

Form 10-Q

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended September 30, 2016

Or

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from _____ to _____

Commission File No. 111596

PERMA-FIX ENVIRONMENTAL SERVICES, INC.

(Exact name of registrant as specified in its charter)

Delaware

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

58-1954497

(IRS Employer Identification Number)

8302 Dunwoody Place, Suite 250, Atlanta, GA

(Address of principal executive offices)

30350

(Zip Code)

(770) 587-9898

(Registrant's telephone number)

N/A

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

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, or a smaller reporting company. See definition of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer Accelerated Filer Non-accelerated Filer Smaller reporting company

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
Common Stock, \$.001 Par Value

Outstanding at November 4, 2016
11,669,383
shares of registrant's
Common Stock

PERMA-FIX ENVIRONMENTAL SERVICES, INC.

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PART I - FINANCIAL INFORMATION
ITEM 1. – Financial Statements

PERMA-FIX ENVIRONMENTAL SERVICES, INC.
Consolidated Balance Sheets

(Amounts in Thousands, Except for Share and per Share Amounts)	September 30, 2016 (Unaudited)	December 31, 2015 (Audited)
ASSETS		
Current assets:		
Cash	\$ 145	\$ 1,435
Restricted cash	—	99
Accounts receivable, net of allowance for doubtful accounts of \$252 and \$1,474, respectively	9,824	9,673
Unbilled receivables - current	3,337	4,569
Inventories	332	377
Prepaid and other assets	3,009	3,929
Current assets related to discontinued operations	86	34
Total current assets	<u>16,733</u>	<u>20,116</u>
Property and equipment:		
Buildings and land	22,545	20,209
Equipment	33,296	35,191
Vehicles	413	422
Leasehold improvements	11,626	11,626
Office furniture and equipment	1,755	1,755
Construction-in-progress	565	497
	<u>70,200</u>	<u>69,700</u>
Less accumulated depreciation	<u>(52,276)</u>	<u>(49,707)</u>
Net property and equipment	17,924	19,993
Property and equipment related to discontinued operations	81	531
Intangibles and other long term assets:		
Permits	8,488	16,761
Other intangible assets - net	1,798	2,066
Accounts receivable - non-current	324	—
Unbilled receivables – non-current	131	707
Finite risk sinking fund	21,456	21,380
Other assets	1,232	1,359
Other assets related to discontinued operations	286	—
Total assets	<u>\$ 68,453</u>	<u>\$ 82,913</u>

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

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

(Amounts in Thousands, Except for Share and per Share Amounts)	September 30, 2016 (Unaudited)	December 31, 2015 (Audited)
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 4,789	\$ 6,109
Accrued expenses	4,987	4,341
Disposal/transportation accrual	1,354	1,107
Deferred revenue	2,459	2,631
Current portion of long-term debt	1,194	1,481
Current portion of long-term debt - related party	—	950
Current liabilities related to discontinued operations	477	531
Total current liabilities	<u>15,260</u>	<u>17,150</u>
Accrued closure costs	7,547	5,301
Other long-term liabilities	915	867
Deferred tax liabilities	2,329	5,424
Long-term debt, less current portion	9,425	7,405
Long-term liabilities related to discontinued operations	986	1,064
Total long-term liabilities	<u>21,202</u>	<u>20,061</u>
Total liabilities	36,462	37,211
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 \$915 and \$867, 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; 11,664,404 and 11,551,232 shares issued, respectively; 11,656,762 and 11,543,590 shares outstanding, respectively	11	11
Additional paid-in capital	105,959	105,556
Accumulated deficit	(74,438)	(60,808)
Accumulated other comprehensive loss	(129)	(117)
Less Common Stock in treasury, at cost; 7,642 shares	(88)	(88)
Total Perma-Fix Environmental Services, Inc. stockholders' equity	<u>31,315</u>	<u>44,554</u>
Non-controlling interest in subsidiary	(609)	(137)
Total stockholders' equity	<u>30,706</u>	<u>44,417</u>
Total liabilities and stockholders' equity	<u>\$ 68,453</u>	<u>\$ 82,913</u>

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

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

(Amounts in Thousands, Except for Per Share Amounts)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Net revenues	\$ 12,921	\$ 17,309	\$ 37,768	\$ 47,264
Cost of goods sold	11,114	12,363	34,111	36,809
Gross profit	1,807	4,946	3,657	10,455
Selling, general and administrative expenses	2,732	2,887	8,162	8,663
Research and development	441	583	1,570	1,500
Loss (gain) on disposal of property and equipment	12	(23)	16	(23)
Impairment loss on tangible assets	—	—	1,816	—
Impairment loss on intangible assets	—	—	8,288	—
(Loss) income from operations	(1,378)	1,499	(16,195)	315
Other income (expense):				
Interest income	31	16	78	36
Interest expense	(101)	(124)	(377)	(390)
Interest expense-financing fees	(14)	(56)	(99)	(171)
Other	(1)	2	20	12
(Loss) income from continuing operations before taxes	(1,463)	1,337	(16,573)	(198)
Income tax expense (benefit)	37	53	(3,093)	124
(Loss) income from continuing operations, net of taxes	(1,500)	1,284	(13,480)	(322)
Loss from discontinued operations, net of taxes	(191)	(377)	(622)	(1,313)
Net (loss) income	(1,691)	907	(14,102)	(1,635)
Net loss attributable to non-controlling interest	(135)	(163)	(472)	(487)
Net (loss) income attributable to Perma-Fix Environmental Services, Inc. common stockholders	\$ (1,556)	\$ 1,070	\$ (13,630)	\$ (1,148)
Net (loss) income per common share attributable to Perma-Fix Environmental Services, Inc. stockholders - basic and diluted:				
Continuing operations	\$ (.12)	\$.12	\$ (1.12)	\$.01
Discontinued operations	(.01)	(.03)	(.06)	(.11)
Net (loss) income per common share	\$ (.13)	\$.09	\$ (1.18)	\$ (.10)
Number of common shares used in computing net (loss) income per share:				
Basic	11,632	11,526	11,588	11,506
Diluted	11,632	11,561	11,588	11,542

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

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

(Amounts in Thousands)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Net (loss) income	\$ (1,691)	\$ 907	\$ (14,102)	\$ (1,635)
Other comprehensive income (loss):				
Foreign currency translation income (loss)	5	(17)	(12)	(92)
Comprehensive (loss) income	(1,686)	890	(14,114)	(1,727)
Comprehensive loss attributable to non-controlling interest	(135)	(163)	(472)	(487)
Comprehensive (loss) income attributable to Perma-Fix Environmental Services, Inc. stockholders	\$ (1,551)	\$ 1,053	\$ (13,642)	\$ (1,240)

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

PERMA-FIX ENVIRONMENTAL SERVICES, INC
Consolidated Statement of Stockholders' Equity
For the Nine Months Ended September 30, 2016
(Unaudited)

(Amounts in thousands, except for share amounts)	Common Stock		Additional Paid-In Capital	Common Stock Held In Treasury	Accumulated Other Comprehensive Loss	Non-controlling Interest in Subsidiary	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount						
Balance at December 31, 2015	11,551,232	\$ 11	\$ 105,556	\$ (88)	\$ (117)	\$ (137)	\$ (60,808)	\$ 44,417
Net loss	—	—	—	—	—	(472)	(13,630)	(14,102)
Foreign currency translation	—	—	—	—	(12)	—	—	(12)
Issuance of Common Stock for services	43,172	—	178	—	—	—	—	178
Issuance of Common Stock upon exercise of Warrants	70,000	—	156	—	—	—	—	156
Stock-based compensation	—	—	69	—	—	—	—	69
Balance at September 30, 2016	11,664,404	\$ 11	\$ 105,959	\$ (88)	\$ (129)	\$ (609)	\$ (74,438)	\$ 30,706

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

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

(Amounts in Thousands)	Nine Months Ended September 30,	
	2016	2015
Cash flows from operating activities:		
Net loss	\$ (14,102)	\$ (1,635)
Less: loss from discontinued operations, net of taxes of \$0	(622)	(1,313)
Loss from continuing operations, net of taxes	(13,480)	(322)
Adjustments to reconcile loss from continuing operations to cash (used in) provided by operating activities:		
Depreciation and amortization	2,986	2,821
Amortization of debt issuance costs	164	166
Deferred tax (benefit) expense	(3,095)	107
Recovery of bad debt reserves	(336)	(27)
Loss (gain) on disposal of property and equipment	16	(23)
Impairment loss on tangible assets	1,816	—
Impairment loss on intangible assets	8,288	—
Issuance of common stock for services	178	220
Stock-based compensation	69	62
Changes in operating assets and liabilities of continuing operations		
Restricted cash	35	—
Accounts receivable	(140)	(164)
Unbilled receivables	1,808	1,354
Prepaid expenses, inventories and other assets	2,247	707
Accounts payable, accrued expenses and unearned revenue	(1,869)	(3,404)
Cash (used in) provided by continuing operations	(1,313)	1,497
Cash used in discontinued operations	(710)	(1,233)
Cash (used in) provided by operating activities	(2,023)	264
Cash flows from investing activities:		
Purchases of property and equipment	(104)	(338)
Proceeds from sale of property and equipment	30	27
Proceeds from sale of SYA subsidiary	—	50
Payment to finite risk sinking fund	(76)	(30)
Cash used in investing activities of continuing operations	(150)	(291)
Proceeds from sale of property of discontinued operations	46	—
Cash used in investing activities	(104)	(291)
Cash flows from financing activities:		
Repayments of revolving credit facility borrowings	(41,223)	(49,476)
Borrowing on revolving credit facility	44,137	49,783
Proceeds from issuance of common stock upon exercise of warrants/options	156	10
Proceeds from stock subscription - Perma-Fix Medical S.A.	64	971
Payment of debt issuance costs	(97)	(13)
Principal repayments of long term debt	(1,199)	(1,742)
Principal repayments of long term debt-related party	(1,000)	(1,125)
Cash provided by (used in) financing activities of continuing operations	838	(1,592)
Effect of exchange rate changes on cash	(1)	(63)
Decrease in cash	(1,290)	(1,682)
Cash at beginning of period	1,435	3,680
Cash at end of period	\$ 145	\$ 1,998
Supplemental disclosure:		
Interest paid	\$ 309	\$ 404
Income taxes paid	41	116
Proceeds from stock subscription for Perma-Fix Medical S.A. held in escrow	—	67

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

PERMA-FIX ENVIRONMENTAL SERVICES, INC.
Notes to Consolidated Condensed Financial Statements
September 30, 2016
(Unaudited)

Reference is made herein to the notes to consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2015.

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 nine months ended September 30, 2016 are not necessarily indicative of results to be expected for the fiscal year ending December 31, 2016.

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, 2015. As disclosed in the Company's Annual Report on Form 10-K for the year ended December 31, 2015, the Company determined that the operations of its majority-owned Polish subsidiary, Perma-Fix Medical S.A. ("PF Medical"), which has not generated any revenues as it continues to be primarily in the research and development ("R&D") stage, meets the definition of a reportable segment in accordance with Accounting Standards Codification ("ASC") 280, "Segment Reporting." Accordingly, as detailed on Note 10 – "Operating Segments," all of the historical numbers presented in the consolidated financial statements have been recast to include the operations of PF Medical as a separate reportable segment ("Medical Segment").

Reclassification

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

2. Summary of Significant Accounting Policies

Our accounting policies are as set forth in the notes to the December 31, 2015 consolidated financial statements referred to above. During the first quarter of 2016, all of the restricted cash previously held in escrow at December 31, 2015 was released. Such amount represented \$35,000 held in escrow for our worker's compensation policy with the remaining representing proceeds held in escrow resulting from stock subscription agreements executed in connection with the sale of common stock by PF Medical in previous years.

Recently Adopted Accounting Standards

In April 2015, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2015-03, "Simplifying the Presentation of Debt Issuance Costs." ASU 2015-03 amends existing guidance to require the presentation of debt issuance costs in the balance sheet as a deduction from the carrying amount of the related debt liability instead of a deferred charge asset. It is effective for annual reporting periods beginning after December 15, 2015 (including interim reporting periods), but early adoption is permitted. The Company adopted ASU 2015-03 retroactively in the first quarter of 2016. The adoption of ASU 2015-03 did not have a material impact to the Company's results of operations, cash flows or financial position. The adoption of ASU 2015-03 resulted in a decrease in prepaid and other assets of approximately \$152,000, a decrease in current portion of long-term debt of \$27,000, and a decrease in long-term debt, less current portion of \$125,000 for the balances as of December 31, 2015 in the accompanying Consolidated Balance Sheets.

Recently Issued Accounting Standards – Not Yet Adopted

In May 2014, the FASB issued ASU No. 2014-09, "Revenue from Contracts with Customers (Topic 606)." ASU 2014-09 provides a single, comprehensive revenue recognition model for all contracts with customers. The amendments in ASU 2014-09 require 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. Subsequently, in August 2015, the FASB issued ASU No. 2015-14, "Revenue from Contracts with Customers (Topic 606) Deferral of the Effective Date," that deferred the effective date of ASU 2014-09 to annual reporting periods beginning after December 15, 2017 (including interim reporting periods within those periods). In March 2016, the FASB issued ASU 2016-08, "Revenue from Contracts with Customer (Topic 606): Principal versus Agent Considerations (Reporting Revenue Gross versus Net)," which clarifies the guidance in determining revenue recognition as principal versus agent. In April 2016, the FASB issued ASU 2016-10, "Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing," which provides guidance in accounting for immaterial performance obligations and shipping and handling. In May 2016, the FASB issued ASU 2016-12, "Revenue from Contracts with Customers (Topic 606): Narrow-Scope Improvements and Practical Expedients," which provides clarification on assessing the collectability criterion, presentation of sales taxes, measurement date for non-cash consideration and completed contracts at transition. Early adoption is permitted for ASU 2014-09 and the related amendment to the original effective date of period beginning after December 15, 2016 (including interim reporting periods within those periods). The ASUs 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 still evaluating the potential impact of adopting this guidance on our financial statements.

In August 2014, the FASB issued ASU No. 2014-15, "Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern." ASU 2014-15 requires management to assess an entity's ability to continue as a going concern, and to provide related footnote disclosure in certain circumstances. The new standard will be effective for all entities in the first annual period ending after December 15, 2016. The Company is still evaluating the potential impact of adopting this guidance on our financial statements.

In July 2015, the FASB issued ASU 2015-11, "Inventory (Topic 330): Simplifying the Measurement of Inventory." ASU 2015-11 requires that inventory within the scope of this update be measured at the lower of cost and net realizable value. Net realizable value is the estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation. The amendments in this update do not apply to inventory that is measured using last-in, first-out ("LIFO") or the retail inventory method. The amendments apply to all other inventory, which includes inventory that is measured using first-in, first-out ("FIFO") or average cost. For all entities, the guidance is effective for annual periods, and interim periods within those annual periods, beginning after December 15, 2016. Early adoption is permitted. The Company does not expect the adoption of ASU 2015-11 to have a material impact on our financial statements.

