SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

Form 10-Q

[X] **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the quarterly period ended June 30, 2017

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	**58-1954497**
(State or other jurisdiction of incorporation or organization)	*(IRS Employer Identification Number)*
8302 Dunwoody Place, Suite 250, Atlanta, GA	**30350**
(Address of principal executive offices)	*(Zip Code)*

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

N/A

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

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 August 8, 2017
Common Stock, $.001 Par Value	11,713,928 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)	June 30, 2017 (Unaudited)	December 31, 2016 (Audited)
ASSETS		
Current assets:		
Cash	$ 535	$ 163
Accounts receivable, net of allowance for doubtful accounts of $352 and $272, respectively	8,589	8,705
Unbilled receivables - current	3,759	2,926
Inventories	330	370
Prepaid and other assets	2,653	2,358
Current assets related to discontinued operations	92	85
Total current assets	15,958	14,607
Property and equipment:		
Buildings and land	22,559	22,544
Equipment	33,475	33,454
Vehicles	398	409
Leasehold improvements	11,626	11,626
Office furniture and equipment	1,738	1,738
Construction-in-progress	698	667
Total property and equipment	70,494	70,438
Less accumulated depreciation	(55,385)	(53,323)
Net property and equipment	15,109	17,115
Property and equipment related to discontinued operations	81	81
Intangibles and other long term assets:		
Permits	8,447	8,474
Other intangible assets - net	1,573	1,721
Accounts receivable - non-current	—	212
Unbilled receivables - non-current	228	216
Finite risk sinking fund	15,608	21,487
Other assets	1,051	1,154
Other assets related to discontinued operations	232	268
Total assets	$ 58,287	$ 65,335

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

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

(Amounts in Thousands, Except for Share and per Share Amounts)	June 30, 2017 (Unaudited)	December 31, 2016 (Audited)
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 3,911	$ 4,244
Accrued expenses	4,103	4,094
Disposal/transportation accrual	1,785	1,390
Deferred revenue	2,089	2,691
Accrued closure costs - current	2,745	2,177
Current portion of long-term debt	1,184	1,184
Current liabilities related to discontinued operations	966	958
Total current liabilities	16,783	16,738
Accrued closure costs, net of current portion	4,355	5,138
Other long-term liabilities	963	931
Deferred tax liabilities	2,432	2,362
Long-term debt, less current portion	3,255	7,649
Long-term liabilities related to discontinued operations	364	361
Total long-term liabilities	11,369	16,441
Total liabilities	28,152	33,179
Commitments and Contingencies (Note 8)		
Series B Preferred Stock of subsidiary, $1.00 par value; 1,467,396 shares authorized, 1,284,730 shares issued and outstanding, liquidation value $1.00 per share plus accrued and unpaid dividends of $963 and $931, respectively	1,285	1,285
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; 11,705,989 and 11,677,025 shares issued, respectively; 11,698,347 and 11,669,383 shares outstanding, respectively	11	11
Additional paid-in capital	106,192	106,048
Accumulated deficit	(76,109)	(74,213)
Accumulated other comprehensive loss	(135)	(162)
Less Common Stock held in treasury, at cost; 7,642 shares	(88)	(88)
Total Perma-Fix Environmental Services, Inc. stockholders' equity	29,871	31,596
Non-controlling interest in subsidiary	(1,021)	(725)
Total stockholders' equity	28,850	30,871
Total liabilities and stockholders' equity	$ 58,287	$ 65,335

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

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

(Amounts in Thousands, Except for Per Share Amounts)	Three Months Ended June 30, 2017	Three Months Ended June 30, 2016	Six Months Ended June 30, 2017	Six Months Ended June 30, 2016
Net revenues	$ 12,715	$ 14,809	$ 25,422	$ 24,847
Cost of goods sold	10,361	12,993	20,349	22,997
Gross profit	2,354	1,816	5,073	1,850
Selling, general and administrative expenses	2,833	2,375	5,684	5,431
Research and development	619	554	1,008	1,128
(Gain) loss on disposal of property and equipment	(1)	(1)	(1)	4
Impairment loss on tangible assets	—	1,816	—	1,816
Impairment loss on intangible assets	—	8,288	—	8,288
Loss from operations	(1,097)	(11,216)	(1,618)	(14,817)
Other income (expense):				
Interest income	36	31	71	47
Interest expense	(90)	(108)	(189)	(276)
Interest expense-financing fees	(9)	(29)	(18)	(85)
Other	—	21	—	21
Loss from continuing operations before taxes	(1,160)	(11,301)	(1,754)	(15,110)
Income tax expense (benefit)	66	(3,167)	147	(3,130)
Loss from continuing operations, net of taxes	(1,226)	(8,134)	(1,901)	(11,980)
Loss from discontinued operations (net of taxes of $0)	(160)	(264)	(291)	(431)
Net loss	(1,386)	(8,398)	(2,192)	(12,411)
Net loss attributable to non-controlling interest	(217)	(164)	(296)	(337)
Net loss attributable to Perma-Fix Environmental Services, Inc. common stockholders	$ (1,169)	$ (8,234)	$ (1,896)	$ (12,074)
Net loss per common share attributable to Perma-Fix Environmental Services, Inc. stockholders - basic and diluted:				
Continuing operations	$ (.09)	$ (.69)	$ (.14)	$ (1.00)
Discontinued operations	(.01)	(.02)	(.02)	(.04)
Net loss per common share	$ (.10)	$ (.71)	$ (.16)	$ (1.04)
Number of common shares used in computing net loss per share:				
Basic	11,698	11,574	11,690	11,566
Diluted	11,698	11,574	11,690	11,566

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

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

(Amounts in Thousands)	Three Months Ended June 30, 2017	Three Months Ended June 30, 2016	Six Months Ended June 30, 2017	Six Months Ended June 30, 2016
Net loss	$ (1,386)	$ (8,398)	$ (2,192)	$ (12,411)
Other comprehensive income (loss):				
Foreign currency translation gain (loss)	15	(70)	27	(17)
Comprehensive loss	(1,371)	(8,468)	(2,165)	(12,428)
Comprehensive loss attributable to non-controlling interest	(217)	(164)	(296)	(337)
Comprehensive loss attributable to Perma-Fix Environmental Services, Inc. stockholders	$ (1,154)	$ (8,304)	$ (1,869)	$ (12,091)

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

PERMA-FIX ENVIRONMENTAL SERVICES, INC
Consolidated Statement of Stockholders' Equity
For the Six Months Ended June 30, 2017

(Amounts in thousands, except for share amounts)	Common Stock Shares	Common Stock Amount	Additional Paid-In Capital	Common Stock Held In Treasury	Accumulated Other Comprehensive Loss	Non-controlling Interest in Subsidiary	Accumulated Deficit	Total Stockholders' Equity
Balance at December 31, 2016 (Audited)	11,677,025	$ 11	$ 106,048	$ (88)	$ (162)	$ (725)	$ (74,213)	$ 30,871
Net loss	—	—	—	—	—	(296)	(1,896)	(2,192)
Foreign currency translation	—	—	—	—	27	—	—	27
Issuance of Common Stock for services	28,964	—	103	—	—	—	—	103
Stock-Based Compensation	—	—	41	—	—	—	—	41
Balance at June 30, 2017 (Unaudited)	11,705,989	$ 11	$ 106,192	$ (88)	$ (135)	$ (1,021)	$ (76,109)	$ 28,850

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)	Six Months Ended June 30, 2017	2016
Cash flows from operating activities:		
Net loss	$ (2,192)	$ (12,411)
Less: loss from discontinued operations, net of taxes of $0	(291)	(431)
Loss from continuing operations, net of taxes	(1,901)	(11,980)
Adjustments to reconcile loss from continuing operations to cash used in operating activities:		
Depreciation and amortization	2,288	1,796
Amortization of debt discount	18	151
Deferred tax expense (benefit)	70	(3,130)
Provision for (recovery of) bad debt reserves	81	(351)
(Gain) loss on disposal of property and equipment	(1)	4
Impairment loss on tangible assets	—	1,816
Impairment loss on intangible assets	—	8,288
Issuance of common stock for services	103	116
Stock-based compensation	41	45
Changes in operating assets and liabilities of continuing operations		
Restricted cash	—	35
Accounts receivable	246	(189)
Unbilled receivables	(845)	1,186
Prepaid expenses, inventories and other assets	37	1,789
Accounts payable, accrued expenses and unearned revenue	(881)	(1,041)
Cash used in continuing operations	(744)	(1,465)
Cash used in discontinued operations	(284)	(458)
Cash used in operating activities	(1,028)	(1,923)
Cash flows from investing activities:		
Purchases of property and equipment	(116)	(28)
Proceeds from sale of property and equipment	7	2
Proceeds from/(payment to) finite risk sinking fund	5,880	(45)
Cash provided by (used in) investing activities of continuing operations	5,771	(71)
Cash provided by investing activities of dicontinued operations	34	51
Cash provided by (used in) investing activities	5,805	(20)
Cash flows from financing activities:		
Repayments of revolving credit borrowings	(22,755)	(26,594)
Borrowing on revolving credit	18,952	29,131
Release of proceeds for stock subscription for Perma-Fix Medical S.A. previously held in escrow	—	64
Principal repayments of long term debt	(609)	(889)
Principal repayments of long term debt-related party	—	(750)
Payment of debt issuance costs	—	(71)
Cash (used in) provided by financing activities of continuing operations	(4,412)	891
Effect of exchange rate changes on cash	7	(4)
Increase (decrease) in cash	372	(1,056)
Cash at beginning of period	163	1,435
Cash at end of period	$ 535	$ 379
Supplemental disclosure:		
Interest paid	$ 194	$ 204
Income taxes paid	12	25

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

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, 2016.

1. Basis of Presentation

The consolidated condensed 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 condensed 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 six months ended June 30, 2017 are not necessarily indicative of results to be expected for the fiscal year ending December 31, 2017.

The Company suggests that these consolidated condensed 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, 2016.

Reclassification
Certain prior year amounts have been reclassified to conform to the current year presentation.

