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

Form 10-Q

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended March 31, 2019

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

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

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

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

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

Class	Outstanding at May 4, 2019
Common Stock, \$.001 Par Value	12,054,439 shares

PERMA-FIX ENVIRONMENTAL SERVICES, INC.

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PART I - FINANCIAL INFORMATION
Item 1. – Financial Statements

PERMA-FIX ENVIRONMENTAL SERVICES, INC.
Consolidated Balance Sheets

(Amounts in Thousands, Except for Share and Per Share Amounts)	March 31, 2019 (Unaudited)	December 31, 2018 (Audited)
ASSETS		
Current assets:		
Cash	\$ 345	\$ 810
Accounts receivable, net of allowance for doubtful accounts of \$136 and \$105, respectively	7,341	7,735
Unbilled receivables - current	3,316	3,105
Inventories	362	449
Prepaid and other assets	2,765	2,552
Current assets related to discontinued operations	99	107
Total current assets	14,228	14,758
Property and equipment:		
Buildings and land	19,782	19,782
Equipment	19,267	19,157
Vehicles	369	369
Leasehold improvements	23	23
Office furniture and equipment	1,554	1,551
Construction-in-progress	1,449	1,389
Total property and equipment	42,444	42,271
Less accumulated depreciation	(26,728)	(26,532)
Net property and equipment	15,716	15,739
Property and equipment related to discontinued operations	81	81
Operating lease right-of-use assets	2,550	—
Intangibles and other long term assets:		
Permits	8,632	8,443
Other intangible assets - net	1,223	1,278
Finite risk sinking fund (restricted cash)	16,052	15,971
Other assets	1,154	1,054
Other assets related to discontinued operations	98	118
Total assets	\$ 59,734	\$ 57,442

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)	March 31, 2019 (Unaudited)	December 31, 2018 (Audited)
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 7,206	\$ 5,497
Accrued expenses	5,001	5,014
Disposal/transportation accrual	1,920	1,542
Deferred revenue	5,443	6,595
Accrued closure costs - current	281	1,142
Current portion of long-term debt	1,184	1,184
Current portion of operating lease liabilities	199	—
Current portion of finance lease liabilities	239	181
Current liabilities related to discontinued operations	322	356
Total current liabilities	<u>21,795</u>	<u>21,511</u>
Accrued closure costs	5,720	5,608
Other long-term liabilities	260	255
Deferred tax liabilities	604	586
Long-term debt, less current portion	2,187	2,118
Long-term operating lease liabilities, less current portion	2,377	—
Long-term finance lease liabilities, less current portion	276	268
Long-term liabilities related to discontinued operations	964	963
Total long-term liabilities	<u>12,388</u>	<u>9,798</u>
Total liabilities	34,183	31,309
Commitments and Contingencies (Note 10)		
Stockholders' Equity:		
Preferred Stock, \$.001 par value; 2,000,000 shares authorized, no shares issued and outstanding	—	—
Common Stock, \$.001 par value; 30,000,000 shares authorized; 11,969,179 and 11,944,215 shares issued, respectively; 11,961,537 and 11,936,573 shares outstanding, respectively	12	12
Additional paid-in capital	107,656	107,548
Accumulated deficit	(80,302)	(79,630)
Accumulated other comprehensive loss	(202)	(214)
Less Common Stock in treasury, at cost; 7,642 shares	(88)	(88)
Total Perma-Fix Environmental Services, Inc. stockholders' equity	<u>27,076</u>	<u>27,628</u>
Non-controlling interest	(1,525)	(1,495)
Total stockholders' equity	<u>25,551</u>	<u>26,133</u>
Total liabilities and stockholders' equity	<u>\$ 59,734</u>	<u>\$ 57,442</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 March 31,	
	2019	2018
Revenues	\$ 11,708	\$ 12,658
Cost of goods sold	9,207	9,337
Gross profit	<u>2,501</u>	<u>3,321</u>
Selling, general and administrative expenses	2,898	2,780
Research and development	227	232
Gain on disposal of property and equipment	—	(8)
(Loss) income from operations	<u>(624)</u>	<u>317</u>
Other income (expense):		
Interest income	81	49
Interest expense	(87)	(53)
Interest expense-financing fees	(10)	(9)
Other	129	—
(Loss) income from continuing operations before taxes	<u>(511)</u>	<u>304</u>
Income tax expense	(39)	(51)
(Loss) income from continuing operations, net of taxes	<u>(550)</u>	<u>253</u>
Loss from discontinued operations (net of taxes of \$0)	<u>(152)</u>	<u>(157)</u>
Net (loss) income	<u>(702)</u>	<u>96</u>
Net loss attributable to non-controlling interest	<u>(30)</u>	<u>(40)</u>
Net (loss) income attributable to Perma-Fix Environmental Services, Inc. common stockholders	<u>\$ (672)</u>	<u>\$ 136</u>
Net (loss) income per common share attributable to Perma-Fix Environmental Services, Inc. stockholders - basic and diluted:		
Continuing operations	\$ (.05)	\$.02
Discontinued operations	(.01)	(.01)
Net (loss) income per common share	<u>\$ (.06)</u>	<u>\$.01</u>
Number of common shares used in computing net (loss) income per share:		
Basic	<u>11,961</u>	<u>11,747</u>
Diluted	<u>11,961</u>	<u>11,773</u>

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

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

(Amounts in Thousands)	Three Months Ended March 31,	
	2019	2018
Net (loss) income	\$ (702)	\$ 96
Other comprehensive income (loss):		
Foreign currency translation gain (loss)	12	(8)
Total other comprehensive income (loss)	12	(8)
Comprehensive (loss) income	(690)	88
Comprehensive loss attributable to non-controlling interest	(30)	(40)
Comprehensive (loss) income attributable to Perma-Fix Environmental Services, Inc. stockholders	\$ (660)	\$ 128