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 March 2016, the FASB issued ASU 2016-09, "Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting." ASU 2016-09 simplifies several aspects related to the accounting for share-based payment transactions, including the accounting for income taxes, statutory tax withholding requirements and classification on the statement of cash flows. ASU 2016-09 is effective for interim and annual periods beginning after December 15, 2016. The Company does not expect the adoption of ASU 2015-11 to have a material impact 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." ASU 2016-15 provides clarification regarding how certain cash receipts and cash payment are presented and classified in the statement of cash flows. This update addresses eight specific cash flow issues with the objective of reducing the existing diversity in practice. ASU 2016-15 will be effective for years beginning after December 15, 2017, including interim periods, and will require adoption on a retrospective basis. Early adoption is permitted. The Company is still evaluating the potential impact of adopting this guidance on our financial statements.

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

During the second quarter of 2016, the Company's M&EC subsidiary was notified by the lessor that the lease agreement which M&EC currently operates its Oak Ridge, Tennessee facility would not be renewed at the end of the current lease term ending January 21, 2018. In light of this event and our strategic review of operations within our Treatment Segment, the Company is proceeding with a plan to shut down its M&EC facility located in Oak Ridge, Tennessee at the end of the lease term. Operations at the M&EC facility are continuing during the remaining term of the lease and the facility has begun the process of transitioning waste shipments and operational capabilities to our other Treatment Segment facilities, subject to customer requirements and regulatory approvals. Simultaneously, the Company has begun 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. As a result of the Company's decision to shut down its M&EC facility, the Company's financial results were impacted by certain non-cash impairment losses, write-offs and accruals as described below.

The Company performs its annual intangible test as of October 1 of each year. As permitted by ASC 350, "Intangibles-Goodwill and Other," when an impairment indicator arises during an interim reporting period, the Company may recognize its best estimates of that impairment loss. The Company performed a discounted cash flow analysis prepared as of June 30, 2016 for M&EC's intangible assets (permits), utilizing our best estimates of projected future cash flows. Based on this analysis, the Company concluded that potential impairment existed and subsequently determined that the permits for our M&EC subsidiary were fully impaired, resulting in an intangible impairment loss of approximately \$8,288,000 which was recorded in the second quarter of 2016.

M&EC is required to complete certain clean-up/maintenance activities at its Oak Ridge, Tennessee facility pursuant to its RCRA permit. The extent and cost of these activities are determined by federal/state mandate requirements. The Company performed an analysis and related estimate of the cost to complete the RCRA portion of these activities and based on this analysis, the Company recorded an additional \$1,626,000 in closure liabilities during the second quarter of 2016 with the offset to capitalized asset retirement costs, as reported as a component of "Net Property and equipment" in the Consolidated Balance Sheet.

In accordance with ASC 360, "Property, Plant, and Equipment," the Company also performed an updated financial valuation of M&EC's long-lived tangible assets, inclusive of the capitalized asset retirement costs, for potential impairment. Based on our analysis using an undiscounted cash flow approach, the Company concluded that the carrying value of certain tangible assets (property and equipment) for M&EC was not recoverable and exceeded its fair value. Consequently, the Company recorded \$1,816,000 in tangible asset impairment loss in the second quarter of 2016. The Company reevaluated the estimated useful lives of the remaining tangible assets and as a result of this analysis, reduced the current estimated useful lives of these assets ranging from 2 to 28 years at June 30, 2016 to 1.6 years. Accordingly, the Company is depreciating the carrying value of M&EC's remaining tangible assets of approximately \$4,728,000 at June 30, 2016 over a period of approximately 1.6 years to the lease expiration date.

In the second quarter of 2016, the Company also wrote-off approximately \$587,000 in fees previously incurred relating to emission performance testing certification requirement in order to meet state compliance mandate in connection with certain M&EC equipment which was impaired (see above for discussion of impairment loss recorded for M&EC's tangible assets). Such amount had been previously included in "Prepaid and other assets" on the Consolidated Balance Sheets.

During the first nine months of 2016 and the corresponding period of 2015, M&EC's revenues were approximately \$3,458,000 and \$5,225,000, respectively

4. Intangible Assets

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

	Useful Lives (Years)	September 30, 2016			December 31, 2015		
		Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Intangibles (amount in thousands)							
Patent	8 - 18	\$ 571	\$ (266)	\$ 305	\$ 539	\$ (203)	\$ 336
Software	3	395	(374)	21	395	(364)	31
Customer relationships	12	3,370	(1,898)	1,472	3,370	(1,671)	1,699
Permit	10	545	(413)	132	545	(373)	172
Total		<u>\$ 4,881</u>	<u>\$ (2,951)</u>	<u>\$ 1,930</u>	<u>\$ 4,849</u>	<u>\$ (2,611)</u>	<u>\$ 2,238</u>

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 permit as noted above):

Year	Amount (In thousands)
2016 (remaining)	\$ 101
2017	369
2018	335
2019	252
2020	217
	<u>\$ 1,274</u>

Amortization expenses relating to the definite-lived intangible assets as discussed above were \$101,000 and \$340,000 for the three and nine months ended September 30, 2016, respectively, and \$108,000 and \$360,000 for the three and nine months ended September 30, 2015, respectively.

5. 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 May 15, 2016, the Company granted 50,000 incentive stock options (“ISOs”) from the Company’s 2010 Stock Option Plan to our newly named Executive Vice President. The ISOs granted were for a contractual term of six years with one-third vesting annually over a three year period. The exercise price of the ISOs was \$3.97 per share, which was equal to the fair market value of the Company’s Common Stock on the date of grant.

On July 28, 2016, the Company granted an aggregate of 12,000 non-qualified stock options (“NQSOs”) from the Company’s 2003 Outside Directors Stock Plan (“2003 Stock Plan”) to five of the seven re-elected directors at our Annual Meeting of Stockholders held on July 28, 2016. Two of the directors are not eligible to receive options under the 2003 Stock Plan as they are employees of the Company or its subsidiaries. The NQSOs granted were for a contractual term of ten years with a vesting period of six months. The exercise price of the NQSOs was \$4.60 per share, which was equal to the Company’s closing stock price the day preceding the grant date, pursuant to the 2003 Stock Plan.

The summary of the Company’s total Stock Option Plans as of September 30, 2016, and 2015, and changes during the periods then ended, are presented below. The Company’s Plans consist of the 2010 Stock Option Plan and the 2003 Stock Plan:

	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value (2)
Options outstanding January 1, 2016	218,200	\$ 7.65		
Granted	62,000	4.09		
Exercised	—	—		
Forfeited/expired	(33,000)	8.14		
Options outstanding end of period (1)	<u>247,200</u>	\$ 6.69	4.6	\$ 126,267
Options exercisable at September 30, 2016 (1)	<u>181,867</u>	\$ 7.61	4.0	\$ 69,516
Options exercisable and expected to be vested at September 30, 2016	<u>239,750</u>	\$ 6.78	4.6	\$ 118,542

	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value (2)
Options outstanding January 1, 2015	239,023	\$ 7.81		
Granted	12,000	\$ 4.19		
Exercised	(3,423)	2.79		\$ 4,298
Forfeited/expired	(29,400)	8.13		
Options outstanding end of period (1)	<u>218,200</u>	7.65	5.1	\$ 25,464
Options exercisable at September 30, 2015(1)	<u>169,533</u>	\$ 8.47	4.8	\$ 25,464
Options exercisable and expected to be vested at September 30, 2015	<u>212,333</u>	\$ 7.72	5.1	\$ 25,464

(1) Options with exercise prices ranging from \$2.79 to \$14.75

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

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. The fair value of the options granted during the nine months ended September 30, 2016 and 2015 and the related assumptions used in the Black-Scholes option model used to value the options granted were as follows (No options were granted to employees during the nine months ended September 30, 2015):

	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 ⁽³⁾ (in years)		6.0

	Outside Director Stock Options Granted	
	July 28, 2016	September 17, 2015
Weighted-average fair value per share	\$ 3.0	\$ 2.84
Risk -free interest rate ⁽¹⁾	1.52%	2.21%
Expected volatility of stock ⁽²⁾	55.99%	57.98%
Dividend yield	None	None
Expected option life ⁽³⁾ (in years)	10.0	10.0

(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 nine months ended September 30, 2016 and 2015 for our employee and director stock options.

Stock Options	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Employee Stock Options	\$ 12,000	\$ 13,000	\$ 42,000	\$ 39,000
Director Stock Options	13,000	2,000	27,000	23,000
Total	\$ 25,000	\$ 15,000	\$ 69,000	\$ 62,000

As of September 30, 2016, the Company has approximately \$103,000 of total unrecognized compensation cost related to unvested options, of which \$29,000 is expected to be recognized in remaining 2016, \$43,000 in 2017, \$30,000 in 2018, with the remaining \$1,000 in 2019.

During the nine months ended September 30, 2016, the Company issued a total of 43,172 shares of our Common Stock under the 2003 Stock Plan to our outside directors as compensation for serving on our Board of Directors. The Company has recorded approximately \$181,000 in compensation expenses (included in selling, general and administration ("SG&A") expenses) in connection with the issuance of shares of our Common Stock to our outside directors.

The Company also issued 70,000 shares of our Common Stock on August 2, 2016 resulting from the exercise of two Warrants issued in connection with a loan dated August 2, 2013 (see Note 7 – "Long Term Debt – Promissory Note" for further detail of this transaction and the total proceeds received).

6. (Loss) Income Per Share

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

(Amounts in Thousands, Except for Per Share Amounts)	Three Months Ended September 30, (Unaudited)		Nine Months Ended September 30, (Unaudited)	
	2016	2015	2016	2015
Net (loss) income attributable to Perma-Fix Environmental Services, Inc., common stockholders:				
(Loss) income from continuing operations attributable to Perma-Fix Environmental Services, Inc. common stockholders	\$ (1,365)	\$ 1,447	\$ (13,008)	\$ 165
Loss from discontinuing operations attributable to Perma-Fix Environmental Services, Inc. common stockholders	(191)	(377)	(622)	(1,313)
Net (loss) income attributable to Perma-Fix Environmental Services, Inc. common stockholders	<u>\$ (1,556)</u>	<u>\$ 1,070</u>	<u>\$ (13,630)</u>	<u>\$ (1,148)</u>
Basic (loss) income per share attributable to Perma-Fix Environmental Services, Inc. common stockholders	<u>\$ (.13)</u>	<u>\$.09</u>	<u>\$ (1.18)</u>	<u>\$ (.10)</u>
Diluted (loss) income per share attributable to Perma-Fix Environmental Services, Inc. common stockholders	<u>\$ (.13)</u>	<u>\$.09</u>	<u>\$ (1.18)</u>	<u>\$ (.10)</u>
Weighted average shares outstanding:				
Basic weighted average shares outstanding	11,632	11,526	11,588	11,506
Add: dilutive effect of stock options	—	5	—	6
Add: dilutive effect of warrants	—	30	—	30
Diluted weighted average shares outstanding	<u>11,632</u>	<u>11,561</u>	<u>11,588</u>	<u>11,542</u>
Potential shares excluded from above weighted average share calculations due to their anti-dilutive effect include:				
Stock options	98	183	150	183

7. Long Term Debt

Long-term debt consists of the following at September 30, 2016 and December 31, 2015:

(Amounts in Thousands)	September 30, 2016	December 31, 2015
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 first nine months of 2016 was 3.9%. ^{(1) (2)}	\$ 5,263	\$ 2,349
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 nine months of 2016 was 3.7%. ^{(1) (2)}	5,352 ⁽⁵⁾	6,514
Promissory Note dated August 2, 2013, payable in twelve monthly installments of interest only, starting September 1, 2013 followed with twenty-four monthly installments of \$125 in principal plus accrued interest (at annual rate of 2.99%). Note paid in full in August 2016. ^{(3) (4)}	—	950
Capital lease (interest at rate of 6.0%)	4	23
Total debt	<u>10,619</u>	<u>9,836</u>
Less current portion of long-term debt	<u>1,194</u>	<u>2,431</u>
Long-term debt	<u>\$ 9,425</u>	<u>\$ 7,405</u>

⁽¹⁾ Our Revolving Credit facility is collateralized by our accounts receivable and our Term Loan is collateralized by our property, plant, and equipment.

⁽²⁾ See below “Revolving Credit and Term Loan Agreement” for monthly payment interest options. Prior to April 1, 2016, the monthly installment payment under the Term Loan was approximately \$190,000.

⁽³⁾ Uncollateralized note.

⁽⁴⁾ Net of debt discount of (\$0) and (\$50,000) at September 30, 2016 and December 31, 2015, respectively. See “Promissory Notes and Installment Agreements” below for additional information.

⁽⁵⁾ Net of debt issuance costs of (\$134,000) and (\$152,000) at September 30, 2016 and December 31, 2015, 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 prior to the March 24, 2016 amendment discussed below (“Amended Loan Agreement”), provided the Company with the following credit facility: (a) up to \$12,000,000 revolving line of 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 \$16,000,000, which required monthly installments of approximately \$190,000 (based on a seven-year amortization).

Under the Amended Loan Agreement, the Company had 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%.

On March 24, 2016, the Company entered into an amendment to the Amended Loan Agreement with PNC which provided, among other things, the following (the amendment, together with the Amended Loan Agreement is collectively known as the “Revised Loan Agreement”):

- extended the due date of our credit facility from October 31, 2016 to March 24, 2021 (“maturity date”);
- amended the Term Loan to approximately \$6,100,000, which requires monthly payments of \$101,600 (based on a five-year amortization) and which approximated the Term Loan balance under the existing credit facility at the date of the amendment. The Revolving Credit remains at up to \$12,000,000 (subject to the amount of borrowings based on a percentage of eligible receivables as previously defined under the Amended Loan Agreement);

- released \$1,000,000 of the \$1,500,000 borrowing availability restriction that the lender had previously placed on the Company in connection with the insurance settlement proceeds received on July 28, 2014 by our Perma-Fix of South Georgia, Inc. (“PFSG”) facility. The Company’s lender had authorized the Company to use such proceeds for working capital purposes but had placed an indefinite reduction on our borrowing availability of \$1,500,000;
- revised the interest payment options to paying an annual rate of interest due on the Revolving Credit at prime plus 1.75% or LIBOR plus 2.75% and the Term Loan at prime (3.50% at September 30, 2016) plus 2.25% or LIBOR plus 3.25%; and
- revised our annual capital spending maximum limit from \$6,000,000 to \$3,000,000.

