.](#)

- 10.11 [Incentive Stock Option Agreement, dated October 19, 2017, between Perma-Fix Environmental Services, Inc. and Richard Grondin, as incorporated by reference from Exhibit 99.11 to the Company's Form 8-K filed on July 27, 2020.](#)
- 10.12 [Incentive Stock Option Agreement, dated January 17, 2019, between Perma-Fix Environmental Services, Inc. and Richard Grondin, as incorporated by reference from Exhibit 99.12 to the Company's Form 8-K filed on July 27, 2020.](#)
- 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 XBRL Instance Document*
- 101.SCH XBRL Taxonomy Extension Schema Document*
- 101.CAL XBRL Taxonomy Extension Calculation Linkbase Document*
- 101.DEF XBRL Taxonomy Extension Definition Linkbase Document*
- 101.LAB XBRL Taxonomy Extension Labels Linkbase Document*
- 101.PRE XBRL Taxonomy Extension Presentation Linkbase Document*

* Pursuant to Rule 406T of Regulation S-T, the 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.

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 5, 2020

By: /s/ Mark Duff
Mark Duff
President and Chief (Principal) Executive Officer

Date: November 5, 2020

By: /s/ Ben Naccarato
Ben Naccarato
Chief (Principal) Financial Officer

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 5, 2020

/s/ Mark Duff

Mark Duff
President and Chief 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 5, 2020

/s/ Ben Naccarato

Ben Naccarato
Executive Vice President and Chief 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, 2020, 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 5, 2020

/s/ Mark Duff

Mark Duff
President and
Chief 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 Annual Report of Perma-Fix Environmental Services, Inc. ("PESI") on Form 10-Q for the quarter ended September 30, 2020, 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 5, 2020

/s/ Ben Naccarato

Ben Naccarato
Executive Vice President and Chief 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.