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

PERMA-FIX ENVIRONMENTAL SERVICES, INC
Consolidated Statement of Stockholders' Equity
(Unaudited)

(Amounts in thousands, except for share amounts)

	Common Stock		Additional Paid-In Capital	Common Stock Held In Treasury	Accumulated Other Comprehensive Loss	Non- controlling Interest in Subsidiary	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount						
Balance at December 31, 2018	<u>11,944,215</u>	<u>\$ 12</u>	<u>\$ 107,548</u>	<u>\$ (88)</u>	<u>\$ (214)</u>	<u>\$ (1,495)</u>	<u>\$ (79,630)</u>	<u>\$ 26,133</u>
Net loss	—	—	—	—	—	(30)	(672)	(702)
Foreign currency translation	—	—	—	—	12	—	—	12
Issuance of Common Stock for services	24,964	—	60	—	—	—	—	60
Stock-Based Compensation	—	—	48	—	—	—	—	48
Balance at March 31, 2019	<u>11,969,179</u>	<u>\$ 12</u>	<u>\$ 107,656</u>	<u>\$ (88)</u>	<u>\$ (202)</u>	<u>\$ (1,525)</u>	<u>\$ (80,302)</u>	<u>\$ 25,551</u>
Balance at December 31, 2017	<u>11,738,623</u>	<u>\$ 12</u>	<u>\$ 106,417</u>	<u>\$ (88)</u>	<u>\$ (112)</u>	<u>\$ (1,175)</u>	<u>\$ (77,893)</u>	<u>\$ 27,161</u>
Adoption of accounting standards updates	—	—	—	—	—	—	(317)	(317)
Net income (loss)	—	—	—	—	—	(40)	136	96
Foreign currency translation	—	—	—	—	(8)	—	—	(8)
Issuance of Common Stock for services	16,074	—	60	—	—	—	—	60
Stock-Based Compensation	—	—	46	—	—	—	—	46
Balance at March 31, 2018	<u>11,754,697</u>	<u>\$ 12</u>	<u>\$ 106,523</u>	<u>\$ (88)</u>	<u>\$ (120)</u>	<u>\$ (1,215)</u>	<u>\$ (78,074)</u>	<u>\$ 27,038</u>

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

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

(Amounts in Thousands)	Three Months Ended	
	2019	2018
Cash flows from operating activities:		
Net (loss) income	\$ (702)	\$ 96
Less: loss from discontinued operations, net of taxes of \$0	(152)	(157)
	(550)	253
(Loss) income from continuing operations, net of taxes		
Adjustments to reconcile (loss) income from continuing operations to cash provided by operating activities:		
Depreciation and amortization	323	372
Amortization of debt issuance costs	8	8
Deferred tax expense	18	22
Provision for bad debt reserves	31	13
Gain on disposal of plant, property, and equipment	—	(8)
Issuance of common stock for services	60	60
Stock-based compensation	48	46
Changes in operating assets and liabilities of continuing operations:		
Accounts receivable	363	3,165
Unbilled receivables	(211)	65
Prepaid expenses, inventories and other assets	(132)	348
Accounts payable, accrued expenses and unearned revenue	(105)	(1,729)
Cash (used in) provided by continuing operations	(147)	2,615
Cash used in discontinued operations	(182)	(181)
Cash (used in) provided by operating activities	(329)	2,434
Cash flows from investing activities:		
Purchases of property and equipment	(224)	(248)
Proceeds from sale of plant, property, and equipment	1	8
Cash used in investing activities of continuing operations	(223)	(240)
Cash provided by investing activities of discontinued operations	25	17
Cash used in investing activities	(198)	(223)
Cash flows from financing activities:		
Repayments of revolving credit borrowings	(11,161)	(14,033)
Borrowing on revolving credit	11,526	14,033
Proceeds from finance leases	120	—
Principal repayments of finance lease liabilities	(44)	—
Principal repayments of long term debt	(304)	(304)
Cash provided by (used in) financing activities	137	(304)
Effect of exchange rate changes on cash	6	(4)
(Decrease) increase in cash and finite risk sinking fund (restricted cash)	(384)	1,903
Cash and finite risk sinking fund (restricted cash) at beginning of period	16,781	16,739
Cash and finite risk sinking fund (restricted cash) at end of period	\$ 16,397	\$ 18,642
Supplemental disclosure:		
Interest paid	\$ 88	\$ 54
Income taxes paid	96	96
Non-cash investing and financing activities:		
Equipment purchase subject to capital lease	4	—

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

PERMA-FIX ENVIRONMENTAL SERVICES, INC.
Notes to Consolidated Financial Statements
March 31, 2019
(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, 2018.

1. Basis of Presentation

The consolidated financial statements included herein have been prepared by the Company (which may be referred to as we, us or our), without an audit, pursuant to the rules and regulations of the Securities and Exchange Commission (“the Commission”). Certain information and note disclosures normally included in financial statements prepared in accordance with accounting principles generally accepted in the United States of America (“U.S. GAAP”) have been condensed or omitted pursuant to such rules and regulations, although the Company believes the disclosures which are made are adequate to make the information presented not misleading. Further, the consolidated financial statements reflect, in the opinion of management, all adjustments (which include only normal recurring adjustments) necessary to present fairly the financial position and results of operations as of and for the periods indicated. The results of operations for the three months ended March 31, 2019 are not necessarily indicative of results to be expected for the fiscal year ending December 31, 2019.

The Company suggests that these consolidated financial statements be read in conjunction with the consolidated financial statements and the notes thereto included in the Company’s Annual Report on Form 10-K for the year ended December 31, 2018.