In connection with the amendment of March 24, 2016, the Company paid PNC total closing fees of approximately \$72,000. As a result of the amendment dated March 24, 2016, the Company recorded approximately \$68,000 in loss on extinguishment of debt in accordance with ASC 470-50, “Debt – Modifications and Extinguishments,” which was included in interest expense in the accompanying Consolidated Statements of Operations.

Pursuant to the Revised Loan Agreement, the Company may terminate the Revised Loan Agreement upon 90 days’ prior written notice upon payment in full of its obligations under the Revised Loan Agreement. The Company has agreed to pay PNC 1.0% of the total financing in the event the Company pays 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.

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 failed to meet its minimum quarterly fixed charge coverage ratio (“FCCR”) requirement of 1.15:1 in the first quarter of 2016. On May 23, 2016, the Company’s lender waived this non-compliance. In connection with this waiver, the Company paid PNC a fee of \$5,000 which was included in SG&A expenses. The Company met its financial covenant requirements in the second quarter of 2016 except for its quarterly FCCR requirement. On August 22, 2016, the Company entered into an amendment to its Revised Loan Agreement with its lender which waived the Company’s non-compliance with its minimum quarterly FCCR for the second quarter of 2016. In addition, the amendment revised the methodology used in calculating the FCCR in the third quarter of 2016 and to be used in the fourth quarter of 2016 and the first quarter of 2017. This amendment also revised the Company’s minimum Tangible Adjusted Net Worth (as defined in the Revised Loan Agreement) requirement from \$30,000,000 to \$26,000,000. In connection with the amendment, the Company paid PNC a fee of \$25,000, which is being amortized over the remaining term of the loan as interest expense – financing fees. The Company failed to meet its FCCR in the third quarter of 2016. The Company has obtained a waiver from its lender for this non-compliance. The Company expects to meet its quarterly financial covenants for the remainder quarter of 2016 as the Company’s lender has further revised the methodology to be used in calculating the FCCR (see Note 12 – “Subsequent Events – Credit Facility” for this waiver and the further revision made to the methodology in calculating the FCCR in subsequent quarters, among other things).

As of September 30, 2016, the availability under our revolving credit was \$2,294,000, based on our eligible receivables and includes the remaining indefinite reduction of borrowing availability of \$500,000 as discussed above.

Promissory Note

The Company entered into a \$3,000,000 loan dated August 2, 2013 with Messrs. Robert Ferguson and William Lampson (each known as the “Lender”). As consideration for the Company receiving the loan, the Company issued to each Lender a Warrant to purchase up to 35,000 shares of the Company’s Common Stock at an exercise price of \$2.23 per share. On August 2, 2016, each Lender exercised his Warrant for the purchase of 35,000 shares of our Common Stock, resulting in total proceeds paid to the Company of approximately \$156,000. As further consideration for the loan, the Company had also issued to each Lender 45,000 shares of the Company’s Common Stock. The fair value of the Warrants and Common Stock and the related closing fees incurred from this transaction were recorded as a debt discount, which has been fully amortized using the effective interest method over the term of the loan as interest expense – financing fees. The loan was repaid in full by the Company in August 2016.

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 made by 2012. As of September 30, 2016, our financial assurance coverage amount under this policy totaled approximately \$38,874,000. The Company has recorded \$15,522,000 in sinking fund related to this policy in other long term assets on the accompanying Consolidated Balance Sheets, which includes interest earned of \$1,051,000 on the sinking fund as of September 30, 2016. Interest income for the three and nine months ended September 30, 2016 was approximately \$24,000 and \$62,000, respectively. Interest income for the three and nine month periods ended September 30, 2015, was approximately \$9,000 and \$23,000, 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.

In August 2007, the Company entered into a second finite risk insurance policy for a term of four years for our Perma-Fix Northwest Richland, Inc. (“PFNWR”) facility with AIG. The policy provided an initial \$7,800,000 of financial assurance coverage with an annual growth rate of 1.5%, which at the end of the four year term policy, provides maximum coverage of \$8,200,000. The Company has made all of the required payments on this policy. As of September 30, 2016, the Company has recorded \$5,934,000 in our sinking fund related to this policy in other long term assets on the accompanying Consolidated Balance Sheets, which includes interest earned of \$234,000 on the sinking fund as of September 30, 2016. Interest income for the three and nine months ended September 30, 2016 was approximately \$7,000 and \$14,000, respectively. Interest income for the three and nine month periods ended September 30, 2015, was approximately \$4,000 and \$7,000, respectively. This policy is renewed annually at the end of the four year term with a nominal fee for the variance between the coverage requirement and the sinking fund balance. The Company has renewed this policy annually from 2011 to 2016 (with fees ranging from \$41,000 to \$46,000 annually). All other terms of the policy remain substantially unchanged.

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. As of September 30, 2016, the total amount of these bonds and letters of credit outstanding was approximately \$1,514,000, of which the majority of the amount relates to various bonding requirements.

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 undergoing closure, subject to regulatory approval.

The following table presents the major class of assets of discontinued operations as of September 30, 2016 and December 31, 2015. On May 2, 2016, Perma-Fix of Michigan, Inc. ("PFMI" – a closed location) entered into an Agreement for the sale of the property (which was held for sale as of December 31, 2015) for a price of \$450,000. The Agreement provides for a down payment of approximately \$75,000. After certain closing and settlement costs, PFMI received approximately \$46,000. The Agreement also provides for, among other things, the balance of the purchase price of \$375,000 to be paid by the buyer in 60 equal monthly installments of approximately \$7,250, with the first payment due June 15, 2016. No assets and liabilities are held for sale as of September 30, 2016.

(Amounts in Thousands)	September 30, 2016	December 31, 2015
Current assets		
Other assets	\$ 86	34
Total current assets	86	34
Long-term assets		
Property, plant and equipment, net ⁽¹⁾	81	531
Other assets	286	—
Total long-term assets	367	531
Total assets	\$ 453	\$ 565
Current liabilities		
Accounts payable	\$ 53	\$ 85
Accrued expenses and other liabilities	395	437
Environmental liabilities	29	9
Total current liabilities	477	531
Long-term liabilities		
Closure liabilities	115	173
Environmental liabilities	871	891
Total long-term liabilities	986	1,064
Total liabilities	\$ 1,463	\$ 1,595

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

The Company's discontinued operations incurred losses of \$191,000 and \$377,000 for the three months ended September 30, 2016 and 2015, respectively (net of taxes of \$0 for each period) and losses of \$622,000 and \$1,313,000 for the nine months ended September 30, 2016 and 2015, respectively (net of taxes of \$0 for each period). Losses for the nine months ended September 30, 2015 included a penalty in the amount of approximately \$201,000 recorded for PFSG in the second quarter of 2015 in connection with a certain Consent Order from the Georgia Department of Natural Resources Environmental Protection Division and an asset impairment charge of \$150,000 recorded for PFMI in the second quarter of 2015 in connection with the sale of property as discussed above. Remaining losses for the periods discussed above 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.

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:
 - o professional radiological measurement and site survey of large government and commercial installations using advanced methods, technology and engineering;
 - o integrated Occupational Safety and Health services including industrial hygiene ("IH") assessments; hazardous materials surveys, e.g., exposure monitoring; lead and asbestos management/abatement oversight; indoor air quality evaluations; health risk and exposure assessments; health & safety plan/program development, compliance auditing and training services; and Occupational Safety and Health Administration ("OSHA") citation assistance;
 - o global technical services providing consulting, engineering, project management, waste management, environmental, and decontamination and decommissioning field, technical, and management personnel and services to commercial and government customers;
- Nuclear services, which include:
 - o technology-based services including engineering, decontamination and decommissioning ("D&D"), specialty services and construction, logistics, transportation, processing and disposal;
 - o remediation of nuclear licensed and federal facilities and the remediation cleanup of nuclear legacy sites. Such services capability includes: project investigation; radiological engineering; partial and total plant D&D; facility decontamination, dismantling, demolition, and planning; site restoration; 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 nine months ended September 30, 2016 and 2015 (in thousands).

Segment Reporting for the Quarter Ended September 30, 2016

	Segments			Segments Total	Corporate ⁽¹⁾	Consolidated Total
	Treatment	Services	Medical			
Revenue from external customers	\$ 7,643	\$ 5,278	—	\$ 12,921	\$ —	\$ 12,921
Intercompany revenues	28	8	—	36	—	—
Gross profit	837	970	—	1,807	—	1,807
Research and development	95	4	342	441	—	441
Interest income	—	—	—	—	31	31
Interest expense	(2)	(2)	—	(4)	(97)	(101)
Interest expense-financing fees	—	—	—	—	(14)	(14)
Depreciation and amortization	1,019	161	—	1,180	9	1,189
Segment (loss) income before income taxes	(90)	360	(342)	(72)	(1,391)	(1,463)
Income tax expense	35	—	—	35	2	37
Segment (loss) income	(125)	360	(342)	(107)	(1,393)	(1,500)
Expenditures for segment assets	63	13	—	76	—	76

Segment Reporting for the Quarter Ended September 30, 2015

	Segments			Segments Total	Corporate ⁽¹⁾	Consolidated Total
	Treatment	Services	Medical			
Revenue from external customers	\$ 10,866	\$ 6,443	—	\$ 17,309	\$ —	\$ 17,309
Intercompany revenues	32	7	—	39	—	—
Gross profit	3,696	1,250	—	4,946	—	4,946
Research and development	49	—	527	576	7	583
Interest income	4	—	—	4	12	16
Interest expense	(1)	—	—	(1)	(123)	(124)
Interest expense-financing fees	—	—	—	—	(56)	(56)
Depreciation and amortization	729	172	—	901	11	912
Segment income (loss) before income taxes	2,745	490	(527)	2,708	(1,371)	1,337
Income tax expense (benefit)	64	(17)	—	47	6	53
Segment income (loss)	2,681	507	(527)	2,661	(1,377)	1,284
Expenditures for segment assets	58	15	—	73	—	73

Segment Reporting for the Nine Months Ended September 30, 2016

	Segments			Segments Total	Corporate ⁽¹⁾	Consolidated Total
	Treatment	Services	Medical			
Revenue from external customers	\$ 22,832	\$ 14,936	—	\$ 37,768	\$ —	\$ 37,768
Intercompany revenues	38	23	—	61	—	—
Gross profit	1,280	2,377	—	3,657	—	3,657
Research and development	321	38	1,196	1,555	15	1,570
Interest income	3	—	—	3	75	78
Interest expense	(19)	(2)	—	(21)	(356)	(377)
Interest expense-financing fees	—	—	—	—	(99)	(99)
Depreciation and amortization	2,437	482	—	2,919	67	2,986
Segment (loss) income before income taxes	(11,895) ⁽²⁾	682	(1,196)	(12,409)	(4,164)	(16,573)
Income tax (benefit) expense	(3,095) ⁽²⁾	—	—	(3,095)	2	(3,093)
Segment (loss) income	(8,800)	682	(1,196)	(9,314)	(4,166)	(13,480)
Expenditures for segment assets	86	17	1	104	—	104

Segment Reporting for the Nine Months Ended September 30, 2015

	Segments			Segments Total	Corporate ⁽¹⁾	Consolidated Total
	Treatment	Services	Medical			
Revenue from external customers	\$ 31,702	\$ 15,562	—	\$ 47,264	\$ —	\$ 47,264
Intercompany revenues	34	22	—	56	—	—
Gross profit	8,265	2,190	—	10,455	—	10,455
Research and development	137	—	1,354	1,491	9	1,500

Interest income	6	—	—	6	30	36
Interest expense	(34)	—	—	(34)	(356)	(390)
Interest expense-financing fees	—	(2)	—	(2)	(169)	(171)
Depreciation and amortization	2,236	552	—	2,788	33	2,821
Segment income (loss) before income taxes	5,259	248	(1,354)	4,153	(4,351)	(198)
Income tax expense (benefit)	135	(17)	—	118	6	124
Segment income (loss)	5,124	265	(1,354)	4,035	(4,357)	(322)
Expenditures for segment assets	303	27	—	330	8	338

(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 recorded in the second quarter of 2016 (see Note 3 – "East Tennessee Materials and Energy Corporation ("M&EC)"). Also includes a tax benefit of approximately \$3,203,000 recorded resulting from the intangible impairment loss recorded for our M&EC subsidiary (see Note 11 – "Income Taxes" below).

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 expense of \$37,000 and income tax benefit of \$3,093,000 for continuing operations for the three and nine months ended September 30, 2016, respectively, and income tax expenses of \$53,000 and \$124,000 for continuing operations for the three and nine months ended September 30, 2015, respectively. The Company's effective tax rates were approximately (2.8%) and 19.2% for the three and nine months ended September 30, 2016, respectively, and 3.5% and 42.9% for the three and nine months ended September 30, 2015, respectively. The Company's income tax benefit for the nine months ended September 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 during the second quarter of 2016.

12. Subsequent Events

Credit Facility

On November 17, 2016, the Company entered into another amendment to its Revised Loan Agreement with its lender. This amendment included the following:

- waived the Company's non-compliance with its minimum quarterly FCCR for the third quarter of 2016;
- further revised the methodology to be used in calculating the FCCR as follows (with continue maintenance of a minimum 1:15:1 ratio in each of the quarters): FCCR for the fourth quarter of 2016 is to be calculated using the financial results for the three months period ending December 31, 2016; FCCR for first quarter of 2017 is to be calculated using financial results for the six months period ending March 31, 2017; FCCR for second quarter of 2017 is to be calculated using the financial results for the nine months period ending June 30, 2017; and FCCR for the third quarter of 2017 and each fiscal quarters thereafter is to be calculated using the financial results for a trailing twelve months period basis;
- placed an immediate additional restriction on the Company's borrowing availability by \$750,000, in addition to the restriction on our borrowing availability of \$500,000 which had been previously placed by our lender; and
- revised the interest payment options to paying an annual rate of interest due on the Revolving Credit at prime plus 2% or LIBOR plus 3% and the Term Loan at Prime plus 2.5% or LIBOR plus 3.5%. Such interest payment option will automatically revert back to interest payment options as revised on the March 24, 2016 amendment (see the March 24, 2016 amendment the Company entered into with PNC in "Note 7 – Long Term Debt") if the Company is able to attain minimally a FCCR of 1:15:1, as calculated using a trailing twelve months period, subsequent to any quarters after the third quarter of 2016.

Pursuant to this amendment, the Company's lender has also established a "Condition Subsequent" which requires the Company to receive restricted cash released from a finite risk sinking fund by December 31, 2016, in connection with our Perma-Fix Northwest Richland, Inc. ("PFNWR") closure policy as discussed below. Immediately upon the receipt of funds, the Company's lender will immediately place another \$750,000 restriction on the Company's borrowing availability resulting in a total of \$2,000,000 restriction on the Company's borrowing availability. In the event the finite risk sinking fund is not received by the Company by December 31, 2016, the Company and its lender will enter into discussions of possible further amendments to the Revised Loan Agreement.