2. Summary of Significant Accounting Policies

Recently Issued Accounting Standards – Not Yet Adopted
In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2014-09, "Revenue from Contracts with Customers (Topic 606)," as amended, which will supersede nearly all existing revenue recognition guidance. ASU 2014-09 provides a single, comprehensive revenue recognition model for all contracts with customers. ASU 2014-09 requires a company to recognize revenue to depict the transfer of goods or services to a customer at an amount that reflects the consideration it expects to receive in exchange for those goods or services. ASU 2014-09 also requires additional disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and changes in judgments and assets recognized from costs incurred to obtain or fulfill a contract. ASU 2014-09, as amended, is effective for annual reporting periods beginning after December 15, 2017 (including interim reporting periods within those periods). Early adoption is permitted for ASU 2014-09, as amended, to the original effective date of the period beginning after December 15, 2016 (including interim reporting periods within those periods). ASU 2014-09 may be applied retrospectively to each prior period presented or retrospectively with the cumulative effect recognized as of the date of initial application. The Company is currently analyzing the effect of the standard across all of its revenue streams to evaluate the impact of the new standard on revenue contracts. This includes reviewing current accounting policies and practices to identify potential differences that would result from applying the requirements under the new standard. The Company plans to adopt the standard in the first quarter of 2018 and anticipates using the modified retrospective method by recognizing the cumulative effect of initially applying the new standard as an adjustment to the opening balance of retained earnings.

In February 2016, the FASB issued ASU No. 2016-02, “Leases (Topic 842).” Under ASU 2016-02, an entity will be required to recognize right-of-use assets and lease liabilities on its balance sheet and disclose key information about leasing arrangements. ASU 2016-02 offers specific accounting guidance for a lessee, a lessor and sale and leaseback transactions. Lessees and lessors are required to disclose qualitative and quantitative information about leasing arrangements to enable a user of the financial statements to assess the amount, timing and uncertainty of cash flows arising from leases. For public companies, ASU 2016-02 is effective for annual reporting periods beginning after December 15, 2018, including interim periods within that reporting period, and requires a modified retrospective adoption, with early adoption permitted. The Company is still evaluating the potential impact of adopting this guidance on our financial statements.

In August 2016, the FASB issued ASU 2016-15, "Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments (a consensus of the Emerging Issues Task Force)," which aims to eliminate diversity in practice in how certain cash receipts and cash payments are presented and classified in the statement of cash flows under Topic 230, Statement of Cash Flows, and other Topics. Subsequently, in November 2016, the FASB issued ASU 2016-18, "Statement of Cash Flows (Topic 230), Restricted Cash, a consensus of the FASB Emerging Issues Task Force," which clarifies the guidance on the cash flow classification and presentation of changes in restricted cash or restricted cash equivalents. Therefore, amounts generally described as restricted cash or restricted cash equivalents should be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flow. ASU 2016-15 and ASU 2016-18 are effective for annual reporting periods, and interim periods therein, beginning after December 15, 2017. The Company does not expect the adoption of these ASUs to have a material impact on our financial statements.

In October 2016, the FASB issued ASU 2016-16, “Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory,” which eliminates the existing exception in U.S. GAAP prohibiting the recognition of the income tax consequences for intra-entity asset transfers. Under ASU 2016-16, entities will be required to recognize the income tax consequences of intra-entity asset transfers other than inventory when the transfer occurs. ASU 2016-16 is effective on a modified retrospective basis for fiscal years, and for interim periods within those fiscal years, beginning after December 15, 2017, with early adoption permitted. The Company does not expect the adoption of this ASU to have a material impact on our financial statements.

In January 2017, the FASB issued ASU No. 2017-01, “Business Combinations (Topic 805) – Clarifying the Definition of a Business.” ASU 2017-01 clarifies the definition of a business with the objective of adding guidance to assist entities with evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. The definition of a business affects many areas of accounting including acquisition, disposals, goodwill and consolidation. This standard is effective for fiscal years beginning after December 15, 2017, including interim periods within that reporting period. The Company does not expect the adoption of this ASU to have a material impact on its consolidated financial statements

In January 2017, the FASB issued ASU No. 2017-03, “Accounting Changes and Error Corrections (Topic 250) and Investments – Equity Method and Joint Ventures (Topic 232) – Amendments to SEC Paragraphs Pursuant to staff Announcements at the September 22, 2016 and November 17, 2016 EITF Meetings.” This amendment states that registrants should consider additional qualitative disclosures if the impact of an issued but not yet adopted ASU is unknown or cannot be reasonably estimated and to include a description of the effect of the accounting policies that the registrant expects to apply, if determined. Transition guidance included in certain issued but not yet adopted ASUs were also updated to reflect this update. The Company does not expect the adoption of the new accounting rules to have a material impact on the Company’s financial condition, results of operations and cash flows.

In May 2017, the FASB issued ASU 2017-09, “Compensation – Stock Compensation (Topic 718): Scope of Modification Accounting. This ASU provides guidance about which changes to the terms or conditions of a share-based payment award require an entity to apply modification accounting in Topic 718. ASU 2017-09 is effective for fiscal years beginning after December 15, 2017 and interim periods within those fiscal years, and early adoption is permitted, including in an interim period. ASU 2017-09 is to be applied on a prospective basis to an award modified on or after the adoption date. The Company does not expect the adoption of ASU 2017-09 to have a material impact on our financial statements.

3. Intangible Assets

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

		June 30, 2017			December 31, 2016		
Intangibles (amount in thousands)	Useful Lives (Years)	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Patent	3 - 17	$ 591	(290)	$ 301	$ 577	$ (274)	$ 303
Software	3	405	(393)	12	405	(383)	22
Customer relationships	12	3,370	(2,110)	1,260	3,370	(1,974)	1,396
Permit	10	545	(455)	90	545	(428)	117
Total		$ 4,911	$ (3,248)	$ 1,663	$ 4,897	$ (3,059)	$ 1,838

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 Company has only one definite-lived permit that is subject to amortization.

The following table summarizes the expected amortization over the next five years for our definite-lived intangible assets (including the one definite-lived permit):

Year	Amount (In thousands)
2017 (remaining)	$ 184
2018	337
2019	254
2020	218
2021	198

Amortization expenses relating to the definite-lived intangible assets as discussed above was $95,000 and $189,000 for the three and six months ended June 30, 2017, respectively, and $138,000 and $240,000 for the three and six months ended June 30, 2016, respectively.

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

The Company has certain stock option plans under which it awards incentive and non-qualified stock options to employees, officers, and outside directors.

On January 13, 2017, the Company granted 6,000 non-qualified stock options ("NQSOs") from the Company's 2003 Outside Directors Stock Plan to a new director elected by the Company's Board of Directors ("Board") to fill the vacancy left by Mr. Jack Lahav who retired from the Board in October 2016. The options granted were for a contractual term of ten years with a vesting period of six months. The exercise price of the NQSO was $3.79 per share, which was equal to our closing stock price the day preceding the grant date, pursuant to the 2003 Outside Directors Stock Plan.

On May 15, 2016, the Company granted 50,000 incentive stock options ("ISOs") from the Company's 2010 Stock Option Plan to our Executive Vice President ("EVP")/Chief Operating Officer ("COO"). The ISOs granted were for a contractual term of six years with one-third yearly vesting over a three year period. The exercise price of the ISO was $3.97 per share, which was equal to the fair market value of the Company's Common Stock on the date of grant.

The summary of the Company's total Stock Option Plans as of June 30, 2017, as compared to June 30, 2016, and changes during the periods then ended, are presented below. The Company's Plans consist of the 2010 Stock Option Plan and the 2003 Outside Directors Stock Plan:

	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value (2)
Options outstanding January 1, 2017	247,200	$ 6.69		
Granted	6,000	3.79		
Exercised	—	—		
Forfeited/expired	(30,000)	5.00		
Options outstanding end of period (1)	223,200	$ 6.84	4.5	$ 13,080
Options exercisable at June 30, 2017(1)	180,534	$ 7.51	4.3	$ 13,080
Options exercisable and expected to be vested at June 30, 2017	223,200	$ 6.84	4.5	$ 13,080

	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value(2)
Options outstanding January 1, 2016	218,000	$ 7.65		
Granted	50,000	3.79		
Exercised	—	—		
Forfeited/expired	—	—		
Options outstanding end of period (1)	268,000	$ 6.96	4.6	$ 134,102
Options exercisable at June 30, 2016(1)	181,533	$ 8.18	4.4	$ 74,802
Options exercisable and expected to be vested at June 30, 2016	254,883	$ 7.10	4.6	$ 125,230

The Company estimates the 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.

	Outside Director Stock Options Granted January 13, 2017
Weighted-average fair value per option	$ 2.63
Risk -free interest rate (1)	2.40%
Expected volatility of stock (2)	56.32%
Dividend yield	None
Expected option life (years) (3)	10.0

		Employee Stock Option Granted May 15, 2016
Weighted-average fair value per share	$	2.00
Risk -free interest rate (1)		1.27%
Expected volatility of stock (2)		53.12%
Dividend yield		None
Expected option life (years) (3)		6.0

(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 six months ended June 30, 2017 and 2016 for our employee and director stock options.

Stock Options	Three Months Ended June 30,				Six Months Ended June 30,			
		2017		2016		2017		2016
Employee Stock Options	$	11,000	$	17,000	$	21,000	$	31,000
Director Stock Options		8,000		—		20,000		14,000
Total	$	19,000	$	17,000	$	41,000	$	45,000

As of June 30, 2017, the Company has approximately $64,000 of total unrecognized compensation cost related to unvested options, of which $18,000 is expected to be recognized in remaining 2017, $33,000 in 2018, with the remaining $13,000 in 2019.

During the six months ended June 30, 2017, the Company issued a total of 28,964 shares of its common stock under the 2003 Outside Directors Stock Plan to its outside directors as compensation for serving on our Board. The Company has recorded approximately $110,000 in compensation expenses for the six months ended June 30, 2017 (included in selling, general and administration expenses) in connection with the issuance of shares of its common stock to outside directors.

5. Income (Loss) Per Share

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

	Three Months Ended June 30, (Unaudited)		Six Months Ended June 30, (Unaudited)	
(Amounts in Thousands, Except for Per Share Amounts)	2017	2016	2017	2016
Net loss attributable to Perma-Fix Environmental Services, Inc., common stockholders:				
Loss from continuing operations attributable to Perma-Fix Environmental Services, Inc. common stockholders	$ (1,009)	$ (7,970)	$ (1,605)	$ (11,643)
Loss from discontinuing operations attributable to Perma-Fix Environmental Services, Inc. common stockholders	(160)	(264)	(291)	(431)
Net loss attributable to Perma-Fix Environmental Services, Inc. common stockholders	$ (1,169)	$ (8,234)	$ (1,896)	$ (12,074)
Basic loss per share attributable to Perma-Fix Environmental Services, Inc. common stockholders	$ (.10)	$ (.71)	$ (.16)	$ (1.04)
Diluted loss per share attributable to Perma-Fix Environmental Services, Inc. common stockholders	$ (.10)	$ (.71)	$ (.16)	$ (1.04)
Weighted average shares outstanding:				
Basic weighted average shares outstanding	11,698	11,574	11,690	11,566
Add: dilutive effect of stock options	—	—	—	—
Add: dilutive effect of warrants	—	—	—	—
Diluted weighted average shares outstanding	11,698	11,574	11,690	11,566
Potential shares excluded from above weighted average share calcualtions due to their anti-dilutive effect include:				
Upon exercise of options	205	171	205	183

6. Long Term Debt

Long-term debt consists of the following at June 30, 2017 and December 31, 2016:

(Amounts in Thousands)	June 30, 2017	December 31, 2016
Revolving Credit facility dated October 31, 2011, as amended, borrowings based upon eligible accounts receivable, subject to monthly borrowing base calculation, balance due March 24, 2021. Effective interest rate for the first six months of 2017 was 4.4%. (1)	$ —	$ 3,803
Term Loan dated October 31, 2011, as amended, payable in equal monthly installments of principal of $102, balance due on March 24, 2021. Effective interest rate for first six months of 2017 was 4.4%. (1) (2)	4,439 (3)	5,030 (3)
Total debt	4,439	8,833
Less current portion of long-term debt	1,184	1,184
Long-term debt	$ 3,255	$ 7,649

(1) Our revolving credit facility is collateralized by our accounts receivable and our term loan is collateralized by our property and equipment.