Reclassification

Certain prior year amounts have been reclassified to conform with the current year presentation. The Company has included finite risk sinking funds (included in other long term assets of the Company’s Consolidated Balance Sheets) of \$15,726,000 at March 31, 2018, as well as previously reported cash, when reconciling the beginning-of-period and end-of-period cash and restricted cash on the accompanying Company’s Consolidated Statements of Cash Flows for three months ended March 31, 2018. The Company’s finite risk sinking funds represents cash held as collateral under the Company’s financial assurance policy (see “Note 10 – Commitment and Contingencies – Insurance” for a discussion of the Company’s finite risk sinking funds). This reclassification did not have a material impact to the Company’s financial position and results of operations.

2. Summary of Significant Accounting Policies

Our accounting policies are as set forth in the notes to the December 31, 2018 consolidated financial statements referred to above.

Recently Adopted Accounting Standards

In February 2016, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2016-02, “Leases (Topic 842),” which requires the recognition of right-of-use (“ROU”) lease assets and lease liabilities by lessees for those leases classified as operating leases under previous guidance. The original guidance required application on a modified retrospective basis with the earliest period presented. In July 2018, the FASB issued ASU 2018-11, “Targeted Improvements,” to Topic 842 which included an option to not restate comparative periods in transition and elect to use the effective date of Topic 842 as the date of initial application of transition, which the Company elected. As permitted under Topic 842, the Company adopted several practical expedients that permit us to not reassess (1) whether any expired or existing contract as of the adoption date is or contain a lease, (2) lease classification for any expired or existing leases as of the adoption date, and (3) initial direct costs for any existing leases as of the adoption date. As a result of the adoption of Topic 842 on January 1, 2019, the Company recorded both operating lease right-of-use (“ROU”) assets of \$2,602,000 and operating lease liabilities of \$2,622,000. The cumulative-effect adjustment is immaterial to its beginning accumulated deficit upon adoption of ASU 2016-02 as the adjustment was considered immaterial. The adoption of Topic 842 had an immaterial impact on our Consolidated Statements of Operations and Cash Flows for the three months ended March 31, 2019. The Company’s accounting for finance leases remained substantially unchanged. The Company has expanded its consolidated financial statement disclosure upon adoption of this standard (see “Note 4 – Leases”).

In February 2018, FASB issued ASU 2018-02, "Income Statement—Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income." This ASU allows for the reclassification of certain income tax effects related to the new Tax Cuts and Jobs Act legislation between "Accumulated other comprehensive income" and "Retained earnings." This ASU relates to the requirement that adjustments to deferred tax liabilities and assets related to a change in tax laws or rates be included in "Income from continuing operations", even in situations where the related items were originally recognized in "Other comprehensive income" (rather than in "Income from continuing operations"). ASU 2018-02 is effective for all entities for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years, with early adoption permitted. Adoption of this ASU is to be applied either in the period of adoption or retrospectively to each period in which the effect of the change in the tax laws or rates were recognized. The adoption of ASU 2018-09 by the Company effective January 1, 2019 did not have a material impact on the Company's financial statements.

In June 2018, the FASB issued ASU No. 2018-07, "Compensation — Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting," which expands the scope of Topic 718 to include all share-based payment transactions for acquiring goods and services from nonemployees. ASU 2018-07 specifies that Topic 718 applies to all share-based payment transactions in which the grantor acquires goods and services to be used or consumed in its own operations by issuing share-based payment awards. ASU 2018-07 also clarifies that Topic 718 does not apply to share-based payments used to effectively provide (1) financing to the issuer or (2) awards granted in conjunction with selling goods or services to customers as part of a contract accounted for under ASC 606. ASU 2018-07 is effective for annual reporting periods, and interim periods within those years, beginning after December 15, 2018, with early adoption permitted. The adoption of ASU 2018-09 by the Company effective January 1, 2019 did not have a material impact on the Company's financial statements.

Recently Issued Accounting Standards – Not Yet Adopted

In June 2016, the FASB issued ASU No. 2016-13, "Credit Losses - Measurement of Credit Losses on Financial Instruments ("ASC 326")."The standard introduces an approach, based on expected losses, to estimate credit losses on certain types of financial instruments and modifies the impairment model for available-for-sale debt securities. The new approach to estimating credit losses (referred to as the current expected credit losses model) applies to most financial assets measured at amortized cost and certain other instruments, including trade and other receivables and loans. The standard is effective for interim and annual reporting periods beginning after December 15, 2019. Entities are required to apply the standard's provisions as a cumulative-effect adjustment to retained earnings as of the beginning of the first reporting period in which the guidance is adopted. The Company is currently assessing the impact that this standard will have on its financial statements.

In August 2018, the FASB issued ASU 2018-13, "Fair Value Measurement (Topic 820): Disclosure Framework - Changes to the Disclosure Requirements for Fair Value Measurement." ASU 2018-13 improves the disclosure requirements on fair value measurements. ASU 2018-13 is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. Early adoption is permitted for any removed or modified disclosures. The Company is currently assessing the impact that this standard will have on its financial statements.

3. Revenue

Disaggregation of Revenue

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

Revenue by Contract Type (In thousands)

	Three Months Ended March 31, 2019			Three Months Ended March 31, 2018		
	Treatment	Services	Total	Treatment	Services	Total
Fixed price	\$ 9,905	\$ 428	\$ 10,333	\$ 8,959	\$ 90	\$ 9,049
Time and materials	—	1,375	1,375	—	3,609	3,609
Total	\$ 9,905	\$ 1,803	\$ 11,708	\$ 8,959	\$ 3,699	\$ 12,658

Revenue by generator (In thousands)

	Three Months Ended March 31, 2019			Three Months Ended March 31, 2018		
	Treatment	Services	Total	Treatment	Services	Total
Domestic government	\$ 7,913	\$ 686	\$ 8,599	\$ 6,536	\$ 3,118	\$ 9,654
Domestic commercial	1,879	758	2,637	2,423	402	2,825
Foreign government	57	337	394	—	153	153
Foreign commercial	56	22	78	—	26	26
Total	\$ 9,905	\$ 1,803	\$ 11,708	\$ 8,959	\$ 3,699	\$ 12,658

Contract Balances

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

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

(In thousands)	March 31, 2019	December 31, 2018	Year-to-date Change (\$)	Year-to-date Change (%)
Contract assets				
Account receivables, net of allowance	\$ 7,341	\$ 7,735	\$ (394)	(5.1)%
Unbilled receivables - current	3,316	3,105	211	6.8%
Contract liabilities				
Deferred revenue	\$ 5,443	\$ 6,595	\$ (1,152)	(17.5)%

Revenue recognized for the three months ended March 31, 2019 and 2018 that was included in the contract liability balance at the beginning of each year was \$5,066,000 and \$3,811,000, respectively. All revenue recognized in each period related to performance obligations satisfied within the respective period.