All other terms of the Revised Loan Agreement remain principally unchanged. In connection with this amendment, the Company agreed to pay its lender a fee of \$25,000.

Closure Policy

As discussed in "Note 8 – Commitment and Contingencies- Insurance," the Company has a closure policy for our PFNWR facility with AIG ("PFNWR policy") which provides financial assurance to the state of Washington in the event of closure of the PFNWR facility. As of September 30, 2016, our financial coverage under this policy stands at approximately \$7,973,000 and this policy is collateralized by a finite risk sinking fund in the amount of approximately \$5,900,000 which is recorded in other long term assets on our Consolidated Balance Sheets. The Company is currently working on other options in providing financial assurance coverage for our PFNWR facility, including acquiring a separate bonding mechanism which would enable the Company to cancel the PFNWR policy, thereby allowing for the release of any of the funds not required to collateralize the new PFNWR closure mechanism. The acceptance of a new mechanism for financial assurance for our PFNWR facility is subject to final approval by Washington state authorities and the release of such finite risk sinking fund is subject to approval by AIG.

Perma-Fix Medical

On October 11, 2016, the Company, Perma-Fix Medical S.A and its wholly-owned subsidiary, Perma-Fix Medical Corporation (Perma-Fix Medical S.A. and Perma-Fix Medical Corporation ("PFM Corporation" – a Delaware corporation) are together known as PF Medical) entered into a letter of intent ("LOI") with a private investor, subject to certain closing and other conditions, including, but not limited to,

the execution of a definitive agreement within 90 days of the LOI, for the purchase of \$10,000,000 of Preferred Shares in PFM Corporation at a price of \$8.00 per share. PF Medical S.A. is a Polish majority-owned subsidiary of the Company. Upon closing, the Preferred Shares of PFM Corporation would be voting securities and allow the investor to own approximately 48.6% of PFM Corporation's issued and outstanding voting securities as of the closing. The LOI also provides that at closing, subject to certain terms and conditions, the investor would also receive a 36-month warrant to purchase three quarters (.75) of one share of PFM Corporation's common stock for each share of Preferred Stock purchased by the investor at closing at an exercise price of \$9.00 for each three quarters of one share. In addition, at closing, the Company would receive a 36 month warrant, subject to certain terms and conditions, to purchase up to 183,606 shares of PFM Corporation's common stock at an exercise price of \$14.00 per share. Further, under the terms of the LOI, the Company would be repaid \$500,000 of the amounts owed to it by PF Medical within 30 days after closing and the balance within 120 days after the closing.

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

Forward-looking Statements

Certain statements contained within this report may be deemed "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended (collectively, the "Private Securities Litigation Reform Act of 1995"). All statements in this report other than a statement of historical fact are forward-looking statements that are subject to known and unknown risks, uncertainties and other factors, which could cause actual results and performance of the Company to differ materially from such statements. The words "believe," "expect," "anticipate," "intend," "will," and similar expressions identify forward-looking statements. Forward-looking statements contained herein relate to, among other things,

- demand for our services;
- reductions in the level of government funding in future years;
- ability of our Medical Segment to fund its R&D program;
- effect of Medical Segment not able to fund its R&D program;
- reducing operating costs;
- expect to meet our quarterly financial covenant requirements in remaining 2016;
- 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 and our available liquidity from our Credit Facility are sufficient to service our Treatment and Services Segments' obligations;
- manner in which the government will be required to spend funding to remediate federal sites;
- reducing operating costs to bring them in line with revenue level, when necessary;
- fund capital expenditures from cash from operations and/or financing;
- fund remediation expenditures for sites from funds generated internally;
- expect to receive certain large waste treatment shipments in the fourth quarter of 2016;
- compliance with environmental regulations;
- capital expenditures;
- potential effect of being a PRP;
- definitive agreement for PF Medical;
- receipt of restricted cash in connection with our PFNWR closure policy;
- acceptance of new mechanism for financial assurance for our PFNWR subsidiary by Washington state authorities;
- potential sites for violations of environmental laws and remediation of our facilities; and
- financial results due to shut down of M&EC facility located in Oak Ridge, Tennessee.

While the Company believes the expectations reflected in such forward-looking statements are reasonable, it can give no assurance such expectations will prove to have been 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;
- failure to receive shipments of waste during the fourth quarter of 2016 that we anticipate receiving;
- potential increases in equipment, maintenance, operating or labor costs;
- management retention and development;
- financial valuation of intangible assets is substantially more/less than expected;
- failure to receive necessary regulatory approvals to cancel PFNWR closure policy and replace such with new financial assurance mechanism for our PFNWR subsidiary;
- AIG's failure to approve release of the finite sinking fund relating to the PFNWR facility;
- the requirement to use internally generated funds for purposes not presently anticipated;
- inability 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 revises our covenant so that we are in compliance; and
- Risk Factors and other factors set forth in "Special Note Regarding Forward-Looking Statements" contained in the Company's 2015 Form 10-K and "Forward-Looking Statements" in Form 10-Q for the quarters ended March 31, 2016 and June 30, 2016.

As disclosed in the Company's Annual Report on Form 10-K for the year ended December 31, 2015, the Company determined that the operations of its majority-owned Polish subsidiary, Perma-Fix Medical S.A. and its wholly-owned subsidiary, Perma-Fix Medical Corporation ("PFM Corporation") (together known as "PF Medical"), which has not generated any revenues as it continues to be primarily in the research and development ("R&D") stage, meet the definition of a reportable segment in accordance with Accounting Standards Codification ("ASC") 280, "Segment Reporting." Accordingly, all of the historical numbers presented in the consolidated financial statements have been recast to include the operations of PF Medical as a separate reportable segment ("Medical Segment").

Overview

Revenue decreased \$4,388,000 or 25.4% to \$12,921,000 for the three months ended September 30, 2016 from \$17,309,000 for the corresponding period of 2015. The decrease was primarily within our Treatment Segment where revenue decreased \$3,223,000 or 29.7% primarily due to lower waste volume. Revenue from Services Segment decreased \$1,165,000 or 18.1% for the three months ended September 30, 2016 primarily due to completion of certain projects. Total gross profit decreased \$3,139,000 or 63.5% for the three months ended September 30, 2016 primarily due to the decrease in revenue in our Treatment Segment. Total Selling, General, and Administrative ("SG&A") expenses decreased \$155,000 or 5.4% for the three months ended September 30, 2016 as compared to the corresponding period of 2015.

Revenue decreased \$9,496,000 or 20.1% to \$37,768,000 for the nine months ended September 30, 2016 from \$47,264,000 for the corresponding period of 2015. The decrease in revenue was primarily due to the decrease in revenue in our Treatment Segment of approximately \$8,870,000 or 28.0% from lower waste volume. Total gross profit decreased \$6,798,000 or 65.0% for the nine months ended September 30, 2016 as compared to the corresponding period of 2015 primarily due to lower revenue generated from our Treatment Segment. Total SG&A expenses decreased \$501,000 or 5.8% for the nine months ended September 30, 2016 as compared to the corresponding period of 2015.

Our first nine months 2016 financial results were significantly impacted by certain large waste treatment shipments that we expected to receive but have been delayed by certain governmental customers. Although we still expect to receive certain of these shipments in the fourth quarter of 2016, there is no guarantee that these shipments will be received in the fourth quarter of 2016 as the receipt of these waste shipments can be further delayed into 2017.

Our financial results for the nine months ended September 30, 2016 included certain non-cash impairment losses, write-offs and accruals which were recorded during the second quarter of 2016 in connection with our East Tennessee Materials and Energy Corporation (“M&EC”) subsidiary as discussed below.

During the second quarter of 2016, M&EC subsidiary was notified by the lessor that the lease agreement which M&EC currently operates its Oak Ridge, Tennessee facility would not be renewed at the end of the current lease term ending January 21, 2018. In light of this event and our strategic review of operations within our Treatment Segment, we are proceeding with a plan to shut down our M&EC facility located in Oak Ridge, Tennessee at the end of the lease term. Operations at the M&EC facility are continuing during the remaining term of the lease and the facility has begun the process of transitioning waste shipments and operational capabilities to our other Treatment Segment facilities, subject to customer requirements and regulatory approvals. Simultaneously, we have begun 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. As a result of this triggering event which occurred during the second quarter of 2016, we recorded non-cash impairment losses on our tangible and intangible assets of approximately \$1,816,000 and \$8,288,000, respectively, in the second quarter of 2016. We also recorded a write-off of approximately \$587,000 in prepaid expenses in connection with certain tangible asset at our M&EC facility which was impaired. As a result of the intangible (permit) impairment losses discussed above, we recorded a tax benefit in the amount of \$3,203,000.

In addition, M&EC is required to complete certain clean-up/maintenance activities at its Oak Ridge, Tennessee facility pursuant to its RCRA permits. The extent and cost of these activities are determined by federal/state mandate requirements. We performed an analysis and related estimate of the cost to complete the RCRA portion of these activities during the second quarter of 2016 and based on this analysis, we recorded an additional \$1,626,000,000 in closure liabilities during the second quarter of 2016 with the offset to capitalized asset retirement costs, as reported as a component of “Net Property and equipment” in the Consolidated Balance Sheet.”

During the first nine months of 2016 and the corresponding period of 2015, M&EC’s revenues were approximately \$3,458,000 and \$5,225,000, respectively.

Business Environment, Outlook and Liquidity

Our Treatment and Services Segments’ business continues to be heavily dependent on services that we provide to governmental customers 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. We believe that significant reductions in the level of governmental funding or specifically mandated levels for different programs that are important to our business could have a material adverse impact on our business, financial position, results of operations and cash flows.

We believe that our cash flow requirements for remaining 2016 will consist primarily of general working capital needs, scheduled principal payments on our debt obligations and capital leases, remediation projects and planned capital expenditures which we plan to fund from operations and our credit facility availability (also see potential receipt of finite risk sinking fund related to our Perma-Fix Northwest Richland, Inc. (“PFNWR”) financial assurance policy in “Liquidity and Capital Resources – Investing Activities” in this “Management’s Discussion and Analysis”). Our Medical Segment continues to dedicate resources to the R&D of the new medical isotope production technology and to take the necessary steps for eventual submission of this technology for U.S. Food and Drug Administration (“FDA”) and other regulatory approval and commercialization of this technology. We believe that the need for capital by the Medical Segment in order to complete its R&D program and to submit its technology for governmental approval will require the Medical Segment to obtain such capital requirements through obtaining its own credit facility or additional equity raise. The Medical Segment has entered into a letter of intent (“LOI”) to raise capital, which is subject to the completion of a definitive agreement (see “Liquidity and Capital Resources - Financing Activities” in this “Management’s Discussion and Analysis” for further detail of this LOI). If the Medical Segment is unable to raise the necessary capital, the Medical Segment could be required to reduce, 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.

Consolidated (amounts in thousands)	Three Months Ended September 30,				Nine Months Ended September 30,			
	2016	%	2015	%	2016	%	2015	%
Net revenues	\$ 12,921	100.0	\$ 17,309	100.0	\$ 37,768	100.0	\$ 47,264	100.0
Cost of goods sold	11,114	86.0	12,363	71.4	34,111	90.3	36,809	77.9
Gross profit	1,807	14.0	4,946	28.6	3,657	9.7	10,455	22.1
Selling, general and administrative	2,732	21.1	2,887	16.7	8,162	21.6	8,663	18.3
Research and development	441	3.4	583	3.4	1,570	4.3	1,500	3.1
Loss (gain) on disposal of property and equipment	12	.1	(23)	(.1)	16	—	(23)	—
Impairment loss on tangible assets	—	—	—	—	1,816	4.8	—	—
Impairment loss on intangible assets	—	—	—	—	8,288	21.9	—	—
(Loss) income from operations	(1,378)	(10.6)	1,499	8.6	(16,195)	(42.9)	315	.7
Interest income	31	.2	16	—	78	.2	36	—
Interest expense	(101)	(.8)	(124)	(.7)	(377)	(1.0)	(390)	(.8)
Interest expense-financing fees	(14)	(.1)	(56)	(.2)	(99)	(.2)	(171)	(.3)
Other	(1)	—	2	—	20	—	12	—
(Loss) income from continuing operations before taxes	(1,463)	(11.3)	1,337	7.7	(16,573)	(43.9)	(198)	(.4)
Income tax expense (benefit)	37	.3	53	.3	(3,093)	(8.2)	124	.3
(Loss) income from continuing operations	\$ (1,500)	(11.6)	\$ 1,284	7.4	\$ (13,480)	(35.7)	\$ (322)	(.7)

Summary – Three and Nine Months Ended September 30, 2016 and 2015

Consolidated revenues decreased \$4,388,000 for the three months ended September 30, 2016, compared to the three months ended September 30, 2015, as follows:

(In thousands)	2016	% Revenue	2015	% Revenue	Change	% Change
Treatment						
Government waste	\$ 5,127	39.7	\$ 8,193	47.3	\$ (3,066)	(37.4)
Hazardous/non-hazardous	1,307	10.1	1,044	6.0	263	25.2
Other nuclear waste	1,209	9.4	1,629	9.5	(420)	(25.8)
Total	7,643	59.2	10,866	62.8	(3,223)	(29.7)
Services						
Nuclear services	4,829	37.3	6,001	34.6	(1,172)	(19.5)
Technical services	449	3.5	442	2.6	7	1.6
Total	5,278	40.8	6,443	37.2	(1,165)	(18.1)
Total	\$ 12,921	100.0	\$ 17,309	100.0	\$ (4,388)	(25.4)

Net Revenue

Treatment Segment revenue decreased \$3,223,000 or 29.7% for the three months ended September 30, 2016 over the same period in 2015. The revenue decrease was primarily due to lower revenue generated from government customers of approximately \$3,066,000 or 37.4% due to lower volume. Other nuclear revenue decreased approximately \$420,000 or 25.8% primarily due to lower volume. The decrease in Services Segment revenue of \$1,165,000 or 18.1% in the three months ended September 30, 2016 as compared to the corresponding period of 2015 was primarily the result of completion of certain projects. 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 decreased \$9,496,000 for the nine months ended September 30, 2016, as compared to the nine months ended September 30, 2015, as follows:

(In thousands)	2016	% Revenue	2015	% Revenue	Change	% Change
Treatment						
Government waste	\$ 15,062	39.9	\$ 23,613	50.0	\$ (8,551)	(36.2)
Hazardous/non-hazardous	3,544	9.4	3,317	7.0	227	6.8
Other nuclear waste	4,226	11.2	4,772	10.1	(546)	(11.4)
Total	22,832	60.5	31,702	67.1	(8,870)	(28.0)
Services						
Nuclear services	13,671	36.2	13,670	28.9	1	0.0
Technical services	1,265	3.3	1,892	4.0	(627)	(33.1)
Total	14,936	39.5	15,562	32.9	(626)	(4.0)
Total	\$ 37,768	100.0	\$ 47,264	100.0	\$ (9,496)	(20.1)