(2) Prior to April 1, 2016, the monthly installment payment under the term loan was approximately $190,000.

(3) Net of debt issuance costs of ($133,000) and ($151,000) at June 30, 2017 and December 31, 2016, respectively.

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 ("Loan Agreement"), with PNC National Association ("PNC"), acting as agent and lender. The Loan Agreement, as subsequently amended ("Amended Loan Agreement"), provides 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"), subject to the amount of borrowings based on a percentage of eligible receivables (as defined) and (b) a term loan ("term loan") of approximately $6,100,000, which requires monthly installments of approximately $101,600 (based on a seven-year amortization).

Under the Amended Loan Agreement, the Company has the option of paying an annual rate of interest due on the revolving credit at prime (4.25% at June 30, 2017) plus 2% or London Inter Bank Offer Rate ("LIBOR") plus 3% and the term loan at prime plus 2.5% or LIBOR plus 3.5%.

Pursuant to the Amended Loan Agreement, the Company may terminate the Amended Loan Agreement, upon 90 days' prior written notice upon payment in full of its obligations under the Amended Loan Agreement. The Company agreed to pay PNC 1.0% of the total financing in the event the Company had paid off its obligations on or before March 23, 2017, .50% of the total financing if the Company pays off its obligations after March 23, 2017 but prior to or on March 23, 2018, and .25% of the total financing if the Company pays off its obligations after March 23, 2018 but prior to or on March 23, 2019. No early termination fee shall apply if the Company pays off its obligations after March 23, 2019.

At June 30, 2017, the availability under our revolving credit was $3,302,000, based on our eligible receivables and includes an indefinite reduction of borrowing availability of $2,000,000 that the Company's lender has imposed, which includes $750,000 that was imposed immediately upon the Company's receipt of finite risk sinking funds on May 1, 2017, in connection with the cancellation of the closure policy for the Company's Perma-Fix Northwest Richland, Inc. ("PFNWR") subsidiary (see "Note 8 – Commitments and Contingencies – Insurance" below for further information of the PFNWR closure policy and the receipt of the related sinking funds).

The Company's credit facility 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 quarterly financial covenants in the first and second quarters of 2017 and expects to meet its quarterly financial covenants in each of the remaining quarters of 2017 and the first nine months of 2018.

7. East Tennessee Materials and Energy Corporation ("M&EC")

The Company continues its plan to close its M&EC facility by the end of the M&EC's lease term of January 21, 2018. Operations at the M&EC facility are continuing during the remaining term of the lease and the facility continues to transition waste shipments and operational capabilities to our other Treatment Segment facilities, subject to customer requirements and regulatory approvals. Simultaneously, the Company continues with the required clean-up/maintenance procedures at M&EC's Oak Ridge, Tennessee facility in accordance with M&EC's Resource Conservation and Recovery Act ("RCRA") permit requirements.

At June 30, 2017, total accrued closure liabilities for our M&EC subsidiary totaled approximately $2,745,000 which are recorded as current liabilities. At December 31, 2016, M&EC had long-term closure liabilities of approximately $881,000 which were reclassified to current at March 31, 2017. The following reflects changes to the closure liabilities for the M&EC subsidiary from year end 2016:

Amounts in thousands	
Balance as of December 31, 2016	3,058
Accretion expense	94
Payments	(407)
Balance as of June 30, 2017	$ 2,745

Revenues for the M&EC subsidiary were $1,692,000 and $5,072,000 for the three and six months ended June 30, 2017, respectively, and $1,382,000 and $2,755,000 for the corresponding periods of 2016, respectively.

8. 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 would have a material adverse effect on our financial position, liquidity or results of future operations.

Insurance

The Company has a 25-year finite risk insurance policy entered into in June 2003 with American International Group, Inc. (“AIG”), which provides financial assurance to the applicable states for our permitted facilities in the event of unforeseen closure. The policy, as amended, provides for a maximum allowable coverage of $39,000,000 and has available capacity to allow for annual inflation and other performance and surety bond requirements. All of the required payments for this finite risk insurance policy, as amended, were previously made by the Company. At June 30, 2017, our financial assurance coverage amount under this policy totaled approximately $29,473,000. The Company has recorded $15,608,000 and $15,546,000 in sinking funds related to this policy in other long term assets on the accompanying Consolidated Balance Sheets at June 30, 2017 and December 31, 2016, respectively, which includes interest earned of $1,136,000 and $1,075,000 on the sinking funds as of June 30, 2017 and December 31, 2016, respectively. Interest income for the three and six months ended June 30, 2017 was approximately $34,000 and $61,000, respectively. Interest income for the three and six month periods ended June 30, 2016, was approximately $24,000 and $38,000, respectively. If the Company so elects, AIG is obligated to pay us an amount equal to 100% of the 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.

The Company also had a finite risk insurance policy dated August 2007 for our PFNWR facility with AIG (“PFNWR policy”) which provided financial assurance to the State of Washington in the event of closure of the PFNWR facility. The Company had recorded $5,941,000 in finite risk sinking funds at December 31, 2016 in other long term assets on the accompanying Consolidated Balance Sheets which included interest earned of $241,000 on the sinking fund. In April 2017, the Company received final releases from state and federal regulators for the PFNWR policy which enabled the Company to cancel the PFNWR policy resulting in the release of approximately $5,951,000 on May 1, 2017 in finite sinking funds previously held by AIG as collateral for the PFNWR policy. The Company used the released finite sinking funds to pay off its revolving credit with the remaining funds to be used for general working capital needs. The Company has acquired new bonds in the required amount of approximately $7,000,000 (“new bonds”) to replace the PFNWR policy in providing financial assurance for the PFNWR facility. Upon receipt of the $5,951,000 in finite sinking funds from AIG, the Company and its lender executed a standby letter of credit in the amount of $2,500,000 as collateral for the new bonds for the PFNWR facility. In addition, the Company’s lender placed an additional $750,000 restriction on the Company’s borrowing availability pursuant to a “Condition Subsequent” clause in the November 17, 2016 amendment that the Company entered into with its lender. Interest income earned under the PFNWR policy for the three and six months ended June 30, 2017 was approximately $2,000 and $10,000, respectively. Interest income for the three and six month periods ended June 30, 2016, was approximately $5,000 and $7,000, respectively.

Letter of Credits and Bonding Requirements
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 June 30, 2017, the total amount of standby letters of credit outstanding totaled approximately $2,675,000 and the total amount of bonds outstanding totaled approximately $8,253,000.

9. Discontinued Operations

The Company's discontinued operations consist of all our subsidiaries included in our Industrial Segment: (1) subsidiaries divested in 2011 and prior, (2) two previously closed locations, and (3) our PFSG facility, which is currently in the process of undergoing closure, subject to regulatory approval of necessary plans and permits.

The Company's discontinued operations had losses of $160,000 and $264,000 for the three months ended June 30, 2017 and 2016, respectively (net of taxes of $0 for each period) and losses of $291,000 and $431,000 for the six months ended June 30, 2017 and 2016, 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 each of the periods noted above.

The following table presents the major class of assets of discontinued operations at June 30, 2017 and December 31, 2016.

(Amounts in Thousands)	June 30, 2017	December 31, 2016
Current assets		
Other assets	$ 92	$ 85
Total current assets	92	85
Long-term assets		
Property, plant and equipment, net [1]	81	81
Other assets	232	268
Total long-term assets	313	349
Total assets	$ 405	$ 434
Current liabilities		
Accounts payable	$ 53	$ 13
Accrued expenses and other liabilities	276	268
Environmental liabilities	637	677
Total current liabilities	966	958
Long-term liabilities		
Closure liabilities	116	113
Environmental liabilities	248	248
Total long-term liabilities	364	361
Total liabilities	$ 1,330	$ 1,319

[1] net of accumulated depreciation of $10,000 for each period presented.

The Company's discontinued operations include a note receivable in the amount of approximately $375,000 recorded in May 2016 resulting from the sale of property at our Perma-Fix of Michigan, Inc. subsidiary. This note requires 60 equal monthly installment payments by the buyer of approximately $7,250 (which includes interest). At June 30, 2017, the outstanding amount on this note receivable totaled approximately $302,000, of which approximately $70,000 is included in "Current assets related to discontinued operations" and approximately $232,000 is included in "Other assets related to discontinued operations" in the accompanying Consolidated Balance Sheets.

10. Operating Segments

In accordance with ASC 280, “Segment Reporting”, the Company defines an operating segment as a business activity: (a) 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 reporting includes:

- nuclear, low-level radioactive, mixed, hazardous and non-hazardous waste treatment, processing and disposal services primarily through four 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:

- On-site waste management services to commercial and government customers;
- 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 industrial hygiene (“IH”) assessments; hazardous materials surveys, e.g., exposure monitoring; lead and asbestos management/abatement oversight; indoor air quality evaluations; health risk and exposure assessments; health & safety plan/program development, compliance auditing and training services; and Occupational Safety and Health Administration (“OSHA”) citation assistance;
  - 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;
- 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; site construction; logistics; transportation; and emergency response; and
- A company owned equipment calibration and maintenance laboratory that services, maintains, calibrates, and sources (i.e., rental) of health physics, IH and customized nuclear, environmental, and occupational safety and health (“NEOSH”) instrumentation.

MEDICAL SEGMENT reporting includes: R&D costs for the new medical isotope production technology from our majority-owned Polish subsidiary, PF Medical. The Medical Segment has not generated any revenue as it continues to be primarily in the R&D stage. All costs incurred for the Medical Segment are reflected within R&D in the accompanying Consolidated Statements of Operations and consist primarily of employee salaries and benefits, laboratory costs, third party fees, and other related costs associated with the development of this new technology.