Remaining Performance Obligations

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

4. Leases

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

The Company's operating lease ROU assets and operating lease liabilities represent primarily leases for office spaces used to conduct our business. These leases have remaining terms of approximately 5 to 11 years which include one or more options to renew, with renewal terms from 3 years to 8 years. Based on the Company's reasonable certainty to exercise these renewal options, the renewal to extend the lease terms are included in valuing our ROU assets and liabilities. As most of our operating leases do not provide an implicit rate, the Company uses its incremental borrowing rate as the discount rate when determining the present value of the lease payments. The incremental borrowing rate is determined based on the Company's secured borrowing rate, lease terms and current economic environment. Some of our operating leases include both lease (rent payments) and non-lease components (maintenance costs such as cleaning and landscaping services). The Company has elected the practical expedient to account for lease component and non-lease component as a single component for all leases. Lease expense for operating leases is recognized on a straight-line basis over the lease term.

Finance leases primarily consist of processing and lab equipment for our facilities. The Company's finance leases generally have terms between two to three years and some of the leases include options to purchase the underlying assets at fair market value at the conclusion of the lease term. At March 31, 2019, assets recorded under finance leases were \$655,000 less accumulated depreciation of \$18,000, resulting in net fixed assets under finance leases of \$637,000, which is recorded within net property and equipment on the Consolidated Balance Sheets.

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

The components of lease cost for the Company's leases for the three months ended March 31, 2019 were (in thousands):

Operating Leases:	
Lease cost	\$ 104
Finance Leases:	
Amortization of ROU assets	9
Interest on lease liability	12
	21
Short-term lease rent expense	49
Total lease cost	\$ 174

The weighted average remaining lease term and the weighted average discount rate for operating and finance leases at March 31, 2019 was:

	Operating Leases	Finance Leases
Weighted average remaining lease terms (years)	9.7	1.8
Weighted average discount rate	8.0%	11.1%

The following table reconciles the undiscounted cash flows for the operating and finance leases at March 31, 2019 to the operating and finance lease liabilities recorded on the balance sheet (in thousands):

	Operating Leases		Finance Leases	
2019 Remainder	\$	298	\$	213
2020		403		336
2021		411		27
2022		418		—
2023		425		—
2024 and thereafter		1,768		—
Total undiscounted lease payments		3,723		576
Less: Imputed interest		(1,147)		(61)
Present value of lease payments	\$	2,576	\$	515
Current portion of operating lease obligations	\$	199	\$	—
Long-term operating lease obligations, less current portion	\$	2,377	\$	—
Current portion of finance lease obligations	\$	—	\$	239
Long-term finance lease obligations, less current portion	\$	—	\$	276

Supplemental cash flow and other information related to our leases were as follows for the period ended March 31, 2019 (in thousands):

Cash paid for amounts included in the measurement of lease liabilities:	
Operating cash flow from operating leases	\$ 98
Operating cash flow from finance leases	\$ 12
Financing cash flow from finance leases	\$ 44
ROU assets obtained in exchange for lease obligations for:	
Finance liabilities	\$ 138
Operating liabilities	\$ —

5. Intangible Assets

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

Intangibles (amount in thousands)	Useful Lives (Years)	March 31, 2019			December 31, 2018		
		Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Patent	1-17	\$ 735	\$ (344)	\$ 391	\$ 728	\$ (336)	\$ 392
Software	3	412	(404)	8	410	(403)	7
Customer relationships	10	3,370	(2,546)	824	3,370	(2,491)	879
Permit	10	545	(545)	-	545	(538)	7
Total		\$ 5,062	\$ (3,839)	\$ 1,223	\$ 5,053	\$ (3,768)	\$ 1,285

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 had only one definite-lived permit that was subject to amortization. This definite-lived permit was fully amortized in the first quarter of 2019.

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

Year	Amount (In thousands)
2019 (remaining)	\$ 183
2020	219
2021	198
2022	172
2023	132

Amortization expenses relating to the definite-lived intangible assets as discussed above were \$73,000 and \$84,000 for the three months ended March 31, 2019 and 2018, respectively.

6. Capital Stock, Stock Plans and Stock Based Compensation

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

On January 17, 2019 the Company granted 105,000 ISOs from the 2017 Stock Option Plan to certain employees, which included our named executive officers as follows: 25,000 ISOs to our Chief Executive Officer (“CEO”), Mark Duff; 15,000 ISOs to our Chief Financial Officer (“CFO”), Ben Naccarato; and 15,000 ISOs to our Executive Vice President (“EVP”) of Strategic Initiatives, Dr. Louis Centofanti. The ISOs granted were for a contractual term of six years with one-fifth vesting annually over a five year period. The exercise price of the ISO was \$3.15 per share, which was equal to the fair market value of the Company’s Common Stock on the date of grant.

On January 18, 2018, the Company granted 6,000 NQSOs from the Company’s 2003 Outside Directors Stock Plan to a new director elected by the Company’s Board of Directors (“Board”) to fill a vacancy on the Board. The NQSOs granted were for a contractual term of ten years with a vesting period of six months. The exercise price of the options was \$4.05 per share, which was equal to our closing stock price the day preceding the grant date, pursuant to the 2003 Outside Directors Stock Plan.