Net Revenue

Treatment Segment revenue decreased \$8,870,000 or 28.0% for the nine months ended September 30, 2016 over the same period in 2015. The revenue decrease was primarily due to lower revenue generated from government customers of approximately \$8,551,000 or 36.2% due to lower waste volume. Our Services Segment revenue decreased by \$626,000 or 4.0%. 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 \$1,249,000 for the quarter ended September 30, 2016, as compared to the quarter ended September 30, 2015, as follows:

(In thousands)	2016	% Revenue	2015	% Revenue	Change
Treatment	\$ 6,806	89.0	\$ 7,170	66.0	\$ (364)
Services	4,308	81.6	5,193	80.6	(885)
Total	\$ 11,114	86.0	\$ 12,363	71.4	\$ (1,249)

Cost of goods sold for the Treatment Segment decreased by \$364,000 or approximately 5.1% primarily due to lower revenue. We incurred lower disposal, transportation, lab, and material and supplies costs totaling approximately \$452,000. Our overall fixed costs were higher by approximately \$82,000 resulting from the following: depreciation expense was higher by approximately \$290,000 primarily due to re-evaluation of the estimated useful lives of M&EC facility's remaining tangible assets conducted during the second quarter of 2016 resulting from the pending shut-down of the facility. Such re-evaluation resulted in a reduction of the estimated useful lives ranging from 2 to 28 years to 1.6 years; payroll and healthcare costs were lower by approximately \$99,000 from lower headcount; general expenses were lower by \$77,000 in various categories as we continue to streamline our costs; and maintenance costs were lower by approximately \$32,000. In the prior period of 2015, we incurred higher costs in connection with the maintenance of certain buildings and equipment. Services Segment cost of goods sold decreased \$885,000 or 17.0% primarily due to the decrease in revenue as discussed above. The decrease was primarily from lower material and supplies and disposal expenses totaling approximately \$610,000 with the remaining lower costs attributed primarily to lower labor and travel expenses. Included within cost of goods sold is depreciation and amortization expense of \$1,158,000 and \$879,000 for the three months ended September 30, 2016, and 2015, respectively.

Cost of goods sold decreased \$2,698,000 for the nine months ended September 30, 2016, as compared to the nine months ended September 30, 2015, as follows:

(In thousands)	2016	% Revenue	2015	% Revenue	Change
Treatment	\$ 21,552	94.4	\$ 23,437	73.9	\$ (1,885)
Services	12,559	84.1	13,372	85.9	(813)
Total	\$ 34,111	90.3	\$ 36,809	77.9	\$ (2,698)

Cost of goods sold for the Treatment Segment decreased by \$1,885,000 or 8.0%. Included in the cost of goods sold is a write-off of approximately \$587,000 in prepaid fees recorded in the second quarter of 2016 resulting from the impairment of certain equipment at our M&EC facility. Such fees were incurred for emission performance testing certification requirements as mandated by the state (see "Overview" under this "Management's Discussion and Analysis of Financial Condition and Results of Operations" for further details of transactions recorded during the second quarter of 2016 due to pending shut down of our M&EC facility). Excluding this write-off, cost of goods sold for the Treatment Segment decreased by approximately \$2,472,000 or 10.5% primarily due to lower revenue. We incurred lower disposal, transportation, lab, and material and supplies costs totaling approximately \$1,765,000. Our overall fixed costs were lower by approximately \$708,000 resulting from the following: salaries and payroll related expenses (including healthcare costs) were lower by approximately \$462,000 resulting from lower headcount; general expenses were lower by approximately \$217,000 in various categories as we continue to streamline our costs; maintenance costs were lower by approximately \$232,000. In the prior period of 2015, we incurred higher costs in connection with the maintenance of certain buildings and equipment; and depreciation expense was higher by approximately \$203,000 primarily due the re-evaluation of the estimated useful lives of M&EC facility's remaining tangible assets conducted during the second quarter of 2016 due to the pending shut down of the facility. Services Segment cost of goods sold decreased \$813,000 or 6.1% primarily due to lower labor and travel expenses totaling approximately \$917,000 which was offset by higher material and supplies and disposal expenses totaling approximately of \$113,000. Included within cost of goods sold is depreciation and amortization expense of \$2,853,000 and \$2,684,000 for the nine months ended September 30, 2016, and 2015, respectively.

Gross Profit

Gross profit for the quarter ended September 30, 2016 decreased \$3,139,000 over the same period of 2015, as follows:

(In thousands)	2016	% Revenue	2015	% Revenue	Change
Treatment	\$ 837	11.0	\$ 3,696	34.0	\$ (2,859)
Services	970	18.4	1,250	19.4	(280)
Total	<u>\$ 1,807</u>	<u>14.0</u>	<u>\$ 4,946</u>	<u>28.6</u>	<u>\$ (3,139)</u>

Treatment Segment gross profit decreased \$2,859,000 or 77.4% and gross margin decreased to 11.0% from 34.0% primarily due to lower revenue from lower waste volume and the impact of our fixed costs. In the Services Segment, the decrease in gross profit of \$280,000 or approximately 22.4% was primarily due to reduced revenue. Gross margin reduced slightly to 18.4% from 19.4%. Our overall Services Segment gross margin is impacted by our current projects which are competitively bid on and will therefore, have varying margin structures.

Gross profit for the nine months ended September 30, 2016 decreased \$6,798,000 over the same period in 2015, as follows:

(In thousands)	2016	% Revenue	2015	% Revenue	Change
Treatment	\$ 1,280	5.6	\$ 8,265	26.1	\$ (6,985)
Services	2,377	15.9	2,190	14.1	187
Total	<u>\$ 3,657</u>	<u>9.7</u>	<u>\$ 10,455</u>	<u>22.1</u>	<u>\$ (6,798)</u>

Treatment Segment gross profit decreased \$6,985,000 or 84.5% and gross margin decreased to 5.6% from 26.1%. Excluding the write-off of the \$587,000 in prepaid fees resulting from the impairment of certain equipment at our M&EC subsidiary as discussed above, Treatment Segment gross profit decreased \$6,398,000 or 77.4% and gross margin decreased to 8.2% from 26.1% primarily due to decreased revenue from lower waste volume and the impact of our fixed costs. In the Services Segment, the increases in gross profit of \$187,000 and gross margin were primarily due to certain higher margin projects that we are currently working on. As discussed previously, 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

Selling, general and administrative ("SG&A") expenses decreased \$155,000 for the three months ended September 30, 2016, as compared to the corresponding period for 2015, as follows:

(In thousands)	2016	% Revenue	2015	% Revenue	Change
Administrative	\$ 1,311	—	\$ 1,198	—	\$ 113
Treatment	819	10.7	931	8.6	(112)
Services	602	11.4	758	11.8	(156)
Total	<u>\$ 2,732</u>	<u>21.1</u>	<u>\$ 2,887</u>	<u>16.7</u>	<u>\$ (155)</u>

Treatment SG&A was lower primarily due to lower marketing expenses by approximately \$112,000 due to fewer tradeshows and lower general expenses by approximately \$36,000 in various categories. The lower cost was partially offset by slightly higher payroll related expenses of \$36,000. The decrease in SG&A in the Services Segment was primarily due to lower outside services expenses by approximately \$73,000 resulting from fewer business/consulting/legal matters. General expenses were lower by approximately \$63,000 in various categories and total travel and payroll related expenses were lower by approximately \$20,000. The increase in administrative SG&A was primarily the result of higher salaries and payroll related expenses of approximately \$87,000 resulting from the hiring of our new executive vice president in the second quarter of 2016 and higher outside services expenses by approximately \$50,000 resulting from more legal/consulting matters. The increase was partially offset by lower travel expenses of \$5,000 and lower general expenses of \$20,000 in various categories. Included in SG&A expenses is depreciation and amortization expense of \$31,000 and \$33,000 for the three months ended September 30, 2016, and 2015, respectively.

SG&A expenses decreased \$501,000 for the nine months ended September 30, 2016, as compared to the corresponding period for 2015, as follows:

(In thousands)	2016	% Revenue	2015	% Revenue	Change
Administrative	\$ 3,769	—	\$ 3,849	—	\$ (80)
Treatment	2,726	11.9	2,864	9.0	(138)
Services	1,667	11.2	1,950	12.5	(283)
Total	<u>\$ 8,162</u>	<u>21.6</u>	<u>\$ 8,663</u>	<u>18.3</u>	<u>\$ (501)</u>

The decrease in administrative SG&A was primarily the result of lower outside services expenses by approximately \$231,000 resulting from fewer consulting/business/legal matters. The decrease was partially offset by higher amortization expense of approximately \$34,000 resulting from the write-off of a patent and higher salaries and payroll related expenses of approximately \$116,000 resulting from the hiring of our new executive vice president in the second quarter of 2016. Treatment SG&A was lower primarily due to lower marketing expenses by approximately \$60,000 due to fewer tradeshows. Total payroll related and travel expenses were lower by approximately \$30,000 and general expenses were lower by approximately \$81,000 in various categories as we continue our efforts in reducing costs. The lower cost was partially offset by higher bad debt expense of \$32,000. The decrease in SG&A in the Services Segment was primarily due to lower bad debt expense of approximately \$341,000 resulting from a reduction in our allowance for doubtful account recorded in the second quarter of 2016 as a previously reserved amount for an uncertain account receivable was determined to be collectible. Amortization expense was lower by approximately \$35,000 as a certain amortizable intangible asset became fully amortized in June 2015. Outside services expenses were lower by approximately \$53,000 from fewer consulting/legal/business matters and general expenses were lower by approximately \$60,000 in various categories. The decrease in SG&A was partially offset by higher payroll expenses of approximately \$208,000 incurred primarily in the first half of 2016 related to bids and proposal work for potential projects. Included in SG&A expenses is depreciation and amortization expense of \$133,000 and \$137,000 for the nine months ended September 30, 2016 and 2015, respectively.

Research and Development (“R&D”)

R&D expenses decreased \$142,000 and increased \$70,000 for the three and nine months ended September 30, 2016, respectively, as compared to the corresponding period of 2015.

(In thousands)	Three Months Ended September 30,			Nine Months Ended September 30,		
	2016	2015	Change	2016	2015	Change
Administrative	\$ —	\$ 7	(7)	\$ 15	\$ 9	\$ 6
Treatment	95	49	46	321	137	184
Services	4	—	4	38	—	38
PF Medical	342	527	(185)	1,196	1,354	(158)
Total	<u>\$ 441</u>	<u>\$ 583</u>	<u>\$ (142)</u>	<u>\$ 1,570</u>	<u>\$ 1,500</u>	<u>\$ 70</u>

Research and development 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 decrease in R&D costs for the three months ended September 30, 2016 as compared to the corresponding period of 2015 was primarily due to reduced R&D performed by our PF Medical Segment. The increase in R&D costs for the nine months was primarily in the Treatment Segment for enhancement of treatment processes.

Interest Expense

Interest expense decreased approximately \$23,000 and \$13,000 for the three and nine months ended September 30, 2016, respectively, as compared to the corresponding period of 2015. The decrease in the third quarter was primarily due to lower interest from our declining Term Loan balance and lower interest from the declining \$3,000,000 loan dated August 2, 2013, which was paid in full by the Company in August 2016. The decrease was partially offset by higher interest from higher averaged revolver loan balance. The decrease in the nine months ended September 30, 2016 as compared to the corresponding period of 2015 was primarily due to the same reasons as discussed above for the three months ended September 30, 2016. The decrease was offset additionally by a \$68,000 loss on debt extinguishment incurred in the first quarter of 2016 (which was included in interest expense) as a result of the 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.

Interest Expense- Financing Fees

Interest expense-financing fees decreased approximately \$42,000 and \$72,000 for the three and nine months ended September 30 2016, respectively, as compared to the corresponding period of 2015. The decrease was primarily due to lower monthly amortized financing fees resulting from our revised credit facility pursuant to the amendment dated March 24, 2016 as discussed above.

Discontinued Operations and Divestitures

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 Perma-Fix of South Georgia, Inc. ("PFSG") facility which is currently undergoing closure, subject to regulatory approval.

On May 2, 2016, Perma-Fix of Michigan, Inc. ("PFMI" – a closed location) entered into an Agreement for the sale of the property for a price of \$450,000. The Agreement provides for a down payment of approximately \$75,000. After certain closing and settlement costs, PFMI received approximately \$46,000. The Agreement also provides for, among other things, the balance of the purchase price of \$375,000 to be paid by the buyer in 60 equal monthly installments of approximately \$7,250, with the first payment due June 15, 2016.

Our discontinued operations had no revenue for the three and nine months ended September 30, 2016 and the corresponding period of 2015. We incurred net losses of \$191,000 and \$622,000 for our discontinued operations for the three and nine months ended September 30, 2016, respectively. We had net losses of \$377,000 and \$1,313,000 for our discontinued operations for the three and nine months ended September 30, 2015, respectively. Our losses for the nine months ended September 30, 2015 included a penalty in the amount of approximately \$201,000 recorded for PFSG in connection with a certain Consent Order from the Georgia Department of Natural Resources Environmental Protection Division and an asset impairment charge of \$150,000 recorded for PFMI in connection with the sale of property as discussed above.

Liquidity and Capital Resources

Our cash flow requirements during the nine months ended September 30, 2016 were primarily financed by our operations and Credit Facility availability. Our Medical Segment continues to dedicate resources to the R&D of the new medical isotope production technology and to take the necessary steps for eventual submission of this technology for FDA and other regulatory approval and commercialization of this technology. We believe that the need for capital by our Medical Segment in order to complete its R&D program and to submit its technology for governmental approval will require the Medical Segment to obtain such capital requirements through obtaining its own credit facility or additional equity raise. The Medical Segment has entered into a letter of intent (“LOI”) to raise capital, which is subject to the completion of a definitive agreement (see “Financing Activities” below for further detail of this LOI). If the Medical Segment is unable to raise the necessary capital, the Medical Segment could be required to reduce, delay or eliminate its R&D program. 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. Our capital requirements consist of general working capital needs, scheduled principal payments on our debt obligations, remediation projects and planned capital expenditures. Although there are no assurances, we believe that our cash flows from operations and our available liquidity from our credit facility are sufficient to fund our Treatment and Services Segment operations (also see potential receipt of finite risk sinking fund related to our PFNWR financial assurance policy in “Liquidity and Capital Resources – Investing Activities” below)

The following table reflects the cash flow activities during the first nine months of 2016:

(In thousands)	2016
Cash used in operating activities of continuing operations	\$ (1,313)
Cash used in operating activities of discontinued operations	(710)
Cash used in investing activities of continuing operations	(150)
Proceeds from sale of property of discontinued operations	46
Cash provided by financing activities of continuing operations	838
Effect of exchange rate changes on cash	(1)
Decrease in cash	\$ (1,290)

As of September 30, 2016, we were in a net borrowing position (Revolving Credit Facility) of approximately \$5,263,000. At September 30, 2016, we had cash on hand of approximately \$145,000, which presents primarily small account balances and minor petty cash used for miscellaneous services and supplies.