Our reporting segments exclude our corporate headquarters and our discontinued operations (see Note 9 – “Discontinued Operations”) which do not generate revenues.

The table below presents certain financial information of our operating segments for the three and six months ended June 30, 2017 and 2016 (in thousands).

Segment Reporting for the Quarter Ended June 30, 2017

	Treatment	Services	Medical	Segments Total	Corporate [1]	Consolidated Total
Revenue from external customers	$ 9,630	$ 3,085	—	$ 12,715	$ —	$ 12,715
Intercompany revenues	97	7	—	104	—	—
Gross profit	2,174	180	—	2,354	—	2,354
Research and development	62	—	550	612	7	619
Interest income	—	—	—	—	36	36
Interest expense	(18)	—	—	(18)	(72)	(90)
Interest expense-financing fees	—	—	—	—	(9)	(9)
Depreciation and amortization	988	135	—	1,123	10	1,133
Segment income (loss) before income taxes	1,238	(553)	(550)	135	(1,295)	(1,160)
Income tax expense	65	—	—	65	1	66
Segment income (loss)	1,173	(553)	(550)	70	(1,296)	(1,226)
Expenditures for segment assets	91	3	—	94	—	94

Segment Reporting for the Quarter Ended June 30, 2016

	Treatment	Services	Medical	Segments Total	Corporate [1]	Consolidated Total
Revenue from external customers	$ 7,985	$ 6,824	—	$ 14,809	$ —	$ 14,809
Intercompany revenues	6	10	—	16	—	—
Gross profit	582	1,234	—	1,816	—	1,816
Research and development	120	7	416	543	11	554
Interest income	2	—	—	2	29	31
Interest expense	(14)	—	—	(14)	(94)	(108)
Interest expense-financing fees	—	—	—	—	(29)	(29)
Depreciation and amortization	705	160	—	865	47	912
Segment (loss) income before income taxes	(10,557) [2]	1,046	(416)	(9,927)	(1,374)	(11,301)
Income tax benefit	(3,167) [2]	—	—	(3,167)	—	(3,167)
Segment (loss) income	(7,390)	1,046	(416)	(6,760)	(1,374)	(8,134)
Expenditures for segment assets	16	4	—	20	—	20

Segment Reporting for the Six Months Ended June 30, 2017

	Treatment	Services	Medical	Segments Total	Corporate [1]	Consolidated Total
Revenue from external customers	$ 19,665	$ 5,757	—	$ 25,422	$ —	$ 25,422
Intercompany revenues	113	10	—	123	—	—
Gross profit	4,861	212	—	5,073	—	5,073
Research and development	243	—	750	993	15	1,008
Interest income	—	—	—	—	71	71
Interest expense	(26)	(1)	—	(27)	(162)	(189)
Interest expense-financing fees	—	—	—	—	(18)	(18)
Depreciation and amortization	1,997	271	—	2,268	20	2,288
Segment income (loss) before income taxes	2,840	(1,260)	(750)	830	(2,584)	(1,754)
Income tax expense	145	—	—	145	2	147
Segment income (loss)	2,695	(1,260)	(750)	685	(2,586)	(1,901)
Expenditures for segment assets	106	10	—	116	—	116

Segment Reporting for the Six Months Ended June 30, 2016

	Treatment	Services	Medical	Segments Total	Corporate [1]	Consolidated Total
Revenue from external customers	$ 15,189	$ 9,658	—	$ 24,847	$ —	$ 24,847
Intercompany revenues	10	15	—	25	—	—
Gross profit	444	1,406	—	1,850	—	1,850
Research and development	226	33	854	1,113	15	1,128
Interest income	2	—	—	2	45	47
Interest expense	(16)	—	—	(16)	(260)	(276)
Interest expense-financing fees	—	—	—	—	(85)	(85)
Depreciation and amortization	1,418	321	—	1,739	57	1,796
Segment (loss) income before income taxes	(11,805) [2]	322	(854)	(12,337)	(2,773)	(15,110)
Income tax benefit	(3,130) [2]	—	—	(3,130)	—	(3,130)
Segment (loss) income	(8,675)	322	(854)	(9,207)	(2,773)	(11,980)
Expenditures for segment assets	23	4	1	28	—	28

[1] Amounts reflect the activity for corporate headquarters not included in the segment information.

[2] Amounts include tangible and intangible asset impairment losses of $1,816,000 and $8,288,000, respectively for the Company's M&EC subsidiary. Also includes a tax benefit of approximately $3,203,000 recorded resulting from the intangible impairment loss recorded for our M&EC subsidiary.

11. Income Taxes

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

The Company had income tax expenses of $66,000 and $147,000 for continuing operations for the three and six months ended June 30, 2017, respectively, and income tax benefits of $3,167,000 and $3,130,000 for continuing operations for the three and six months ended June 30, 2016, respectively. The Company's effective tax rates were approximately 5.7% and 8.4% for the three and six months ended June 30, 2017, respectively, and (28.0%) and (20.7%) for the three and six months ended June 30, 2016, respectively. The Company's income tax benefits for the three and six months ended June 30, 2016 was primarily the result of a tax benefit recorded in the amount of $3,203,000 resulting from the permit impairment loss recorded for the Company's M&EC subsidiary.

12. Related Party Transaction

Mr. John Climaco

Mr. John Climaco served as a member of the Company's Board from October 2013 until the Company's 2017 Annual Meeting of Stockholders held July 27, 2017, when he ceased being a member of the Company's Board. On June 30, 2017, Mr. Climaco ceased being the EVP of PF Medical. As EVP of PF Medical, Mr. Climaco earned compensation of $75,000 and $150,000 for the six month ended June 30, 2017 and twelve months ended December 31, 2016, respectively.

13. Subsequent Events

Option Plans

The Company adopted the 2017 Stock Option Plan ("2017 Plan"), which was approved by the Company's stockholders at the Company's Annual Meeting of Stockholders on July 27, 2017 (the "Annual Meeting"). The 2017 Plan authorizes the grant of options to officers and employees of the Company, including any employee who is also a member of the Board of Directors, as well as to consultants of the Company. The 2017 Plan authorizes an aggregate grant of 540,000 NQSOs and ISOs, which includes a rollover of 140,000 options remaining available for issuance under the 2010 Stock Option Plan. As a result of the approval of the 2017 Stock Option Plan, no further options will be granted under the 2010 Stock Option Plan. In all other respects, the 2010 Stock Option Plan will remain in full force and effect with respect to all outstanding options granted under the 2010 Stock Option Plan, which stands at 60,000. Consultants of the Company can only be granted NQSOs. The term of each stock option granted under the 2017 Plan shall be fixed by the Compensation and Stock Option Committee ("Compensation Committee"), but no stock options will be exercisable more than ten years after the grant date, or in the case of an ISO granted to a 10% stockholder, five years after the grant date. The exercise price of any ISO granted under the 2017 Plan to an individual who is not a 10% stockholder at the time of the grant shall not be less than the fair market value of the shares at the time of the grant, and the exercise price of any incentive stock option granted to a 10% stockholder shall not be less than 110% of the fair market value at the time of grant. The exercise price of any NQSOs granted under the plan shall not be less than the fair market value of the shares at the time of grant.

At the Annual Meeting, the Company's shareholders also approved an amendment to the 2003 Outside Directors Stock Plan ("2003 Plan") which authorizes the issuance of an additional 300,000 shares of the Company's common stock under the plan. Immediately prior to the approval of this amendment by the Company's shareholders, the 2003 Plan had available for issuance approximately 99,900 shares.

Grant of Options
On July 27, 2017, the Company's appropriate committees of the Board and the Board approved the grant of incentive stock options ("ISOs") from the 2017 Plan (which was approved by our stockholders as discussed above) to our named executive officers as follows: 50,000 ISOs to our Chief Executive Officer (Louis F. Centofanti); 100,000 ISOs to our EVP/COO (Mr. Mark Duff); and 50,000 ISOs to our Chief Financial Officer (Mr. Ben Naccarato). The ISOs granted were for a contractual term of six years with one-fifth yearly vesting over a five year period. The exercise price of the ISO was $3.65 per share, which was equal to the fair market value of the Company's common stock on the date of grant.

Robert L. Ferguson
Mr. Robert Ferguson ("Ferguson") is a consultant to the Company's Board of Directors ("Board") and a consultant to the Company in connection with the Company's Test Bed Initiative ("TBI") at its PFNWR facility. For Ferguson's consulting work with the Board, he has been receiving compensation of $4,000 a month. For Ferguson's consulting work in connection with the Company's TBI, on July 27, 2017 ("grant date"), the Compensation Committee and the Board granted Ferguson a stock option from the Company's 2017 Plan (see above for a discussion of the 2017 Plan) for the purchase of up to 100,000 shares of the Company's common stock at an exercise price of $3.65 a share, which was the fair market value of the Company's common stock on the date of grant ("Ferguson Stock Option"). The exercise of the Ferguson Stock Option is subject to the achievement of the following milestones:

- Upon treatment and disposal of three (3) gallons of waste at the PFNWR facility by January 27, 2018, 10,000 shares of the Ferguson Stock Option shall become exercisable;

- Upon treatment and disposal of 2,000 gallons of waste at the PFNWR facility by January 27, 2019, 30,000 shares of the Ferguson Stock Option shall become exercisable; and

- Upon treatment and disposal of 50,000 gallons of waste at the PFNWR facility and assistance, on terms satisfactory to the Company, in preparing certain justifications of cost and pricing data for the waste and obtaining a long-term commercial contract relating to the treatment, storage and disposal of waste by January 27, 2021, 60,000 shares of the Ferguson Stock Option shall become exercisable.

The term of the Ferguson Stock Option is seven (7) years from the grant date. Each of the milestones is exclusive of each other; therefore, achievement of any of the milestones above by Ferguson by the designated date will provide Ferguson the right to exercise the number of options in accordance with the milestone attained. The Company will account for this transaction in accordance with ASC 505-50, "Equity-Based Payments to Non-Employees."

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;
- continue to focus on expansion into both commercial and international markets to increase revenues;
- reductions in the level of government funding in future years;
- reducing operating costs;
- expect to meet our quarterly financial covenant requirements in remaining quarters of 2017 and the first nine months of 2018;
- cash flow requirements;
- government funding for our services;
- may not have liquidity to repay debt if our lender accelerates payment of our borrowings;
- our cash flows from operations, our available liquidity from our credit facility, and the remaining finite risk sinking funds that we received are sufficient to fund our operations;
- manner in which the government will be required to spend funding to remediate federal sites;
- fund capital expenditures from cash from operations and/or financing;
- fund remediation expenditures for sites from funds generated internally;
- compliance with environmental regulations;
- potential effect of being a PRP;
- further reduce or delay or eliminate R&D program if the Medical Segment is unable to raise the necessary capital; and
- potential sites for violations of environmental laws and remediation of our facilities.