The Company granted a NQSO to Robert Ferguson on July 27, 2017 from the Company’s 2017 Stock Option Plan for the purchase of up to 100,000 shares of the Company’s Common Stock (“Ferguson Stock Option”) in connection with his work as a consultant to the Company’s Test Bed Initiative (“TBI”) at our Perma-Fix Northwest Richland, Inc. (“PFNWR”) facility. The vesting of the Ferguson Stock Option is subject to the achievement of three separate milestones by certain dates. On January 17, 2019, the Company’s Compensation and Stock Option Committee (“Compensation Committee”) and Board of Director (“Board”) approved an amendment to the Ferguson Stock Option whereby the vesting date for the second milestone was extended to March 31, 2020 from January 27, 2019. The 10,000 options under the first milestone were vested and exercised by Robert Ferguson in May 2018. The Company has not recorded expenses for the remaining 90,000 Ferguson Stock Option under the remaining two milestones since achievement of the performance obligation under each of the two remaining milestones is uncertain at March 31, 2019. All other terms of the Ferguson Stock Option remain unchanged.

The Company estimates fair value of stock options using the Black-Scholes valuation model. Assumptions used to estimate the fair value of stock options granted include the exercise price of the award, the expected term, the expected volatility of the Company's stock over the option's expected term, the risk-free interest rate over the option's expected term, and the expected annual dividend yield. The fair value of the options granted on January 17, 2019 and January 18, 2018 as discussed above and the related assumptions used in the Black-Scholes option model used to value the options granted were as follows:

	Employee Stock Option Granted January 17, 2019	Outside Director Stock Options Granted January 18, 2018
Weighted-average fair value per option	\$ 1.42	\$ 2.55
Risk -free interest rate ⁽¹⁾	2.58%	2.62%
Expected volatility of stock ⁽²⁾	48.67%	57.29%
Dividend yield	None	None
Expected option life ⁽³⁾	5.0 years	10.0 years

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

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

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

The following table summarizes stock-based compensation recognized for the three months ended March 31, 2019 and 2018 for our employee and director stock options.

Stock Options	Three Months Ended March 31,	
	2019	2018
Employee Stock Options	\$ 43,000	\$ 10,000
Director Stock Options	5,000	36,000
Total	\$ 48,000	\$ 46,000

At March 31, 2019, the Company has approximately \$534,000 of total unrecognized compensation cost related to unvested options, of which \$112,000 is expected to be recognized in remaining 2019, \$144,000 in 2020, \$144,000 in 2021, \$104,000 in 2022, \$29,000 in 2023, with the remaining \$1,000 in 2024.

The summary of the Company's total Stock Option Plans as of March 31, 2019 and March 31, 2018, and changes during the periods then ended, are presented below. The Company's Plans consist of the 2010 and 2017 Stock Option Plans and the 2003 Outside Directors Stock Plan:

	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value ⁽²⁾
Options outstanding January 1, 2019	616,000	\$ 4.23		
Granted	105,000	3.15		
Exercised	—	—		
Forfeited/expired	—	—		
Options outstanding end of period ⁽¹⁾	721,000	\$ 4.07	4.7	\$ 48,360
Options exercisable at March 31, 2019 ⁽¹⁾	261,333	\$ 5.00	4.4	\$ 10,560
Options exercisable and expected to be vested as of March 31, 2019	721,000	\$ 4.07	4.7	\$ 48,360

	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value ⁽²⁾
Options outstanding January 1, 2018	624,800	\$ 4.42		
Granted	6,000	4.05		
Exercised	—	—		
Forfeited/expired	—	—		
Options outstanding end of period ⁽¹⁾	<u>630,800</u>	<u>\$ 4.41</u>	5.3	\$ 259,070
Options exercisable at March 31, 2018 ⁽¹⁾	<u>191,467</u>	<u>\$ 6.13</u>	4.7	\$ 46,970
Options exercisable and expected to be vested as of March 31, 2018	<u>630,800</u>	<u>\$ 4.41</u>	5.3	\$ 259,070

⁽¹⁾ Options with exercise prices ranging from \$2.79 to \$13.35

⁽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.

During the three months ended March 31, 2018, the Company issued a total of 24,964 shares of its Common Stock under the 2003 Outside Directors Stock Plan to its outside directors as compensation for serving on our Board. The Company has recorded approximately \$63,000 in compensation expenses (included in selling, general and administration (“SG&A”) expenses) in connection with the issuance of shares of its common stock to outside directors.

7. (Loss) Income Per Share

Basic (loss) income per share is calculated based on the weighted-average number of outstanding common shares during the applicable period. Diluted (loss) income per share is based on the weighted-average number of outstanding common shares plus the weighted-average number of potential outstanding common shares. In periods where they are anti-dilutive, such amounts are excluded from the calculations of dilutive earnings per shares. 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 (Unaudited) March 31,	
	2019	2018
Net (loss) income attributable to Perma-Fix Environmental Services, Inc., common stockholders:		
(Loss) income from continuing operations, net of taxes	\$ (550)	\$ 253
Net loss attributable to non-controlling interest	(30)	(40)
(Loss) income from continuing operations attributable to Perma-Fix Environmental Services, Inc. common stockholders	(520)	293
Loss from discontinuing operations attributable to Perma-Fix Environmental Services, Inc. common stockholders	(152)	(157)
Net (loss) income attributable to Perma-Fix Environmental Services, Inc. common stockholders	\$ (672)	\$ 136
Basic (loss) income per share attributable to Perma-Fix Environmental Services, Inc. common stockholders	\$ (.06)	\$.01
Diluted (loss) income per share attributable to Perma-Fix Environmental Services, Inc. common stockholders	\$ (.06)	\$.01
Weighted average shares outstanding:		
Basic weighted average shares outstanding	11,961	11,747
Add: dilutive effect of stock options	—	26
Diluted weighted average shares outstanding	11,961	11,773
Potential shares excluded from above weighted average share calculations due to their anti-dilutive effect include:		
Stock options	598	168