Operating Activities

Accounts Receivable (including Accounts receivable – non-current), net of allowances for doubtful accounts, totaled \$10,148,000 at September 30, 2016, an increase of \$475,000 from the December 31, 2015 balance of \$9,673,000. The increase was primarily due to timing of accounts receivable collections. We provide a variety of payment terms to our customers; therefore, our accounts receivable are impacted by the timing of accounts receivable collections.

Accounts Payable, totaled \$4,789,000 at September 30, 2016, a decrease of \$1,320,000 from the December 31, 2015 balance of \$6,109,000. The decrease was primarily due to reduced payables resulting from lower revenue and the pay down of our accounts payable. Also, we continue to manage payment terms with our vendors to maximize our cash position throughout all segments.

Disposal/transportation accrual as of September 30, 2016, totaled \$1,354,000, an increase of \$247,000 over the December 31, 2015 balance of \$1,107,000. Our disposal accrual can vary based on revenue mix and the timing of waste shipments for final disposal. During the first nine months of 2016, we shipped less waste for disposal.

We had working capital of \$1,473,000 (which included working capital of our discontinued operations) as of September 30, 2016, as compared to working capital of \$2,966,000 as of December 31, 2015. Our working capital was negatively impacted primarily by reduced revenue and the net loss we incurred during the first nine months of 2016.

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 prior to the March 24, 2016 amendment discussed below (“Amended Loan Agreement”), provided us with the following credit facility: (a) up to \$12,000,000 revolving line of 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 \$16,000,000, which required monthly installments of approximately \$190,000 (based on a seven-year amortization).

Under the Amended Loan Agreement, we had 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%.

On March 24, 2016, we entered into an amendment to the Amended Loan Agreement with PNC which provided, among other things, the following (the amendment, together with the Amended Loan Agreement is collectively known as the “Revised Loan Agreement”):

- extended the due date of our credit facility from October 31, 2016 to March 24, 2021 (“maturity date”);
- amended the Term Loan to approximately \$6,100,000, which requires monthly payments of \$101,600 (based on a five-year amortization) and which approximated the term loan balance under the existing credit facility at the date of the amendment. The Revolving Credit remains at up to \$12,000,000 (subject to the amount of borrowings based on a percentage of eligible receivables as previously defined under the Amended Loan Agreement);
- released \$1,000,000 of the \$1,500,000 borrowing availability restriction that the lender had previously placed on the Company in connection with the insurance settlement proceeds received on July 28, 2014 by our PFSG facility. The Company’s lender had authorized the Company to use such proceeds for working capital purposes but had placed an indefinite reduction on our borrowing availability of \$1,500,000;
- revised the interest payment options to paying an annual rate of interest due on the Revolving Credit at prime plus 1.75% or LIBOR plus 2.75% and the Term Loan at prime plus 2.25% or LIBOR plus 3.25%; and
- revised our annual capital spending maximum limit from \$6,000,000 to \$3,000,000.

In connection with the amendment of March 24, 2016, we paid PNC total closing fees of approximately \$72,000. As a result of the amendment dated March 24, 2016, we recorded approximately \$68,000 in loss on extinguishment of debt in accordance with ASC 470-50, “Debt – Modifications and Extinguishments,” which was included in interest expense in the accompanying Consolidated Statements of Operations.

Pursuant to the Revised Loan Agreement, we may terminate the Revised Loan Agreement upon 90 days’ prior written notice upon payment in full of its obligations under the Revised Loan Agreement. We have agreed to pay PNC 1.0% of the total financing in the event we pay off our obligations on or before 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 its obligations after March 23, 2019.

As of September 30, 2016, the availability under our revolving credit was \$2,294,000, based on our eligible receivables and includes the remaining indefinite reduction of borrowing availability of \$500,000 as discussed above. As of November 17, 2016, the indefinite reduction of borrowing availability will be increased by an additional \$750,000 (see amendment that we entered into with our lender on November 17, 2016 below). Upon potential receipt of the finite risk sinking fund relating to our PFNWR facility as discussed below (see “Investing Activities” below), our indefinite reduction of borrowing availability will be increased by an additional \$750,000.

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 illustrates the quarterly financial covenant requirements under our credit facility as of September 30, 2016.

(Dollars in thousands)	Quarterly Requirement	1st Quarter Actual	2nd Quarter Actual	3rd Quarter Actual
Senior Credit Facility				
Fixed charge coverage ratio	1.15:1	0.91:1	0.64:1	0.06:1
Minimum tangible adjusted net worth	\$ 30,000 ⁽¹⁾	\$ 40,539	\$ 32,150	\$ 30,706

(1) Effective with the third quarter of 2016, minimum tangible adjusted net worth was reduced to \$26,000 (see below for further details)

We failed to meet our minimum quarterly fixed charge coverage ratio (“FCCR”) requirement of 1.15:1 in the first quarter of 2016. On May 23, 2016, our lender waived this non-compliance. In connection with this waiver, we paid PNC a fee of \$5,000. We met our financial covenant requirements in the second quarter of 2016 except for our quarterly FCCR requirement. On August 22, 2016, we entered into an amendment to the Revised Loan Agreement with our lender which waived our non-compliance with the minimum quarterly FCCR for the second quarter of 2016. In addition, the amendment revised the methodology used in calculating the FCCR in the third quarter of 2016 and to be used in the fourth quarter of 2016 and the first quarter of 2017. This amendment also revised our minimum Tangible Adjusted Net Worth requirement (as defined in the Revised Loan Agreement) from \$30,000,000 to \$26,000,000. We failed to meet our quarterly FCCR requirement for the third quarter of 2016 due in large part, to the decrease in revenues sustained by our Treatment Segment as a result of delays in certain waste shipments that we expected to receive during the third quarter of 2016. On November 17, 2016, we entered into another amendment to our Revised Loan Agreement with our lender. This amendment included the following:

- waived our non-compliance with the minimum quarterly FCCR for the third quarter of 2016;
- further revised the methodology to be used in calculating the FCCR as follows (with continue maintenance of a minimum 1:15:1 ratio in each of the quarters): FCCR for the fourth quarter of 2016 is to be calculated using the financial results for the three months period ending December 31, 2016; FCCR for first quarter of 2017 is to be calculated using financial results for the six months period ending March 31, 2017; FCCR for second quarter of 2017 is to be calculated using the financial results for the nine months period ending June 30, 2017; and FCCR for the third quarter of 2017 and each fiscal quarters thereafter is to be calculated using the financial results for a trailing twelve months period basis;
- placed an immediate additional restriction on our borrowing availability by \$750,000, in addition to the restriction on our borrowing availability of \$500,000 which had been previously placed by our lender; and
- revised the interest payment options to paying an annual rate of interest due on the Revolving Credit at prime plus 2% or LIBOR plus 3% and the Term Loan at Prime plus 2.5% or LIBOR plus 3.5%. Such interest payment option will automatically revert back to interest payment options as revised on the March 24, 2016 amendment (see the March 24, 2016 amendment the Company entered into with above) if the Company is able to attain minimally a FCCR of 1:15:1, as calculated using a trailing twelve months period, subsequent to any quarters after the third quarter of 2016.

Pursuant to this amendment, our lender has also established a “Condition Subsequent” which requires the Company to receive restricted cash released from a finite risk sinking fund by December 31, 2016, in connection with our PFNWR subsidiary as discussed below (see “Investing Activities” below for further discussion of this finite risk sinking fund). Immediately upon the receipt of the funds, our lender will immediately place another \$750,000 restriction on the Company’s borrowing availability resulting in a total of \$2,000,000 restriction on the Company’s borrowing availability. In the event this finite risk sinking fund is not received by the Company by December 31, 2016, we will enter into discussions with our lender of possible further amendments to the Revised Loan Agreement.

All other terms of the Revised Loan Agreement remain principally unchanged. In connection with this amendment, the Company agreed to pay our lender a fee of \$25,000. As a result of this amendment, we believe we will be able to meet our quarterly financial covenant requirements in the remaining quarter of 2016. If we fail to meet any of our quarterly financial covenant requirements in the remaining quarter of 2016 and PNC does not waive the non-compliance or further 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.

We entered into a \$3,000,000 loan dated August 2, 2013 with Messrs. Robert Ferguson and William Lampson (each known as the “Lender”) which was repaid in full by us in August 2016. The loan was unsecured with a term of three years with interest payable at a fixed interest rate of 2.99% per annum. The loan required monthly payments of accrued interest only during the first year of the loan and monthly payments of \$125,000 in principal plus accrued interest for the second and third year of the loan. As consideration for us receiving the loan, we issued to each Lender a Warrant to purchase up to 35,000 shares of the Company’s Common at an exercise price of \$2.23 per share. On August 2, 2016, each Lender exercised his Warrant for the purchase of 35,000 shares of our Common Stock, resulting in total proceeds paid to us of approximately \$156,000. As further consideration for the loan, we had also issued to each Lender 45,000 shares of the Company’s Common Stock. The fair value of the Warrants and Common Stock and the related closing fees incurred from this transaction were recorded as a debt discount, which has been fully amortized using the effective interest method over the term of the loan as interest expense – financing fees.



On October 11, 2016, the Company, Perma-Fix Medical S.A and its wholly-owned subsidiary, Perma-Fix Medical Corporation (Perma-Fix Medical S.A. and Perma-Fix Medical Corporation (“PFM Corporation” – a Delaware corporation) are together known as PF Medical) entered into a letter of intent (“LOI”) with a private investor, subject to certain closing and other conditions, including , but not limited to, the execution of a definitive agreement within 90 days of the LOI, for the purchase of \$10,000,000 of Preferred Shares in PFM Corporation at a price of \$8.00 per share. Perma-Fix Medical S.A. is a Polish majority-owned subsidiary of the Company. Upon closing, the Preferred Shares of PFM Corporation would be voting securities and allow the investor to own approximately 48.6% of PFM Corporation’s issued and outstanding voting securities as of the closing. The LOI also provides that at closing, subject to certain terms and conditions, the investor would also receive a 36-month warrant to purchase three quarters (.75) of one share of PFM Corporation’s common stock for each share of Preferred Stock purchased by the investor at closing at an exercise price of \$9.00 for each three quarters of one share. In addition, at closing, the Company would receive a 36 month warrant, subject to certain terms and conditions, to purchase up to 183,606 shares of PFM Corporation’s common stock at an exercise price of \$14.00 per share. Further, under the terms of the LOI, the Company would be repaid \$500,000 of the amounts owed to it by PF Medical within 30 days after closing and the balance within 120 days after the closing.

If the above-described funding transaction is consummated, the LOI provides that the Board of Directors of PFM Corporation shall consist of seven directors. Two of the directors shall be nominees of the investor, two of the directors shall be nominees of the Company, one director shall be a nominee of another stockholder of Perma-Fix Medical S.A. and two independent directors shall be nominees of the PFM Corporation board.

Investing Activities

For the nine months ended September 30, 2016, our purchases of capital equipment totaled approximately \$104,000. These expenditures were primarily for improvements in our Treatment Segment. These capital expenditures were funded by cash from operations. We have budgeted approximately \$1,200,000 for 2016 capital expenditures for our Treatment and Services Segments to maintain operations and regulatory compliance requirements. 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 have a closure policy for our PFNWR facility with American International Group, Inc. (“AIG”) (“PFNWR policy”) which provides financial assurance to the state of Washington in the event of closure of the PFNWR facility. As of September 30, 2016, our financial coverage under this policy stands at approximately \$7,973,000 and this policy is collateralized by a finite risk sinking fund in the amount of approximately \$5,900,000 which is recorded in other long term assets on our Consolidated Balance Sheets. The Company is currently working on other options in providing financial assurance coverage for our PFNWR facility, including acquiring a separate bonding mechanism, which would enable the Company to cancel the PFNWR policy, thereby allowing for the release of any of the funds not required to collateralize the new PFNWR closure mechanism. The acceptance of a new mechanism for financial assurance for our PFNWR facility is subject to final approval by Washington state authorities and the release of such finite risk sinking fund is subject to approval by AIG.

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 September 30, 2016, which total approximately \$1,065,000, payable as follows: \$187,000 in remainder of 2016; \$700,000 in 2017; with the remaining \$178,000 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. As of September 30, 2016, the total amount of these bonds and letters of credit outstanding was approximately \$1,514,000, of which the majority of the amount relates to various bonds. Our Treatment Segment facilities operate under licenses and permits that require financial assurance for closure and post-closure costs. We provide for these requirements through financial assurance policies. As of September 30, 2016, the closure and post-closure requirements for these facilities were approximately \$46,847,000. We have recorded approximately \$21,456,000 in a sinking fund related to these policies in other long term assets on the accompanying Consolidated Balance Sheets.

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, 2015.

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 \$6,568,000 or 50.8% and \$19,508,000 or 51.7% of our total revenue from continuing operations during the three and nine months ended September 30, 2016, respectively, as compared to \$9,460,000 or 54.7% and \$27,261,000 or 57.7% of our total revenue from continuing operations during the corresponding period of 2015, 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 customer'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 September 30, 2016, we had total accrued environmental remediation liabilities of \$900,000, of which \$29,000 is recorded as a current liability. No material changes in remediation liabilities have occurred since December 31, 2015.

Item 3. Quantitative and Qualitative Disclosures about Market Risks

Not applicable

Item 4. Controls and Procedures

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

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our periodic reports filed with the Securities and Exchange Commission is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the Securities and Exchange Commission and that such information is accumulated and communicated to our management. As of the end of the period covered by this report, we carried out an evaluation with the participation of our Principal Executive Officer and Principal Financial Officer. Based on this recent assessment, our Principal Executive Officer and Principal Financial Officer have concluded that our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934, as amended) were effective as of September 30, 2016

(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, 2015, 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, 2015, except as follows:

PF Medical's inability to commercialize its medical isotope production technology may have a material impact on our financial results.