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

- general economic conditions;
- material reduction in revenues;
- ability 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 federal agencies or subcontracts involving federal agencies, or reduction in amount of waste delivered to the Company under the contracts or subcontracts;
- renegotiation of contracts involving the federal government;

- 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;
- lender refuses to waive non-compliance or revise our covenant so that we are in compliance in the event of default; and
- risk factors and other factors set forth in "Special Note Regarding Forward-Looking Statements" contained in the Company's 2016 Form 10-K and Form 10-Q for the quarters ended March 31, 2017 and June 30, 2017.

Overview

Revenue decreased $2,094,000 or 14.1% to $12,715,000 for the three months ended June 30, 2016 from $14,809,000 for the corresponding period of 2016. Revenue from our Services Segment decreased $3,739,000 or 54.8% primarily due the completion of a significant Nuclear services project in December 2016. Revenue from our Treatment Segment increased $1,645,000 or 20.6% primarily due to higher waste volume. Total gross profit increased $538,000 or 29.6% for the three months ended June 30, 2017 primarily due to the increase in revenue in our Treatment Segment. Total Selling, General, and Administrative ("SG&A") expenses increased $458,000 or 19.3% for the three months ended June 30, 2017 as compared to the corresponding period of 2016.

Revenue increased $575,000 or 2.3% to $25,422,000 for the six months ended June 30, 2017 from $24,847,000 for the corresponding period of 2016. The increase in revenue was primarily due to the increase in revenue in our Treatment Segment of approximately $4,476,000 or 29.5% from higher waste volume. Services Segment revenue decreased approximately $3,901,000 or 40.4% to $5,757,000 from $9,658,000. Total gross profit increased $3,223,000 or 174.2% for the six months ended June 30, 2017 as compared to the corresponding period of 2016 primarily due to higher revenue generated from our Treatment Segment. Total SG&A expenses increased $253,000 or 4.7% for the six months ended June 30, 2017 as compared to the corresponding period of 2016.

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 the current economic conditions and the manner in which the government will be required to spend funding to remediate federal sites. In addition, our 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. 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, during the latter part of 2016, our Medical Segment reduced substantially its R&D activities due to the need for capital to fund such activities. Our Medical Segment continues to seek various sources in order to raise this capital. We anticipate that our Medical Segment research and development ("R&D") activities will be limited until it obtains the necessary capital through obtaining its own credit facility or additional equity raise. If the Medical Segment is unable to raise the necessary capital, the Medical Segment could be required to further reduce or delay or eliminate its R&D program.

Results of Operations

The reporting of financial results and pertinent discussions are tailored to three reportable segments: The Treatment, Services, and Medical Segments. Our Medical Segment encompasses the operations of our majority-owned Polish subsidiary, PF Medical, which has not generated any revenue and all costs incurred are included within R&D.

Summary – Three and Six Months Ended June 30, 2017 and 2016.

	Three Months Ended June 30,				Six Months Ended June 30,			
Consolidated (amounts in thousands)	2017	%	2016	%	2017	%	2016	%
Net revenues	$ 12,715	100.0	$ 14,809	100.0	$ 25,422	100.0	$ 24,847	100.0
Cost of goods sold	10,361	81.5	12,993	87.7	20,349	80.0	22,997	92.6
Gross profit	2,354	18.5	1,816	12.3	5,073	20.0	1,850	7.4
Selling, general and administrative	2,833	22.3	2,375	16.0	5,684	22.4	5,431	21.9
Research and development	619	4.8	554	3.8	1,008	4.0	1,128	4.5
(Gain) loss on disposal of property and equipment	(1)	—	(1)	—	(1)	—	4	—
Impairment loss on tangible assets	—	—	1,816	12.3	—	—	1,816	7.3
Impairment loss on intangible assets	—	—	8,288	55.9	—	—	8,288	33.3
Loss from operations	(1,097)	(8.6)	(11,216)	(75.7)	(1,618)	(6.4)	(14,817)	(59.6)
Interest income	36	.3	31	.2	71	.3	47	.2
Interest expense	(90)	(.7)	(108)	(.7)	(189)	(.7)	(276)	(1.2)
Interest expense-financing fees	(9)	(.1)	(29)	(.2)	(18)	(.1)	(85)	(.3)
Other	—	—	21	.1	—	—	21	.1
Loss from continuing operations before taxes	(1,160)	(9.1)	(11,301)	(76.3)	(1,754)	(6.9)	(15,110)	(60.8)
Income tax expense (benefit)	66	.5	(3,167)	(21.4)	147	.6	(3,130)	(12.6)
Loss from continuing operations	$ (1,226)	(9.6)	$ (8,134)	(54.9)	$ (1,901)	(7.5)	$(11,980)	(48.2)

Consolidated Revenues

Consolidated revenues decreased $2,094,000 for the three months ended June 30, 2017, compared to the three months ended June 30, 2016, as follows:

(In thousands)	2017	% Revenue	2016	% Revenue	Change	% Change
Treatment						
Government waste	$ 7,124	56.0	$ 4,967	33.5	$ 2,157	43.4
Hazardous/non-hazardous	1,328	10.4	1,151	7.8	177	15.4
Other nuclear waste	1,178	9.3	1,867	12.6	(689)	(36.9)
Total	9,630	75.7	7,985	53.9	1,645	20.6
Services						
Nuclear services	2,404	18.9	6,456	43.6	(4,052)	(62.8)
Technical services	681	5.4	368	2.5	313	85.1
Total	3,085	24.3	6,824	46.1	(3,739)	(54.8)
Total	$ 12,715	100.0	$ 14,809	100.0	$ (2,094)	(14.1)

Treatment Segment revenue increased $1,645,000 or 20.6% for the three months ended June 30, 2017 over the same period in 2016. The revenue increase was primarily due to higher revenue generated from government clients of approximately $2,157,000 or 43.4% due to higher waste volume. Other nuclear waste revenue decreased by approximately $689,000 primarily due to lower averaged priced waste. Services Segment revenue decrease by $3,739,000 or 54.8% in the three months ended June 30, 2017 from the corresponding period of 2016 primarily due to the completion of a nuclear services project in December 2016 which had generated revenues of approximately $4,500,000 in the second quarter of 2016. Our Services Segment revenues are project based; as such, the scope, duration and completion of each project varies. As a result, our Services Segment revenues are subject to differences relating to timing and project value.

Consolidated revenues increased $575,000 for the six months ended June 30, 2017, as compared to the six months ended June 30, 2016, as follows:

(In thousands)	2017	% Revenue	2016	% Revenue	Change	% Change
Treatment						
Government waste	$ 14,434	56.8	$ 9,935	40.0	$ 4,499	45.3
Hazardous/non-hazardous	2,512	9.9	2,236	9.0	276	12.3
Other nuclear waste	2,719	10.7	3,018	12.1	(299)	(9.9)
Total	19,665	77.4	15,189	61.1	4,476	29.5
Services						
Nuclear services	4,495	17.6	8,841	35.6	(4,346)	(49.2)
Technical services	1,262	5.0	817	3.3	445	54.5
Total	5,757	22.6	9,658	38.9	(3,901)	(40.4)
Total	$ 25,422	100.0	$ 24,847	100.0	$ 575	2.3

Treatment Segment revenue increased $4,476,000 or 29.5% for the six months ended June 30, 2017 over the same period in 2016. The revenue increase was primarily due to higher revenue generated from government clients of approximately $4,499,000 or 45.3% due to higher waste volume. Services Segment revenue decrease by $3,901,000 or 40.4% in the six months ended June 30, 2017 from the corresponding period of 2016 primarily due to the completion of a nuclear services project in December 2016 which had generated revenues of approximately $5,090,000 during the first six months of 2016. Our Services Segment revenues are project based; as such, the scope, duration and completion of each project varies. 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 decreased $2,632,000 for the quarter ended June 30, 2017, as compared to the quarter ended June 30, 2016, as follows:

(In thousands)	2017	% Revenue	2016	% Revenue	Change
Treatment	$ 7,456	77.4	$ 7,403	92.7	$ 53
Services	2,905	94.2	5,590	81.9	(2,685)
Total	$ 10,361	81.5	$ 12,993	87.7	$ (2,632)

Cost of goods sold for the Treatment Segment increased by $53,000 or approximately 0.7%. Disposal/transportation/material and supplies costs increased by approximately $338,000 due to higher revenue. Our overall fixed costs were lower by approximately $285,000 resulting from the following: regulatory expense was lower by $534,000 as our second quarter 2016 cost of goods sold included a write-off of approximately $587,000 in prepaid fees resulting from the impairment of certain equipment at our East Tennessee Materials and Energy Corporation ("M&EC") facility due to the pending closure of the M&EC facility by January 2018. Such fees were incurred for emission performance testing certification requirements as mandated by the state; salaries and payroll related expenses were lower by approximately $156,000 due to lower headcount; depreciation expense was higher by approximately $283,000 due to the re-evaluation of the estimated useful lives of our M&EC facility's remaining tangible assets conducted during the second quarter of 2016 due to the pending closure of the facility; maintenance expense was higher by $36,000; and general expense was higher by approximately $86,000 in various categories. Services Segment cost of goods sold decreased $2,685,000 or 48.0% primarily due to the decrease in revenue as discussed above. The decrease in Services Segment's cost of goods sold was primarily in salaries and payroll related expenses, travel, and outside services expenses totaling approximately $1,650,000 with the remaining decrease primarily in material and supplies and disposal costs. Included within cost of goods sold is depreciation and amortization expense of $1,111,000 and $843,000 for the three months ended June 30, 2017, and 2016, respectively.

Cost of goods sold decreased $2,648,000 for the six months ended June 30, 2017, as compared to the six months ended June 30, 2016, as follows:

(In thousands)	2017	% Revenue	2016	% Revenue	Change
Treatment	$ 14,804	75.3	$ 14,745	97.1	$ 59
Services	5,545	96.3	8,252	85.4	(2,707)
Total	$ 20,349	80.0	$ 22,997	92.6	$ (2,648)

Cost of goods sold for the Treatment Segment increased by $59,000 or approximately 0.4%. Disposal/transportation/material and supplies costs increased by approximately $76,000 due to higher revenue. Our overall fixed costs were lower by approximately $17,000 resulting from the following: regulatory expense was lower by $464,000 as our second quarter 2016 cost of goods sold included a write-off of approximately $587,000 in prepaid fees resulting from the impairment of certain equipment at our M&EC facility due to its pending closure as discussed above. Such fees were incurred for emission performance testing certification requirements as mandated by the state; salaries and payroll related expenses were lower by approximately $326,000 due to lower headcount; depreciation expense was higher by approximately $579,000 due to the re-evaluation of the estimated useful lives of our M&EC facility's remaining tangible assets conducted during the second quarter of 2016 due to the pending closure of the facility by January 2018; maintenance expense was higher by $77,000; and general expense was higher by approximately $117,000 in various categories; Services Segment cost of goods sold decreased $2,707,000 or 32.8% primarily due to the decrease in revenue as discussed above. The decrease in Services Segment's cost of goods sold was primarily in salaries and payroll related expenses, travel, and outside services expenses totaling approximately $1,720,000 with the remaining decrease primarily in material and supplies and disposal costs. Included within cost of goods sold is depreciation and amortization expense of $2,245,000 and $1,695,000 for the six months ended June 30, 2017, and 2016, respectively.