8. Long Term Debt

Long-term debt consists of the following at March 31, 2019 and December 31, 2018:

(Amounts in Thousands)	March 31, 2019	December 31, 2018
Revolving Credit facility dated October 31, 2011, as amended, borrowings based upon eligible accounts receivable, subject to monthly borrowing base calculation, balance due March 24, 2021. Effective interest rate for the first quarter of 2019 was 7.6%. ⁽¹⁾	\$ 1,004	\$ 639
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 the first quarter of 2019 was 5.7%. ⁽¹⁾	2,367 ⁽²⁾	2,663 ⁽²⁾
Total debt	3,371	3,302
Less current portion of long-term debt	1,184	1,184
Long-term debt	\$ 2,187	\$ 2,118

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

⁽²⁾ Net of debt issuance costs of (\$72,000) and (\$80,000) at March 31, 2019 and December 31, 2018, 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 (“Amended Loan Agreement”), with PNC National Association (“PNC”), acting as agent and lender. The Amended Loan Agreement has been amended from time to time since the execution of the Amended Loan Agreement. The Amended Loan Agreement, as subsequently amended (“Revised Loan Agreement”), provides the Company with the following credit facility with a maturity date of March 24, 2021: (a) up to \$12,000,000 revolving credit (“revolving credit”) and (b) a term loan (“term loan”) of approximately \$6,100,000, which requires monthly installments of approximately \$101,600 (based on a seven-year amortization). The maximum that we can borrow under the revolving credit is based on a percentage of eligible receivables (as defined) at any one time reduced by outstanding standby letters of credit and borrowing reductions that our lender may impose from time to time.

On March 29, 2019, the Company entered into an amendment to its Revised Loan Agreement with its lender under the credit facility which provided the following:

- waived the Company's failure to meet the minimum quarterly fixed charge coverage ratio ("FCCR") requirement for the fourth quarter of 2018;
- waived the quarterly FCCR testing requirement for the first quarter of 2019;
- revised the methodology to be used in calculating the FCCR in each of the second and third quarters of 2019 (with continued requirement to maintain a minimum 1.15:1 ratio in each of the quarters);
- revised the minimum Tangible Adjusted Net Worth requirement (as defined in the Revised Loan Agreement) from \$26,000,000 to \$25,000,000;
- eliminated the London InterBank Offer Rate ("LIBOR") interest payment option of paying annual rate of interest due on our term loan and revolving credit until the Company becomes compliant with its FCCR requirement again. Prior to this amendment, the Company had the option of paying annual rate of interest due on the revolving credit at prime (5.50% at March 31, 2019) plus 2% or LIBOR plus 3% and the term loan at prime plus 2.5% or LIBOR plus 3.5%;
- provided consent for the \$2,500,000 loan that the Company entered into with Robert Ferguson on April 1, 2019 (see "Note 15 – Subsequent Events – Loan and Securities Purchase Agreement, Promissory Note and Subordinate Agreement" for a discussion of this loan). The Company is not allowed to make any principal prepayment on this loan until it receives the restricted finite risk sinking funds of approximately \$5,000,000 held as collateral by American International Group, Inc. ("AIG") under our financial assurance policy. The Company expects to receive this restricted funds resulting from the closure of our M&EC facility by the end of the second quarter of 2019 (see "Note 10 – Commitments and Contingencies – Insurance" for a discussion of restricted sinking funds held by AIG under our financial assurance policy); and
- revised the annual rate used to calculate the Facility Fee (as defined in the Revised Loan Agreement) (unused revolving credit line fee) from 0.250% to 0.375%.

Most of the other terms of the Revised Loan Agreement remain principally unchanged. In connection with this amendment, the Company paid its lender a fee of \$20,000.

Pursuant to the Revised Loan Agreement, as amended, 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. No early termination fee shall apply if the Company pays off its obligations after March 23, 2019.

At March 31, 2019, the borrowing availability under our revolving credit was approximately \$1,860,000, based on our eligible receivables and includes an indefinite reduction of borrowing availability of \$1,000,000 that the Company's lender has imposed. Our borrowing availability under our revolving credit was also reduced by outstanding standby letters of credit totaling approximately \$2,639,000.

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's lender waived the fixed charge coverage ratio testing requirement for the first quarter of 2019. The Company met all of its other financial covenants in the first quarter of 2019 and expects to meet its financial covenants in each of the remaining quarters of 2019 and into the first half of 2020.

9. East Tennessee Materials and Energy Corporation (“M&EC”)

The Company has completed the physical on-site closure and decommissioning activities at its M&EC facility (in closure status) in accordance with M&EC’s license and permit requirements, with final closure of the facility subject to completion of final surveys and regulatory approvals.

At March 31, 2019, total accrued closure liabilities for our M&EC subsidiary totaled approximately \$281,000 which are recorded as current liabilities. The Company recorded an additional \$165,000 in closure costs and current closure liabilities due to finalization of closure requirements. The following reflects changes to the closure liabilities for the M&EC facility from year end 2018:

Amounts in thousands	
Balance as of December 31, 2018	\$ 1,142
Adjustment to closure liability	165
Spending	(1,026)
Balance as of March 31, 2019	\$ 281

10. Commitments and Contingencies

Hazardous Waste

In connection with our waste management services, we process both hazardous and non-hazardous waste, which we transport to our own, or other, facilities for destruction or disposal. As a result of disposing of hazardous substances, in the event any cleanup is required, we could be a potentially responsible party for the costs of the cleanup notwithstanding any absence of fault on our part.