Our majority-owned Polish subsidiary, PF Medical (consisting of Perma-Fix Medical S.A. and its wholly owned subsidiary, Perma-Fix Medical Corporation ("PFM Corporation" – a Delaware corporation)), continues to dedicate significant resources to the R&D of its new medical isotope production technology. The ability to successfully commercialize this new technology is complex and an uncertain process requiring high levels of innovation and investment. As a majority owner of PF Medical, if PF Medical is unable to successfully commercialize this new technology and generate revenue, our financial result may be impacted materially. Further, PF Medical must complete the development of the new medical isotope technology and obtain approvals as to its Tc-99m medical diagnostic application from a certain U.S. governmental agency before it can market its process in the U.S. and may be required to obtain approvals from certain foreign governmental authorities before it can market its process in those respective countries. In order to raise the necessary capital for PF Medical to complete its development of its new medical isotope technology and to obtain approvals required to market its technology, PF Medical will be required to obtain its own credit facility, which could restrict our rights as majority owner of PF Medical, or raise additional equity capital which, if successful, could result in a dilution of our ownership in PF Medical. On October 11, 2016, the Company and PF Medical entered into a letter of intent ("LOI") with a private investor, subject to certain closing and other conditions, including, but not limited to, the execution of a definitive agreement within 90 days of the LOI, for the purchase of \$10,000,000 of Preferred Shares in PFM Corporation at a price of \$8.00 per share and among other things (see "Liquidity and Capital Resources – Financing Activities" in "Management's Discussion and Analysis" for further details of this LOI). If PF Medical is unable to raise the necessary capital by obtain its own credit facility or equity raise, PF Medical could be required to reduce, delay or eliminate its R&D program.

Breach of financial covenants in our Credit Facility could result in a default, triggering repayment of outstanding debt under the credit facility.

Our Credit Facility with our bank contains financial covenants. A breach of any of these covenants could result in a default under our Credit Facility triggering our lender to immediately require the repayment of all outstanding debt under our Credit Facility and terminate all commitments to extend further credit. Although we failed to meet our quarterly fixed charge coverage ratio ("FCCR") for the first, second, and third quarters of 2016, these instances of non-compliance were waived by our lender. Our lender has further revised the methodology in calculating our FCCR. As a result of this revision, we expect to meet our quarterly financial covenant requirement for the remainder quarter of 2016; however, if we fail to meet any of our quarterly financial covenant requirements in the future and our lender does not waive the non-compliance or revise our covenant so that we are in compliance, our lender could accelerate the payment of our borrowings under our credit facility. In such event, we may not have sufficient liquidity to repay our debt under our Credit Facility and other indebtedness.

Shut down of our East Tennessee Materials and Energy Corporation ("M&EC") facility located in Oak Ridge, Tennessee could negatively impact our financial results.

Our M&EC subsidiary was notified by the lessor that the lease agreement which M&EC currently operates its Oak Ridge, Tennessee facility would not be renewed at the end of the current lease term ending January 21, 2018. In light of this event and our strategic review of operations within our Treatment Segment, we are proceeding with a plan to shut down our M&EC facility located in Oak Ridge, Tennessee at the end of the lease term. Operations at the M&EC facility are continuing during the remaining term of the lease and the facility has begun the process of transitioning waste shipments and operational capabilities to our other Treatment Segment facilities, subject to customer requirements and regulatory approvals. Simultaneously, we have begun required clean-up/maintenance procedures at M&EC's Oak Ridge, Tennessee facility in accordance with M&EC's RCRA permit requirements. We believe that our plan to shut down our M&EC facility in Oak Ridge, Tennessee should reduce our fixed costs within our Treatment Segment with minimal loss in revenue, thereby improving our Treatment Segment gross margin. However, as certain waste shipments are dependent on our customers' requirements and the operational capabilities of our other Treatment facilities to accept and treat these wastes, there are no guarantees that our other Treatment facilities will be able to treat these wastes. In such event, our financial results could be materially impacted.

Item 6. Exhibits

(a) **Exhibits**

- 3(ii) Amended and Restated Bylaws of Perma-Fix Environmental Services, Inc., as amended effective July 28, 2016, as incorporated by reference from Exhibit 3(ii) to the Company Form 8-K filed on August 1, 2016.
- 4.1 First Amendment to Amended and Restated Revolving Credit, Term Loan and Security Agreement between PNC Bank, National Association and Perma-Fix Environmental Services, Inc., dated November 7, 2012, as incorporated by reference from Exhibit 4.1 to the Company Form 10-Q for the quarter ended September 30, 2012, filed on November 8, 2012.
- 4.2 Second Amendment to Amended and Restated Revolving Credit, Term Loan and Security Agreement and Waiver between PNC Bank, National Association and Perma-Fix Environmental Services, Inc., dated May 9, 2013, as incorporated by reference from Exhibit 4.1 to the Company Form 10-Q for the quarter ended March 31, 2013, filed on May 10, 2013.
- 4.3 Third Amendment to Amended and Restated Revolving Credit, Term Loan and Security Agreement between PNC Bank, National Association and Perma-Fix Environmental Services, Inc., dated August 2, 2013, as incorporated by reference from Exhibit 4.1 to the Company Form 10-Q for the quarter ended June 30, 2013, filed on August 8, 2013.
- 4.4 Fourth Amendment to Amended and Restated Revolving Credit, Term Loan and Security Agreement and Waiver between PNC Bank, National Association and Perma-Fix Environmental Services, Inc., dated April 14, 2014, as incorporated by reference from Exhibit 4.17 to the Company 2013 Form 10-K, filed on April 15, 2014.
- 4.5 Fifth Amendment to Amended and Restated Revolving Credit, Term Loan and Security Agreement between PNC Bank, National Association and Perma-Fix Environmental Services, Inc., dated July 25, 2014, as incorporated by reference from Exhibit 4.1 to the Company Form 8-K, filed on July 31, 2014.
- 4.6 Sixth Amendment to Amended and Restated Revolving Credit, Term Loan and Security Agreement between PNC Bank, National Association and Perma-Fix Environmental Services, Inc., dated July 25, 2014, as incorporated by reference from Exhibit 4.2 to the Company Form 8-K, filed on July 31, 2014.
- 4.7 Seventh Amendment to Amended and Restated Revolving Credit, Term Loan and Security Agreement between PNC Bank, National Association and Perma-Fix Environmental Services, Inc., dated March 24, 2016, as incorporated by reference from Exhibit 4.17 to the Company 2015 Form 10-K filed on March 24, 2016.
- 4.8 Waiver Letter from PNC dated May 23, 2016 for non-compliance of financial covenant, as incorporated by reference from Exhibit 4.8 to the Company Form 10-Q for the quarter ended June 30, 2016, filed on May 23, 2016.
- 4.9 Eighth Amendment to Amended and Restated Revolving Credit, Term Loan and Security Agreement between PNC Bank, National Association and Perma-Fix Environmental Services, Inc., dated August 22, 2016, as incorporated by reference from Exhibit 4.9 to the Company's Form 10-Q for the quarter ended June 30, 2016, filed on August 22, 2016.
- 4.10 Ninth Amendment to Amended and Restated Revolving Credit, Term Loan and Security Agreement between PNC Bank, National Association and Perma-Fix Environmental Services, Inc., dated November 17, 2016.
- 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.
- 99.1 Letter of Intent (Term Sheet) dated October 11, 2016, between Perma-Fix Environmental Services, Inc., Perma-Fix Medical S.A., Perma-Fix Medical Corporation, and the Investor.

101.INS XBRL Instance Document*
101.SCH XBRL Taxonomy Extension Schema Document*
101.CAL XBRL Taxonomy Extension Calculation Linkbase Document*
101.DEF XBRL Taxonomy Extension Definition Linkbase Document*
101.LAB XBRL Taxonomy Extension Labels Linkbase Document*
101.PRE XBRL Taxonomy Extension Presentation Linkbase Document*

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

SIGNATURES

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

PERMA-FIX ENVIRONMENTAL SERVICES

Date: November 18, 2016

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

Date: November 18, 2016

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

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

THIS NINTH AMENDMENT TO AMENDED AND RESTATED REVOLVING CREDIT, TERM LOAN AND SECURITY AGREEMENT AND WAIVER, dated as of November 17, 2016 (this "Amendment"), relating to the Credit Agreement referenced below, is by and among PERMA-FIX ENVIRONMENTAL SERVICES, INC., a Delaware corporation (the "Borrower"), the lenders identified on the signature pages hereto (the "Lenders"), and PNC Bank, National Association, a national banking association, as agent for the Lenders (in such capacity, the "Agent"). Terms used herein but not otherwise defined herein shall have the meanings provided to such terms in the Credit Agreement.

WITNESSETH

WHEREAS, a credit facility has been extended to the Borrower pursuant to the terms of that certain Amended and Restated Revolving Credit, Term Loan and Security Agreement dated as of October 31, 2011 (as amended and modified from time to time, the "Credit Agreement") among the Borrower, the Lenders identified therein, and PNC Bank, National Association, as agent for the Lenders;

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

WHEREAS, the Required Lenders have agreed to the requested modifications on the terms and conditions set forth herein;

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

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

(a) A new definition of "Release of Restricted Insurance Closure Fund" is added to Section 1.2 in correct alphabetical order to read as follows:

“Release of Restricted Insurance Closure Fund” shall mean the pending funds forthcoming to Borrower from Chartis/AIG in connection with the restructuring of its state mandated closure insurance requirements.”

(b) The definition of “Applicable Margin” in Section 1.2 is amended to read as follows:

“Applicable Margin” for (i) Revolving Advances that are Eurodollar Rate Loans, 3.00%, (ii) Revolving Advances that are Domestic Rate Loans, 2.00%, (iii) Equipment Loans and Term Loans that are Eurodollar Rate Loans, 3.50%, and (iv) Equipment Loans and Term Loans that are Domestic Rate Loans, 2.50%. At such time as Borrower attains a Fixed Charge Coverage Ratio of 1.15 to 1.0 on a rolling four quarter basis the Applicable Margin shall be reduced as follows: for (i) Revolving Advances that are Eurodollar Rate Loans, 2.75%, (ii) Revolving Advances that are Domestic Rate Loans, 1.75%, (iii) Equipment Loans and Term Loans that are Eurodollar Rate Loans, 3.25%, and (iv) Equipment Loans and Term Loans that are Domestic Rate Loans, 2.25%.”

(c) Section 2.1(a)(y)(a)(iii) is amended to read as follows:

“(iii) a \$1,250,000 availability block established from a portion of the South Georgia Insurance Proceeds which shall be increased to \$2,000,000 when Borrower receives the Release of Restricted Insurance Closure Fund, minus”.

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

“(b) Fixed Charge Coverage Ratio.

Cause to be maintained a Fixed Charge Coverage Ratio of not less than 1.15 to 1.0 for (i) the one quarter period ending as of December 31, 2016; (ii) the two quarter period ending as of March 31, 2017; (iii) the three quarter period ending as of June 30, 2017; and (iv) the four quarter period ending as of September 30, 2017 and for each fiscal quarter thereafter.”

(e) Exhibit 1.2(a) is deleted in its entirety and replaced by a new Exhibit 1.2(a) attached hereto and incorporated by reference.

2 . Waiver. The Agent and the Required Lenders hereby waive the violation by the Borrower of the Fixed Charge Coverage Ratio covenant set forth in Section 6.5(b) of the Credit Agreement for the quarter ending as of September 30, 2016.

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

- (a) the execution of this Amendment by the Borrower, the Required Lenders and the Agent; and
- (b) receipt by the Agent of an amendment fee of \$25,000.

4 . Condition Subsequent. No later than December 31, 2016 the Borrower shall the provide Agent evidence satisfactory to the Agent that it has received the Release of Restricted Insurance Closure Fund.

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

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

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

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

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

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

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

BORROWER:

PERMA-FIX ENVIRONMENTAL
SERVICES, INC.

By: /s/Ben Naccarato

Name: Ben Naccarato

Title: CFO

AGENT AND LENDER:

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

By: /s/Alex M. Council IV

Name: Alex M. Council

Title: Vice President

Ninth Amendment
Perma-Fix

[Letterhead of Company]

COMPLIANCE CERTIFICATE _____, 20__

PNC Bank, National Association, as Agent
One Piedmont Town Center
4720 Piedmont Row Drive
Suite 300
Charlotte, NC 28210
Attention: Alex Council

The undersigned, the [**Chief Executive Officer**][**President**][**Chief Financial Officer**][**Controller**] of **Perma-Fix Environmental Services, Inc.**, a Delaware corporation, gives this certificate to **PNC Bank, National Association**, as Agent (in such capacity, the "Agent"), in accordance with the requirements of **Section 9.7 and 9.8** (Annual and Quarterly Financial Statements) of that certain Revolving Credit, Term Loan and Security Agreement dated as of October 31, 2011, among the Borrower, the financial institutions which are parties thereto as Lenders, and the Agent (the "Loan Agreement").

Capitalized terms used in this Certificate, unless otherwise defined herein, shall have the meanings ascribed to them in the Loan Agreement.

1. Based upon my review of the financial statements of the Company for the [Fiscal Year/Quarter] ending _____, 20__, copies of which are attached hereto, I hereby certify that:
 - (a) Section 6.5(a), the Tangible Adjusted Net Worth is [satisfied / not satisfied] at \$_____ when compared to the required amount of at least \$26,000,000.
 - (b) Section 6.5(b), the Fixed Charge Coverage Ratio is [satisfied / not satisfied] at _____ to 1.0 when compared to the required **1.15 to 1.0** for (a) the one quarter period ending as of December 31, 2016; (ii) the two quarter period ending as of March 31, 2017; (iii) the three quarter period ending as of June 30, 2017; and (iv) the four quarter period ending as of December 31, 2017 and as of the end of each fiscal quarter thereafter.
 - (c) Sections 7.4, Investments are [satisfied/not satisfied] as there are \$xx,xxx (if none, so state) outstanding.
 - (d) Sections 7.5(a), Loans are [satisfied/not satisfied] as no advances, loans or extensions of credit have been made except for extensions of trade credit in connection with the sale of Inventory in the Ordinary Course of Business and Section 7.5(b), Loans to employees in the Ordinary Course of Business in the amount of \$xx,xxx (if none, so state) are [less/more] than the allowable amount of \$1,000,000 in the aggregate.
 - (e) Sections 7.6, Capital Expenditures are [satisfied/not satisfied] as \$xx,xxx is [less/more] than the allowable amount of \$3,000,000 for any fiscal year.
-

- (f) Sections 7.7, Dividends and Distributions are [satisfied/not satisfied] as the payment of all dividends and distributions comply with the provisions of Section 7.7.
 - (g) Sections 7.8, Create additional Indebtedness is [satisfied/not satisfied] as such additional Indebtedness complies with the provisions of Section 7.8.
 - (h) Sections 7.11, Leases are [satisfied/not satisfied] as \$ xx,xxx is [less/ more] when compared to the annual rental payments for all property of \$1,000,000.
2. No Default exists on the date hereof, other than: _____ [if none, so state]; and
 3. No Event of Default exists on the date hereof, other than _____ [if none, so state].
 4. As of the date hereof, if applicable, Borrower is current in all material respects in payment of all accrued rent, warehouse fees, and other charges to Persons who own or lease any premises where any of the Collateral is located, and there are no pending disputes or claims regarding Borrowers' failure to pay or delay in payment of any such rent or other charges.
 5. Additionally, as of the date hereof, as required by Section 9.3, to the best of my knowledge, Borrower is in compliance in all material respects with all federal, state and local laws relating to environmental protection and control and occupational safety and health, or if such is not the case, specifying in all areas of material non-compliance of which such officer has actual knowledge and the proposed action Borrower will implement in order to achieve compliance in all material respects unless full compliance is otherwise required.
 6. The financial statements attached hereto are complete and accurate in all respects and were prepared in accordance with GAAP, consistently applied, except for the absence of footnotes and subject to year end audit adjustments, and except as may be disclosed in such financial statements.