Gross Profit

Gross profit for the quarter ended June 30, 2017 increased $538,000 over the same period in 2016, as follows:

(In thousands)	2017	% Revenue	2016	% Revenue	Change
Treatment	$ 2,174	22.6	$ 582	7.3	$ 1,592
Services	180	5.8	1,234	18.1	(1,054)
Total	$ 2,354	18.5	$ 1,816	12.3	$ 538

Treatment Segment gross profit increased $1,592,000 or 273.5% and gross margin increased to 22.6% from 7.3% primarily due to increased revenue from higher waste volume and lower overall fixed costs. In the Services Segment, the decreases in gross profit of $1,054,000 or 85.4% and gross margin of approximately 12.3% was primarily due to the decrease 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 six months ended June 30, 2017, increased $3,223,000 over 2016, as follows:

(In thousands)	2017	% Revenue	2016	% Revenue	Change
Treatment	$ 4,861	24.7	$ 444	2.9	$ 4,417
Services	212	3.7	1,406	14.6	(1,194)
Total	$ 5,073	20.0	$ 1,850	7.4	$ 3,223

Treatment Segment gross profit increased $4,417,000 or 994.8% and gross margin increased to 24.7% from 2.9% primarily due to increased revenue from higher waste volume and revenue mix. In the Services Segment, the decreases in gross profit of $1,194,000 or 84.9% and gross margin of approximately 10.9% was primarily due to the decrease 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.

Selling, General and Administrative ("SG&A")

SG&A expenses increased $458,000 for the three months ended June 30, 2017, as compared to the corresponding period for 2016, as follows:

(In thousands)	2017	% Revenue	2016	% Revenue	Change
Administrative	$ 1,244	—	$ 1,270	—	$ (26)
Treatment	856	8.9	906	11.3	(50)
Services	733	23.8	199	2.9	534
Total	$ 2,833	22.3	$ 2,375	16.0	$ 458

The increase in total SG&A was primarily due to higher SG&A costs in the Services Segment. Services Segment SG&A increased by $534,000 primarily due to higher bad debt expense of approximately $459,000. During the second quarter of 2016, the Services Segment recorded a reduction in bad debt expense of approximately $364,000 resulting from a reduction in allowance for doubtful accounts as a previously uncertain account receivable was determined to be collectible at June 30, 2016. The remaining increase in Services Segment SG&A was primarily due to higher outside services expenses of approximately $16,000 and higher salaries and payroll related expenses of approximately $59,000. The decrease in Administrative SG&A was primarily the result of lower salaries and payroll related expenses of approximately $23,000 and lower amortization expense of approximately $37,000 as we recorded a patent write-off during the second quarter of 2016. The decrease in costs was partially offset by higher outside services expenses of approximately $34,000 resulting from more legal/consulting matters. Treatment SG&A was lower primarily due to lower salaries and payroll related costs of approximately $54,000 and lower general expenses of approximately $9,000 in various categories. The lower cost was partially offset by higher outside services expenses of approximately $13,000 resulting from more consulting matters. Included in SG&A expenses is depreciation and amortization expense of $22,000 and $69,000 for the three months ended June 30, 2017, and 2016, respectively.

SG&A expenses increased $253,000 for the six months ended June 30, 2017, as compared to the corresponding period for 2016, as follows:

(In thousands)	2017	% Revenue	2016	% Revenue	Change
Administrative	$ 2,460	—	$ 2,458	—	$ 2
Treatment	1,753	8.9	1,907	12.6	(154)
Services	1,471	25.6	1,066	11.0	405
Total	$ 5,684	22.4	$ 5,431	21.9	$ 253

The increase in total SG&A was primarily due to higher SG&A costs in the Services Segment. Services Segment SG&A increased by $405,000 primarily due to higher bad debt expense of approximately $425,000. During the second quarter of 2016, the Services Segment recorded a reduction in bad debt expense of approximately $364,000 resulting from a reduction in allowance for doubtful accounts as a previously uncertain account receivable was determined to be collectible at June 30, 2016. The higher cost was partially reduced primarily by lower outside services costs resulting from fewer consulting/subcontract matters. The slight increase in Administrative SG&A was primarily the result of higher outside services expenses of approximately $111,000 resulting from more legal/consulting matters and higher travel expenses of approximately $14,000. The higher cost was mostly offset by lower salaries and payroll related expenses of approximately $45,000 and lower amortization expense of approximately $38,000 as we recorded a patent write-off during the second quarter of 2016. In addition, general expenses were lower by approximately $40,000 in various categories. Treatment SG&A was lower primarily due to lower salaries and payroll related costs of approximately $164,000 from lower headcount, lower travel expenses of $16,000, and lower general expenses of approximately $6,000. The lower cost was partially offset by higher outside services expenses of approximately $32,000 resulting from more consulting matters. Included in SG&A expenses is depreciation and amortization expense of $43,000 and $101,000 for the six months ended June 30, 2017 and 2016, respectively.

R&D

R&D expenses increased $65,000 and decreased $120,000 for the three and six months ended June 30, 2017, respectively, as compared to the corresponding period of 2016.

	Three Months Ended June 30,			Six Months Ended June 30		
(In thousands)	2017	2016	Change	2017	2016	Change
Administrative	$ 7	$ 11	$ (4)	$ 15	$ 15	$ -
Treatment	62	120	(58)	243	226	17
Services	—	7	(7)	—	33	(33)
PF Medical	550	416	134	750	854	(104)
Total	$ 619	$ 554	$ 65	$ 1,008	$ 1,128	$ (120)

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. The increase in R&D costs for the three months ended June 30, 2017 was primarily in the Medical Segment. The increase was primarily due to additional legal costs incurred of approximately $289,000. The decrease in R&D costs for the six months ended June 30, 2017 as compared to the corresponding period of 2016 was primarily in the Medical Segment. As disclosed previously, our Medical Segment reduced substantially its R&D activities in late 2016 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. This decrease was partially offset by the additional legal costs incurred as discussed above.

Interest Expense

Interest expense decreased approximately $18,000 for the three months ended June 30, 2017 as compared to the corresponding period of 2016. The decrease was primarily due to lower interest from our declining term loan balance and lower average revolver loan balance outstanding. Also, interest was lower resulting from declining loan balance from the $3,000,000 loan dated August 2, 2013, which was paid in full by us in August 2016. Interest expense decreased approximately $87,000 for the six months ended June 30, 2017 as compared to the corresponding period of 2016 primarily due to $68,000 in loss on debt extinguishment that we recorded in the first quarter of 2016 resulting from an amendment dated March 24, 2016 that we entered into with our lender which extended the due date of our credit facility, among other things, to March 24, 2021. Excluding this $68,000 loss on debt extinguishment, the lower interest expense was primarily due to the same reasons as discussed above for the second quarter of 2017.

Interest Expense- Financing Fees

Interest expense-financing fees decreased approximately $20,000 and $67,000 for the three and six months ended June 30, 2017, respectively, as compared to the corresponding period of 2016. The decrease for each period was primarily due to lower monthly amortized financing fees resulting from our amended credit facility pursuant to the amendment dated March 24, 2016 as discussed above. The decrease was also the result of final amortization of debt discount as financing fees in August 2016 in connection with the issuance of our common stock and two warrants to certain lenders as consideration for the Company receiving a $3,000,000 loan which was paid off by the Company in August 2016.

Discontinued Operations and Divestitures

Our discontinued operations consist of all our subsidiaries included in our Industrial Segment: (1) subsidiaries divested in 2011 and prior, (2) two previously closed locations, and (3) our PFSG facility, which is currently in the process of undergoing closure, subject to regulatory approval of necessary plans and permits.

Our discontinued operations had no revenue for the three and six months ended June 30, 2017 and the corresponding period of 2016. We had net losses of $160,000 and $291,000 for our discontinued operations for the three and six months ended June 30, 2017, respectively. We had net losses of $264,000 and $431,000 for our discontinued operations for the three and six months ended June 30, 2016, respectively.

Liquidity and Capital Resources

Our cash flow requirements during the six months ended June 30, 2017 were primarily financed by our operations, credit facility availability, and the restricted finite risk sinking funds that were released back to us from the cancellation of the financial assurance policy for our Perma-Fix Northwest Richland, Inc. ("PFNWR") subsidiary (see "Investing Activities" below for further information of this finite sinking fund and the new closure mechanism acquired for the PFNWR subsidiary). Our cash flow requirements for the remainder of 2017 and into the first nine months of 2018 will consist primarily of general working capital needs, scheduled principal payments on our debt obligations, remediation projects, planned capital expenditures, and closure spending requirements of approximately $2,745,000 in connection with the pending shut down of our M&EC facility. We plan to fund these requirements from our operations, our credit facility availability and the remaining finite risk sinking funds that we received in connection with the cancellation of our PFNWR financial assurance policy. We continue to explore all sources of increasing revenue. We are continually reviewing operating costs and are committed to further reducing operating costs to bring them in line with revenue levels, when necessary. Although there are no assurances, we believe that our cash flows from operations, our available liquidity from our credit facility, and the remaining finite risk sinking funds that we received are sufficient to fund our operations for the remainder of 2017 and into the first nine months of 2018. As previously disclosed, during the latter part of 2016, our Medical Segment reduced substantially its R&D 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. Our Medical Segment continues to seek various sources in order to raise this funding. If the Medical Segment is unable to raise the necessary capital, the Medical Segment could be required to further reduce or delay or eliminate its R&D program.

The following table reflects the cash flow activities during the first six months of 2017:

(In thousands)		2017
Cash used in operating activities of continuing operations	$	(744)
Cash used in operating activities of discontinued operations		(284)
Cash provided by investing activities of continuing operations		5,771
Cash provided by investing activities of discontinued operations		34
Cash used in financing activities of continuing operations		(4,412)
Effect of exchange rate changes in cash		7
Increase in cash	$	372

At June 30, 2017, we were in a positive cash position and no revolving credit balance. At June 30, 2017, we had cash on hand of approximately $535,000. The cash balance at June 30, 2017, primarily represents remaining restricted cash finite sinking funds released back to us resulting from the cancellation of our PFNWR financial assurance policy and account balances for our foreign subsidiaries.