Legal Matters

In the normal course of conducting our business, we are involved in various litigation. We are not a party to any litigation or governmental proceeding which our management believes could result in any judgments or fines against us that 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 (“2003 Closure Policy”) with AIG, which provides financial assurance to the applicable states for our permitted facilities in the event of unforeseen closure. The 2003 Closure Policy, as amended, provides for a maximum allowable coverage of \$39,000,000 and has available capacity to allow for annual inflation and other performance and surety bond requirements. At March 31, 2019, our financial assurance coverage amount under this 2003 Closure Policy totaled approximately \$30,549,000. The Company has contributed \$16,052,000 and \$15,971,000 in sinking fund related to this policy in other long term assets on the accompanying Consolidated Balance Sheets at March 31, 2019 and December 31, 2018, respectively, which includes interest earned of \$1,581,000 and \$1,500,000 on the sinking fund as of March 31, 2019 and December 31, 2018, respectively. Interest income for the three months ended March 31, 2019 and 2018 was approximately \$81,000 and \$50,000, respectively. If the Company so elects, AIG is obligated to pay the Company 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.

Letter of Credits and Bonding Requirements

From time to time, the Company is required to post standby letters of credit and various bonds to support contractual obligations to customers and other obligations, including facility closures. At March 31, 2019, the total amount of standby letters of credit outstanding totaled approximately \$2,639,000 and the total amount of bonds outstanding totaled approximately \$18,782,000.

11. 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 is in closure status, which final closure is subject to regulatory approval of necessary plans and permits.

The Company's discontinued operations had net losses of \$152,000 and \$157,000 for the three months ended March 31, 2019 and 2018 (net of taxes of \$0 for each period). The losses were primarily due to costs incurred in the administration and continued monitoring of our discontinued operations. The Company's discontinued operations had no revenues for each of the periods noted above.

The following table presents the major class of assets of discontinued operations as of March 31, 2019 and December 31, 2018. No assets and liabilities were held for sale at each of the periods noted.

(Amounts in Thousands)	March 31, 2019	December 31, 2018
Current assets		
Other assets	\$ 99	\$ 107
Total current assets	99	107
Long-term assets		
Property, plant and equipment, net ⁽¹⁾	81	81
Other assets	98	118
Total long-term assets	179	199
Total assets	<u>\$ 278</u>	<u>\$ 306</u>
Current liabilities		
Accounts payable	\$ 26	\$ 10
Accrued expenses and other liabilities	256	296
Environmental liabilities	40	50
Total current liabilities	322	356
Long-term liabilities		
Closure liabilities	127	126
Environmental liabilities	837	837
Total long-term liabilities	964	963
Total liabilities	<u>\$ 1,286</u>	<u>\$ 1,319</u>

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

The Company's discontinued operations included a note receivable in the original amount of approximately \$375,000 recorded in May 2016 resulting from the sale of property at our Perma-Fix of Michigan, Inc. subsidiary. This note requires 60 equal monthly installment payments by the buyer of approximately \$7,250 (which includes interest). At March 31, 2019, the outstanding amount on this note receivable totaled approximately \$176,000, of which approximately \$78,000 is included in "Current assets related to discontinued operations" and approximately \$98,000 is included in "Other assets related to discontinued operations" in the accompanying Consolidated Balance Sheets.

12. Operating Segments

In accordance with ASC 280, "Segment Reporting", the Company defines an operating segment as a business activity: (1) from which we may earn revenue and incur expenses; (2) whose operating results are regularly reviewed by the chief operating decision maker ("CODM") to make decisions about resources to be allocated to the segment and assess its performance; and (3) for which discrete financial information is available.

Our reporting segments are defined as below:

TREATMENT SEGMENT, which includes:

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

SERVICES SEGMENT, which includes:

- Technical services, which include:
 - 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 IH assessments; hazardous materials surveys, e.g., exposure monitoring; lead and asbestos management/abatement oversight; indoor air quality evaluations; health risk and exposure assessments; health & safety plan/program development, compliance auditing and training services; and OSHA citation assistance;
 - o global technical services providing consulting, engineering, project management, waste management, environmental, and decontamination and decommissioning field, technical, and management personnel and services to commercial and government customers; and
 - o on-site waste management services to commercial and governmental customers.
- Nuclear services, which include:
 - o technology-based services including engineering, decontamination and decommissioning (“D&D”), specialty services and construction, logistics, transportation, processing and disposal;
 - o remediation of nuclear licensed and federal facilities and the remediation cleanup of nuclear legacy sites. Such services capability includes: project investigation; radiological engineering; partial and total plant D&D; facility decontamination, dismantling, demolition, and planning; site restoration; logistics; transportation; and emergency response; and
- A company owned equipment calibration and maintenance laboratory that services, maintains, calibrates, and sources (i.e., rental) health physics, IH and customized NIOSH instrumentation.
- A company owned gamma spectroscopy laboratory for the analysis of oil and gas industry solids and liquids.

MEDICAL SEGMENT, which includes: Research and Development (“R&D”) of the Company’s medical isotope production technology by our 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” or the Medical Segment). The Company’s Medical Segment has not generated any revenue as it remains in the R&D stage. The Medical Segment has substantially reduced its R&D activities due to the need for capital to fund these activities. The Company anticipates that the Medical Segment will not resume full R&D activities until the necessary capital is obtained through its own credit facility or additional equity raise or obtains partners willing to provide funding for its R&D. All costs incurred by the Medical Segment are reflected within R&D in the accompanying consolidated financial statements.

Our reporting segments exclude our corporate headquarters and our discontinued operations (see “Note 11 – Discontinued Operations”) which do not generate revenues.