PERMA-FIX ENVIRONMENTAL SERVICES, INC.

_____ as **[Chief Executive Officer] [President]**
[Chief Financial Officer] [Controller]

Dated _____

Spreadsheet

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: November 18, 2016

/s/ Louis F. Centofanti

Louis F. Centofanti
Chairman of the Board
Chief 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: November 18, 2016

/s/ Ben Naccarato

Ben Naccarato
Vice President and
Chief 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 September 30, 2016, 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: November 18, 2016

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

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

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 September 30, 2016, 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: November 18, 2016

/s/ Ben Naccarato

Ben Naccarato
Vice President and Chief Financial Officer

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

TERM SHEET

Perma-Fix Medical Holdings U.S.

This Term Sheet is entered into as of the date of the last signature to the agreement (the "Effective Date") by and among Perma-Fix Medical, S.A. ("PFM"), Perma-Fix Environmental Services, Inc., a major shareholder of PFM ("PESI"), and Perma-Fix Medical Corporation, a Delaware Corporation, and a wholly owned subsidiary of PFM (the "Company"), and CAT Ventures Medical Isotopes LLC ("Investor"). The following summarizes the principal terms as to a proposed sale of Preferred Shares, Common Shares, the issuance of various Warrants to named parties and certain other transactions by and among the Company, the Investor, PFM, and PESI (together the "Transactions").

Company: Perma-Fix Medical Corporation.

Investment: Investor shall purchase 1,250,000 shares of non-dividend paying Series A Preferred Stock of the Company ("*Series A Preferred Stock*") for US \$10.0 Million, or \$8 per share, (the "*Series A Purchase Price*"). Immediately following the closing of the purchase of the Series A Preferred Stock by the Investor (the "*Closing*"), Investor will own approximately 48.6% of the Company's issued and outstanding shares of voting equity securities as though all of PFM's current shareholders own the same ownership in the Company just prior to the Closing. Investor will have 90 days from the Effective Date to complete the Closing and the purchase of the Series A Preferred Stock.

Within 30 days of the Investors Closing of the purchase of the Series A Preferred Stock of the Company, the Investor shall ensure that the Company pays \$500,000.00 to PESI towards the \$2.3 million PFM now owes to PESI. The remaining balance of this \$2.3 million debt currently owed, plus any additional debts by PFM to PESI accruing before Closing, will be repaid as soon as practicable, but not later than 120 days from the date of the Closing.

Exclusive Negotiations: PFM and PESI will not, and will cause the Company not to, engage with any third party as to the sale of any securities by the Company or PFM for 90 days from the Effective Date of this Term Sheet.

Board of Directors: The Company will have 7 directors. The holders of the Series A Preferred Stock shall appoint two Company directors (the "*Series A Directors*") upon completion of Closing of the Series A Preferred Stock, PESI shall appoint two directors, Digirad Corporation shall appoint one director and the Board will elect two independent directors. If allowed by, and subject to Polish law, a Voting Agreement and other documents deemed reasonably necessary shall be executed to ensure that the members of the Company's Board of Directors shall also be elected as members of the Supervisory Board of PFM.

Intellectual Property: On or prior to the Closing, the Patent License Agreement dated March 18, 2014 between PESI and the Company (the “*License Agreement*”) as to U.S. Patent Application series No. 13/424,289 (the “*Patent*”) shall be modified to include Ge/Ga-68 systems and to reflect the following modifications: (a) Company will have a paid-up, perpetual, worldwide, royalty-free, exclusive right and license to use the Patent for use in any Tc-99m and Ge/Ga medical applications, including without limitation the use of the Patent in the production and use, , of these radioisotopes in any medical procedures (together the “*Field*”), (b) Company will maintain its licensed rights to all improvements and modifications to the patent that are developed by Company or any other party in the Field as provided in the current License Agreement, and (c) Company may sublicense the Licensed Rights to any person as provided in the current License Agreement, subject to current License Agreement terms. Other than as modified as discussed above, no other changes to the License Agreement shall be made.

Warrants: For each share of Series A Preferred Stock purchased by the Investor at Closing, the Investor shall receive a warrant to purchase three-quarters (.75) of one share of the Company’s Common Stock per warrant (the “*Investor Warrant*”). Each Investor Warrant will have a strike price of nine dollars (\$9) per Investor Warrant, and be exercisable within 36 months from completion of the purchase of the Series A Preferred Stock. PESI will also receive a 36-month warrant to purchase 183,606 shares of Company Common Stock at \$14 per share (“*PESI Warrant*”) and Drad will also receive a 36-month warrant to purchase 16,394 shares of Common Stock at \$14 per share (“*Drad Warrant*”).

Investor Warrants, PESI Warrants and Drad Warrants will terminate upon the earlier of:

- a.sale or disposition of the whole or a substantial part of the assets or stock of the Company,
- b.completion of an initial public offering of the shares of the Company, or
- c.3 months following FDA approval.

Tax Issues: Only if applicable to the purchase of the Series A Preferred Stock, the deal will be structured to qualify the investment by Investor for preferential tax treatment under the Tax Hikes (PATH) Act.

Anti-Dilution Rights: Broad-based weighted-average anti-dilution protection for any issuance of stock or other equity instruments at a price per share less than the Series A Purchase Price. Common Stock or Restricted Stock Units issuable upon a stock split, stock dividend, a subdivision of shares of Common Stock or as part of any equity incentive plan (including any rights to acquire Common Stock) will not trigger such anti-dilution adjustment.

Liquidation Preference: A Deemed Liquidation Event (as defined below) or the dissolution or winding up of the Company will require, proceeds to be paid to the Company’s shareholders as follows:
After paying of all Company debts and liabilities, subject to the laws of Delaware:

- (1) first, pay one times the Series A Purchase Price plus accrued but unpaid dividends on each share of Series A Preferred Stock outstanding;
- (2) Thereafter, all remaining proceeds will be distributed pari passu to holders of Series A Preferred Stock (on an as converted basis) and Common Stock.

“Deemed Liquidation Event” means a merger, consolidation or similar event (other than one in which Company shareholders own a majority by voting power of the outstanding shares of the surviving or acquiring corporation) and a sale, lease, transfer or other disposition of substantially all Company assets.

Preemptive Rights: Investor will have the right to purchase up to its pro rata share (based on its percentage of outstanding Common Stock on an as converted basis) of any securities offered by the Company, on the same material terms and conditions as the Company proposes to offer such securities to other potential investors, except securities offered pursuant to a registered public offering or pursuant to stock options, warrants or other rights granted by the Company to its employees or pursuant to the Definitive Agreements or pursuant to a financing approved by 75% of the Board of Directors of the Company.

Equity Incentive Plan: Immediately following the Closing of the purchase of the Series A Preferred Stock by the Investor, the Company shall establish an employee, director and consultant equity incentive plan (the “Plan”), and will reserve approximately 8% of the Company’s outstanding voting shares of capital stock as of the Closing for grants, options, or other similar forms of equity-based remuneration under the Plan.

Subject to applicable law, the Board of Directors shall issue grants under the Plan to certain of the Company’s or PFM’s directors, employees and/or consultants as approved by the Company’s Board of Directors on such terms as required under the Plan, but at a minimum Shameem Hassan shall receive grants equal to the amount previously approved by the Board or the equivalent amount agreed to by Parties.

Expenses: PFM or the Company shall pay all incorporation, accounting, and legal expenses related to establishing the Company. PFM or the Company will reimburse Investor for all reasonable legal, consulting, and accounting expenses and associated travel costs incurred by Investor in connection with the transactions contemplated hereby, including, but not limited to, preparing and negotiating this Term Sheet and the Definitive Agreements and conducting due diligence in an amount not to exceed \$75,000.

Protective Provisions: Subject to Delaware law, so long as at least 500,000 shares of the Series A Preferred Stock remain outstanding and owned by the Investor, the Company shall not, without the approval, by vote or written consent of the Investor and a majority of the Board of Directors of the Company and, if required under Delaware law, a majority of the outstanding shares of voting equity securities of the Company, voting as a single class

- (1) liquidate, dissolve or wind up the affairs of the Company, or effect any merger or consolidation or any other Deemed Liquidation Event;
- (2) amend, alter, or repeal any provision of the Company’s Certificate of Incorporation or Bylaws in a manner materially adverse to the Series A Preferred Stock;
- (3) create or authorize the creation of or issue any other security convertible into or exercisable for any equity security, having rights, preferences or privileges senior to or on parity with the Series A Preferred Stock, or increase the authorized number of shares of Series A Preferred Stock;
- (4) purchase or redeem or pay any dividend on any capital stock prior to the Series A Preferred Stock, other than stock repurchased from former employees or consultants in connection with the cessation of their employment/services, at the lower of fair market value or cost, other than as approved by the Board, including the approval of the Series A Directors;
- (5) adopt any equity incentive plan, unless approved by a majority of the Board of Directors of the Company;
- (6) sell or dispose of the whole or a substantial part of the assets of the Company and/or any subsidiary;
- (7) approve or make adjustments or modifications to terms of transactions involving the interest of any director or shareholder of the Company and/or affiliate, including but not limited to the making of any loans or advances, whether directly or indirectly, or the provision of any guarantee, indemnity or security for or in connection with any indebtedness of liabilities of any director or shareholder of the Company and/or affiliates, except any such transactions between the Company and PESI, the Company and Digirad or those transactions that have been approved by a majority of the Board of Directors of the Company; or
- (8) increase or decrease the size of the Board;

If at any time the Investor owns a majority of the outstanding voting shares of the Company, the Company shall not, without approval, by vote or written consent of the non-Investor shareholders of the Company, carry out or perform any of the actions listed above in this paragraph “Protective Provisions”.

Conditions to Closing:

The following conditions must be satisfied on or before the Closing:

- (1) There is no material adverse change in Company or PFM;
- (2) Satisfactory completion of technical, accounting, legal and financial diligence by the Investor;
- (3) PESI and Company have modified the terms of the License Agreement according to the terms of this Term Sheet, if necessary;
- (4) other reasonable and customary closing conditions required by Investor; and
- (5) the parties hereto have entered into Definitive Agreements regarding the transactions described in this Term Sheet (“*Definitive Agreements*”).

Non-Solicitation of Employees

The Investor and the Company agree to not, and to cause their affiliates and subsidiaries to not, by or for themselves, or as an agent, representative, or employee of another, employ any employee of PESI or any of its subsidiaries or attempt to solicit, entice, persuade, or induce any individual who is employed by PESI or any of its subsidiaries to terminate or refrain from renewing or extending such employment or to become employed by or enter into contractual relations with the Investor, the Company, any of the Investor’s or the Company’s affiliates or subsidiaries, or any other individual or entity other than PESI or its subsidiaries.

Representations and Warranties:

Customary representations and warranties made by the Company regarding Company and PFM plus such other reasonable and customary representations and warranties required by Investor.

Indemnity:

The Definitive Agreements will provide that each party will indemnify, defend, and hold harmless each other party and its respective affiliates on a several, but not joint, basis for any actual damages suffered by such indemnified party, other than consequential damages or loss of profits, arising in connection with any material breach of the representations, warranties, covenants and undertakings by the such other parties set forth in the Definitive Agreements.

**Disclosure;
Confidentiality:**

Notwithstanding any nondisclosure, confidentiality, or other agreement to the contrary, Investor may disclose confidential information regarding PFM and Company and the terms of this Term Sheet to any of Investor's affiliates, agents, employees, representatives, partners, prospective Investors, attorneys, accountants, experts, consultants, and advisors who have executed a reasonable nondisclosure agreement ("*NDA*") pre-approved by PESI with signed copies of all such *NDA*'s to be provided to PESI before any disclosure takes place.

Except as set forth above or as required by law, no party hereto shall disclose the terms and conditions, or the existence, of this Term Sheet with any third party until the Definitive Agreements have been executed and delivered, except further, PESI and PFM may disclose this Term Sheet to their attorneys, accountants, affiliates, agents, employees and directors who have a need to know in order to carry out their duties and responsibilities in connection with the proposed transactions discussed in this Term Sheet, subject to the requirements of the preceding paragraphs.

Due Diligence:

Within five business days of the Effective Date, PEIS and PFM will provide, and cause Company to provide to Investor reasonable access, during normal business hours and with reasonable advance notification, to PFM's and Company's facilities, books and records in the form of a data room and will cause the directors, employees, accountants, and other agents and representatives (collectively, "*Representatives*") of PESI, PFM, and Company to cooperate fully with the Investor and its Representatives in connection with Investor's due diligence review of PFM, Company and their assets (including intellectual property), contracts, liabilities, operations, records and other aspects of their business, which Investor shall complete due diligence within ten business days upon completed review.

Governing Law:

This Term Sheet will be governed in all respects by the laws of the State of Delaware, without regard to any conflict of law principles.

Term:

This Term Sheet shall terminate 90 days from the Effective Date hereof, unless extended in writing executed by all parties hereto.

(signatures on following page)

Except for the provisions titled "Exclusive Negotiations," "Disclosure; Confidentiality," "Non-Solicitation of Employees," "Due Diligence," and "Governing Law (all of which shall be binding), (a) this Term Sheet is intended only as a summary of the discussions of the Investor with PESI and PFM as to the proposed investment in the Company by the Investors as described in this Term Sheet, and (b) this Term Sheet is not a binding agreement between or among any parties but is subject to negotiation and execution of Definitive Agreements.

Perma-Fix Medical S.A.

CAT Ventures Medical Isotopes LLC

By: /s/ Stephen Belcher

By: /s/ Jin S. Chun 10/11/16

Name: Stephen Belcher
Title: Chief Executive Officer

Name: Jin S. Chun
Title: Managing Member

Perma-Fix Environmental Services, Inc. Perma-Fix Medical Corporation

Perma-Fix Environmental Services, Inc

Perma-Fix Medical Corporation

By: /s/Lou Centofanti

By: /s/ Ben Naccarato

Name: L. Centofanti

Name: B. Naccarato

Title: CEO

Title: CFO

Date: 10/11/16

Date: 10-11-16

EXHIBIT A

WORK ORDERS