Operating Activities

Accounts receivable (including Accounts receivable – non-current), net of allowances for doubtful accounts, totaled $8,589,000 at June 30, 2017, a decrease of $328,000 from the December 31, 2016 balance of $8,917,000. The decrease was primarily due to increased accounts receivable collections. 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.

Accounts payable, totaled $3,911,000 at June 30, 2017, a decrease of $333,000 from the December 31, 2016 balance of $4,244,000. The decrease was primarily due to the timing of the payment of our accounts payables. Also, we continue to manage payment terms with our vendors to maximize our cash position throughout all segments.

Disposal/transportation accrual at June 30, 2017, totaled $1,785,000, an increase of $395,000 over the December 31, 2016 balance of $1,390,000. Our disposal accrual can vary based on revenue mix and the timing of waste shipments for final disposal. During the six months of 2017, we shipped less waste for disposal.

We had a working capital deficit of $825,000 (which included working capital of our discontinued operations) at June 30, 2017, as compared to a working capital deficit of $2,131,000 at December 31, 2016. The improvement in our working capital was primarily the result of the pay down of our payables and the receipt of the finite risk sinking funds from the cancellation of our PFNWR financial assurance policy. The funds received were used to pay off our revolver credit which is included in long-term liabilities on the Consolidated Balance Sheets, with the remaining funds to be used for working capital purposes. Our working capital was negatively impacted by the reclassification of approximately $881,000 in accrued closure costs in the first quarter of 2017 from long-term to current resulting from expected spending relating to the pending closure of our M&EC facility.

Investing Activities

For the six months ended June 30, 2017, our purchases of capital equipment totaled approximately $116,000. These expenditures were primarily for improvements in our Treatment and Services Segments. These capital expenditures were funded by cash from operations. We had budgeted approximately $1,000,000 for 2017 capital expenditures for our Treatment and Services Segments to maintain operations and regulatory compliance requirements. During the second quarter of 2017, the Company's Board approved an additional $630,000 in capital expenditure for expanding the range of waste streams that can be accepted for treatment and processing. Certain of these budgeted projects may either be delayed until later years or deferred altogether. We have traditionally incurred actual capital spending totals for a given year at less than the initial budgeted amount. 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.

We had a closure policy dated August 2007 for our PFNWR facility with AIG ("PFNWR policy") which provided financial assurance to the State of Washington in the event of closure of the PFNWR facility. In April 2017, we received final releases from state and federal regulators for the PFNWR policy which enabled us to cancel the PFNWR policy resulting in the release of approximately $5,951,000 on May 1, 2017 in finite sinking funds previously held by AIG as collateral for the PFNWR policy. We used the released finite sinking funds to pay off our revolving credit with the remaining funds to be used for general working capital needs. We have acquired new bonds in the required amount of approximately $7,000,000 ("new bonds") to replace the PFNWR policy in providing financial assurance for the PFNWR facility. Upon receipt of the $5,951,000 in finite sinking funds from AIG, we and our lender executed a standby letter of credit in the amount of $2,500,000 as collateral for the new bonds for the PFNWR facility.

Financing Activities

We entered into an Amended and Restated Revolving Credit, Term Loan and Security Agreement, dated October 31, 2011 ("Loan Agreement"), with PNC National Association ("PNC"), acting as agent and lender. The Loan Agreement, as subsequently amended ("Amended Loan Agreement"), provides us with the following credit facility with a maturity date of March 24, 2021: (a) up to $12,000,000 revolving credit ("revolving credit"), subject to the amount of borrowings based on a percentage of eligible receivables (as defined) and (b) a term loan ("term loan") of approximately $6,100,000, which requires monthly installments of approximately $101,600 (based on a seven-year amortization).

Under the Amended Loan Agreement, we have the option of paying an annual rate of interest due on the revolving credit at prime plus 2% or London Inter Bank Offer Rate ("LIBOR") plus 3% and the term loan at prime plus 2.5% or LIBOR plus 3.5%.

Pursuant to the Amended Loan Agreement, we may terminate the Amended Loan Agreement, upon 90 days' prior written notice upon payment in full of our obligations under the Amended Loan Agreement. We agreed to pay PNC 1.0% of the total financing in the event we had paid off our obligations on or before March 23, 2017, .50% of the total financing if we pay off our obligations after March 23, 2017 but prior to or on March 23, 2018, and .25% of the total financing if we pay off our obligations after March 23, 2018 but prior to or on March 23, 2019. No early termination fee shall apply if we pay off our obligations after March 23, 2019.

At June 30, 2017, the availability under our revolving credit was $3,302,000, based on our eligible receivables and includes an indefinite reduction of borrowing availability of $2,000,000 that our lender has imposed, which includes $750,000 that was imposed immediately upon the receipt of the $5,951,000 in finite sinking funds by us in connection with cancellation of our PFNWR policy, pursuant a "Condition Subsequent" clause in the November 17, 2016 amendment that we entered into with our lender (see "Investing Activities" above for further discussion of the receipt of the finite risk sinking funds in connection with our PFNWR facility).

Our credit facility 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 following table details the quarterly financial covenant requirements under our credit facility at June 30, 2017.

(Dollars in thousands)	Quarterly Requirement	1st Quarter Actual	2nd Quarter Actual
Senior Credit Facility			
Fixed charge coverage ratio	1.15:1	3.13:1	2.57:1
Minimum tangible adjusted net worth	$26,000	$30,148	$28,850

We met our quarterly financial covenants in the first and second quarters of 2017 and we expect to meet these quarterly financial covenant requirements in each of the remaining quarters of 2017 and through the first nine months of 2018; however, if we fail to meet any of these quarterly financial covenant requirements as noted above and our lender does not 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.

Off Balance Sheet Arrangements

We have a number of routine operating leases, primarily related to office space rental, office equipment rental and equipment rental for contract projects as of June 30, 2017, which total approximately $532,000, payable as follows: $341,000 in the remainder of 2017 with the remaining $191,000 in 2018.

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 June 30, 2017, the total amount of standby letters of credit outstanding totaled approximately $2,675,000 and the total amount of bonds outstanding totaled approximately $8,253,000. The Company also provides closure and post-closure requirements through a financial assurance policy for certain of our Treatment Segment facilities through AIG. At June 30, 2017, the closure and post-closure requirements for these facilities were approximately $27,473,000.

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, 2016.

Known Trends and Uncertainties

Significant Customers. Our Treatment and Services Segments have significant relationships with the federal government, and continue to enter into contracts, directly as the prime contractor or indirectly for others as a subcontractor, with the federal government. The U.S Department of Energy ("DOE") and U.S. Department of Defense ("DOD") represent major customers for our Treatment Segment and Services Segments. The contracts that we are a party to with the federal government or with others as a subcontractor to the federal government generally provide that the government may terminate or renegotiate the contracts on 30 days notice, at the government's election. Our inability to continue under existing contracts that we have with the federal government (directly or indirectly as a subcontractor) or significant reductions in the level of governmental funding in any given year could have a material adverse impact on our operations and financial condition.

We performed services relating to waste generated by the federal government, either directly as a prime contractor or indirectly as a subcontractor to the federal government, representing approximately $9,598,000 or 75.5% and $18,976,000 or 74.6% of our total revenues generated during the three and six months ended June 30, 2017, respectively, as compared to $6,576,000 or 44.4% and $12,941,000 or 52.1% of our total revenue generated during the corresponding period of 2016, respectively.

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 internally.

At June 30, 2017, we had total accrued environmental remediation liabilities of $885,000, of which $637,000 is recorded as a current liability, which reflects a decrease of $40,000 from the December 31, 2016 balance of $925,000. The decrease represents payments on remediation projects at Perma-Fix of South Georgia, Inc. ("PFSG") and Perma-Fix of Dayton, Inc. ("PFD") of $1,000 and $39,000, respectively.

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 June 30, 2017

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

There was no change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) in the Company's most recent 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 additional 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, 2016, which is incorporated herein by reference.

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, 2016, except as follows:

Shareholder Activism Could Cause Material Disruption to Our Business

Our Board is currently reviewing a recent investor communication as to the Company's strategic direction. Investor activism can divert management attention and resources, thereby creating uncertainty and harm our business, and among other ways, by hindering execution of our business strategy and initiatives. This in turn can adversely affect the market price of our common stock, and making it more difficult to attract and retain qualified personnel and business partners.

Item 6. Exhibits

(a) **Exhibits**

10.1 2017 Stock Option Plan, as incorporated by reference from Exhibit B to the Company Proxy Statement filed on June 22, 2017.

10.2 Fourth Amendment to the 2003 Outside Directors Stock Plan, as incorporated by reference from Exhibit A to the Company's Proxy Statement filed on June 22, 2017.

10.3 Incentive Stock Option Agreement between Perma-Fix Environmental Services, Inc. and Chief Executive Officer, dated July 27, 2017, as incorporated by reference from Exhibit 99.1 to the Company's 8-K filed on August 2, 2017.

10.4 Incentive Stock Option Agreement between Perma-Fix Environmental Services, Inc. and Executive Vice President/Chief Operating Officer, dated July 27, 2017, as incorporated by reference from Exhibit 99.2 to the Company's 8-K filed on August 2, 2017.

10.5	Incentive Stock Option Agreement between Perma-Fix Environmental Services, Inc. and Chief Financial Officer, dated July 27, 2017, as incorporated by reference from Exhibit 99.3 to the Company's 8-K filed on August 2, 2017.
10.6	Stock Option Agreement dated July 27, 2017 between Mr. Robert L. Ferguson, and Perma-Fix Environmental Services, Inc.
31.1	Certification by Dr. Louis F. Centofanti, 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 Dr. Louis F. Centofanti, 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: August 9, 2017

By: /s/ Dr. Louis F. Centofanti
Dr. Louis F. Centofanti
President and Chief (Principal) Executive Officer

Date: August 9, 2017

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

PERMA-FIXENVIRONMENTAL SERVICES, INC

2017 STOCK OPTION PLAN

Participant Name: Robert Ferguson

Grant Date: July 27, 2017

		Vesting Schedule	
		Exercise Dates	Percent Exercisable
Shares Subject to Option:	100,000	01/27/2018	10%
Expiration Date:	7/27/2024	01/27/2019	30%
Exercise Price:	$3.65	01/27/2021	60%

NONQUALIFIED STOCK OPTION AGREEMENT

PERMA-FIX ENVIRONMENTAL SERVICES, INC.
2017 STOCK OPTION PLAN

NONQUALIFIED STOCK OPTION AGREEMENT

THIS AGREEMENT is made as of the Grant Date set forth on the cover page of this Agreement (the "Cover Page") between PERMA-FIX ENVIRONMENTAL SERVICES, INC., a Delaware corporation (the "Company"), and the participant named on the Cover Page (the "Participant"). In consideration of the mutual covenants and conditions herein set forth and for good and valuable consideration, the Company and the Participant agree as follows:

1. Recitations. The Participant is a consultant of the Company or a Subsidiary, and the Company believes that the Participant should be provided an inducement to continue the Participant's consultancy and to accomplish specified achievements with the Company and to advance the interests of the Company. Accordingly, the Company desires to provide the Participant with the opportunity to purchase certain shares of the Company's common stock, par value $.001 per share (the "Common Stock"), pursuant to the Company's 2017 Stock Option Plan, adopted by the Board of Directors, and approved by the Company's shareholders on July 27, 2017 (the "Plan"). A copy of the Plan has been delivered to the Participant, and the capitalized terms in this Agreement have the same meaning as set forth in the Plan, unless otherwise indicated. Capitalized terms used in this Agreement but not defined herein, shall have the same meaning as the Plan.

2. Grant of Option. The Company hereby grants to Participant the option to purchase the shares of Common Stock set forth on the Cover Page (the "Option"). The purchase price for each share to be purchased under the Option will be the exercise price set forth on the Cover Page (the "Exercise Price"), subject to adjustment as provided in the Plan, which Exercise Price is the Fair Market Value of the shares of Common Stock as of the Grant Date. The Option is not intended to qualify as an "incentive stock option" as such term is defined under Section 422 of the Internal Revenue Code of 1986, as amended (the "Code"), and accordingly, is a nonqualified stock option.

3. Vesting of Option. The Participant may exercise this Option for the shares of Common Stock, which become vested pursuant to this paragraph 3. The Option will vest in 10%, 30% and 60% increments, beginning on the first anniversary date of the Grant Date as stated on the Cover Page. If Participant's consulting arrangement with the Company or any Subsidiary remains fulltime and continuous at all times prior to any Exercise Date set forth on the Cover Page, then the Option will be deemed vested, subject to attainment of the Goals, described below, and may be exercised for the purchase of all or part of the cumulative number of shares of Common Stock determined by multiplying the Shares Subject to the Option set forth on the Cover Page by the designated percentage set forth on the Cover Page.

4. The Goals. The exercise of the Options is subject to attainment of the following goals:

(a) Upon treatment and disposal of three (3) gallons of waste at the Company's PFNWR facility on or before January 27, 2018, 10,000 shares of the Option shall become exercisable;

(b) Upon treatment and disposal of two thousand (2,000) gallons of waste at the Company's PFNWR facility on or before January 27, 2019, 30,000 shares of the Option shall become exercisable;

(c) Upon treatment and disposal of fifty thousand (50,000) gallons of waste at the Company's PFNWR facility and assistance, on terms satisfactory to the Company, in preparing appropriate justifications of cost and pricing date for the waste, and obtaining a long-term commercial contract relating to the treatment, storage and disposal of waste on or before January 27, 2021, sixty thousand (60,000) shares of the Option shall become exercisable.

For the purposes of this Agreement, "waste" is defined as liquid law (low activity waste) and/or liquid TRU (transuranic waste).

Each of the Goals are exclusive of the other. Accordingly, the achievement of any of the Goals by the Participant will provide the Participant the right to exercise the number of Options in accordance with the Goals obtained.

4.1 Notice and Payment. The Option will be exercised by the Participant giving the Company written notice at the Company's principal place of business setting forth the exact number of shares that the Participant is purchasing under the Option. This written notice will be accompanied by the payment to the Company of the full Exercise Price for the number of shares Participant desires to purchase. The form of written notice is attached as Exhibit "A" to this Agreement. The Participant agrees to comply with such other reasonable requirements as the Committee may establish.

4.2 Method of Payment. Payment of the Exercise Price may be made by the following:

(a) cash or wire transfer;

(b) certified check or bank check;

(c) other shares of Common Stock owned by the Participant for at least six months prior to the date of exercise, provided such shares have a Fair Market Value on the date of exercise of the Stock Option equal to the aggregate exercise price for the Common Stock being purchased;

(d) by requesting the Company to withhold such number of Shares then issuable upon exercise of the Option that have an aggregate Fair Market Value equal to the exercise price for the Option being exercised; or

(e) by a combination of the methods described above.

No loan or advance will be made by the Company for the purpose of financing the purchase of shares under the Option.

4.3 Issuance of Shares. As soon as practicable after the Company receives notice and payment pursuant to this paragraph 4, the Company will cause one or more certificates for the shares purchased under the Option to be delivered to the Participant or the personal representative of a deceased Participant's estate. If any law or regulation requires the Company to take any action with respect to the shares specified in such written notice before the issuance thereof, then the date of issuance of such shares will be extended for a period necessary to take such action.

5. Exercise and Payment. The Option may not be exercised unless the Participant is a consultant of the Company or any Subsidiary at all times during the period commencing with the Grant Date and ending on the earlier of

(a) the Expiration Date set forth on the Cover Page;

(b) 12 months following the termination of Participant's consulting arrangement as a result of a Disability; and

(c) three months following the termination of the Participant's consulting arrangement by action of the Company.

6. If the Participant dies prior to the Expiration Date, the Option may be exercised by the personal representative or executor of the Participant's estate or by a person who acquired the right to exercise by bequest, inheritance or by reason of the Participant's death, as provided in the Plan.

7 . Term of Option. The Option will terminate and become null and void at the close of business on the Expiration Date. Notwithstanding anything contained herein to the contrary, the Option may not be exercised after such Expiration Date.

8. Nontransferabilitv. The Option may not be transferred except by will or the laws of descent and distribution. Only the Participant may exercise the Option during the Participant's lifetime. For purposes of this paragraph 7, the term "transfer" includes without limitation, any disposition, assignment, pledge, or hypothecation, whether by operation of law or otherwise. The Option will not be subject to execution, attachment, or similar process. Any attempted assignment, transfer, pledge, hypothecation, or other disposition of the Option contrary to the provisions of this Agreement, and the levy of any execution, attachment or similar process upon the Option, will be null and void and without effect.

9 . Investment Representations. The Participant hereby represents, warrants, covenants, agrees and acknowledges the following: The Option will be exercised and shares of Common Stock issued only upon compliance with the Securities Act of 1933, as amended (the "Act"), and any other applicable securities law, or pursuant to an exemption therefrom; the Participant will acquire shares of Common Stock under the Option for investment purposes only and with no present intention to resell or distribute the same; and upon request by the Company, the Participant will execute and deliver to the Company an agreement to the foregoing effect.

10. Rights as a Shareholder. Participant will have no rights as a shareholder with respect to any shares covered by this Agreement or the Option until the date of issuance of a stock certificate to Participant for such shares. No adjustment will be made for dividends or other rights for which the record date is prior to the date such stock certificate is issued.

11. Consulting Arrangement. As long as the Participant continues to be a full-time and continuous consultant of the Company or any Subsidiary, the Option will not be effected by any change of duties or position caused or approved by the Company. The Committee will determine whether a leave of absence or change in the terms of the consulting arrangement will be considered a termination of the consulting arrangement with the Company or any Subsidiary within the meaning of the Plan. Nothing in the Plan or in this Agreement will confer upon the Participant any right to continue as a consultant of the Company or any Subsidiary or will interfere in any way with the right of the Company or any Subsidiary to terminate the Participant's consulting arrangement at any time.

12. Governing Law; Binding Effect. This Agreement will be governed by, and construed in accordance with, the laws of the State of Delaware without regard to choice of law provisions. This Agreement will be binding upon the heirs, executors, administrators, and successors of the parties hereto.

13. Amendments. Subject to the terms of the Plan, the Board may amend any of the provisions of the Plan, and may at any time terminate the Plan. However, no amendment may be made to the Plan, which in any material respect impairs the rights of the Participant under this Agreement without the Participant's consent.

14. Incorporation by Reference: Interpretation. The Option is granted pursuant to the Plan, the terms of which are incorporated herein by reference, and the Option and this Agreement will be interpreted in accordance with the Plan. The Committee will (a) construe and interpret the terms and provisions of the Plan and this Agreement, and (b) in its discretion make general and special rules and regulations for administering the Plan. The Committee's construction, interpretation, rules, and regulations will be binding and conclusive upon all persons granted an Option.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed the day and year first above written.

PERMA-FIX ENVIRONMENAL SERVICES, INC., a
Delaware Corporation

By:/s/Dr. Louis Centofanti
Dr. Louis F. Centofanti
CEO & President

("Participant")

/s/Robert L. Ferguson
(Signature)

/s/Robert L. Ferguson
(Please Print Name)

Exhibit "A"

PERMA-FIX ENVIRONMENTAL SERVICES, INC.
2017 STOCK OPTION PLAN

NOTICE OF EXERCISE
OF NONQUALIFIED STOCK OPTION

Date:

Perma-Fix Environmental Services, Inc.
8302 Dunwoody Place #250
Atlanta, GA 30350

Re: NQSO No. *, dated.* ________*. 20*

Dear Sir:
Pursuant to paragraph 4 of the referenced Nonqualified Stock Option Agreement, the undersigned hereby exercises the related Nonqualified Stock Option for the purchase of ______ shares of common stock of Perma-Fix Environmental Services, Inc.

Enclosed is a check in the amount of $ ______, which represents the Exercise Price for the number of shares to be purchased. Please issue in my name one certificate for the shares being purchased and deliver the certificate to me at the address set forth below.

Very truly yours,

____
(Please Sign)

Deliver to:

____
____
(Address)

Enclosure

EXHIBIT 31.1

CERTIFICATIONS

I, Louis F. Centofanti, 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: August 9, 2017

/s/ Louis F. Centofanti

Louis F. Centofanti
Chief Executive Officer, President
and Principal Executive Officer

EXHIBIT 31.2

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: August 9, 2017

/s/ Ben Naccarato

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

EXHIBIT 32.1

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 June 30, 2017, as filed with the Securities and Exchange Commission on the date hereof (the “Form 10-Q”), I, Dr. Louis F. Centofanti, 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: August 9, 2017

/s/ Louis F. Centofanti
Dr. Louis F. Centofanti
Chief Executive Officer, President and
and Principal Executive Officer

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

EXHIBIT 32.2

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 June 30, 2017, as filed with the Securities and Exchange Commission on the date hereof (the "Form 10-Q"), I, Ben Naccarato, 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: August 9, 2017

/s/ Ben Naccarato
Ben Naccarato
Vice President, Chief Financial Officer
and
Principal Financial Officer

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