The table below presents certain financial information of our operating segments for the three months ended March 31, 2019 and 2018 (in thousands):

Segment Reporting for the Quarter Ended March 31, 2019

	Treatment	Services	Medical	Segments Total	Corporate ⁽¹⁾	Consolidated Total
Revenue from external customers	\$ 9,905	\$ 1,803	—	\$ 11,708	\$ —	\$ 11,708
Intercompany revenues	2	21	—	23	—	—
(Negative) gross profit	2,957	(456)	—	2,501	—	2,501
Research and development	147	—	74	221	6	227
Interest income	—	—	—	—	81	81
Interest expense	(17)	(9)	—	(26)	(61)	(87)
Interest expense-financing fees	—	—	—	—	(10)	(10)
Depreciation and amortization	237	78	—	315	8	323
Segment income (loss) before income taxes	1,875	(1,012)	(74)	789	(1,300)	(511)
Income tax expense	(39)	—	—	(39)	—	(39)
Segment income (loss)	1,836	(1,012)	(74)	750	(1,300)	(550)
Expenditures for segment assets	222	2	—	224	—	224

Segment Reporting for the Quarter Ended March 31, 2018

	Treatment	Services	Medical	Segments Total	Corporate ⁽¹⁾	Consolidated Total
Revenue from external customers	\$ 8,959	\$ 3,699	—	\$ 12,658	\$ —	\$ 12,658
Intercompany revenues	213	14	—	227	—	—
Gross profit	2,780	541	—	3,321	—	3,321
Research and development	114	—	100	214	18	232
Interest income	—	—	—	—	49	49
Interest expense	—	(1)	—	(1)	(52)	(53)
Interest expense-financing fees	—	—	—	—	(9)	(9)
Depreciation and amortization	240	123	—	363	9	372
Segment income (loss) before income taxes	1,744	(86)	(100)	1,558	(1,254)	304
Income tax expense	(51)	—	—	(51)	—	(51)
Segment income (loss)	1,693	(86)	(100)	1,507	(1,254)	253
Expenditures for segment assets	220	25	—	245	3	248

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

13. Income Taxes

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

Income tax expenses were \$39,000 and \$51,000 for continuing operations for the three months ended March 31, 2019 and the corresponding period of 2018, respectively. The Company’s effective tax rate was approximately 7.6% and 16.8% for the three months ended March 31, 2019 and the corresponding period of 2018, respectively. The Company’s tax rate for each of the periods discussed above was impacted by the Company’s full valuation on its net deferred tax assets.

14. Management Incentive Plans (“MIPs”)

On January 17, 2019, the Company’s Board and Compensation Committee approved individual MIPs for the CEO, CFO, and EVP of Strategic Initiatives. Each MIP is effective January 1, 2019 and applicable for the year ended December 31, 2019. Each MIP provides guidelines for the calculation of annual cash incentive based compensation, subject to Compensation Committee oversight and modification. Each MIP awards cash compensation based on achievement of performance thresholds, with the amount of such compensation established as a percentage of the executive’s annual 2019 base salary on the approval date of the MIP. The potential target performance compensation ranges from 5% to 150% of the 2019 base salary for the CEO (\$14,350 to \$430,500), 5% to 100% of the 2019 base salary for the CFO (\$11,762 to \$235,231), and 5% to 100% of the 2019 base salary for the EVP of Strategic Initiatives (\$11,449 to \$228,985).

15. Subsequent Events

Loan and Securities Purchase Agreement, Promissory Note and Subordination Agreement

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

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

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

The Company is currently evaluating the accounting treatment of this transaction and the impact to our financial statements.

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

Forward-looking Statements

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

- demand for our services;
- continue to focus on expansion into both commercial and international markets to increase revenues;
- full implementation of our strategic plan;
- improve revenue and liquidity and increase shareholder values upon full implementation of strategic plan;
- closure of M&EC facility;
- improvement to working capital deficit;
- reductions in the level of government funding in future years;
- R&D activity of our Medical Segment;
- reducing operating costs;
- expect to meet our financial covenant requirements in the next twelve months;
- cash flow requirements;
- government funding for our services;
- may not have liquidity to repay debt if our lender accelerates payment of our borrowings;
- our cash flows from operations, our available liquidity from our credit facility, loan proceeds of \$2,500,000, and finite sinking funds that we expect to receive are sufficient to service our operations;
- release of restricted finite risk sinking funds;
- manner in which the applicable government will be required to spend funding to remediate various sites;
- funding operations;
- fund capital expenditures from cash from operations and/or financing;
- fund remediation expenditures for sites from funds generated internally;
- compliance with environmental regulations;
- potential effect of being a PRP;
- potential sites for violations of environmental laws and remediation of our facilities;
- continuation of contracts with federal government;
- loss of contracts;
- necessary capital for Medical Segment; and
- contracts/task order agreement and value of these contracts/task order.

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

- general economic conditions;
- material reduction in revenues;
- ability to meet PNC covenant requirements;
- inability to collect in a timely manner a material amount of receivables;
- increased competitive pressures;
- inability to maintain and obtain required permits and approvals to conduct operations;
- public not accepting our new technology;
- inability to develop new and existing technologies in the conduct of operations;
- inability to maintain and obtain closure and operating insurance requirements;
- inability to retain or renew certain required permits;
- discovery of additional contamination or expanded contamination at any of the sites or facilities leased or owned by us or our subsidiaries which would result in a material increase in remediation expenditures;
- delays at our third party disposal site can extend collection of our receivables greater than twelve months;
- refusal of third party disposal sites to accept our waste;
- changes in federal, state and local laws and regulations, especially environmental laws and regulations, or in interpretation of such;
- requirements to obtain permits for TSD activities or licensing requirements to handle low level radioactive materials are limited or lessened;
- potential increases in equipment, maintenance, operating or labor costs;
- management retention and development;
- financial valuation of intangible assets is substantially more/less than expected;
- the requirement to use internally generated funds for purposes not presently anticipated;
- inability to continue to be profitable on an annualized basis;
- inability of the Company to maintain the listing of its Common Stock on the NASDAQ;
- terminations of contracts with federal agencies or subcontracts involving federal agencies, or reduction in amount of waste delivered to the Company under the contracts or subcontracts;
- renegotiation of contracts involving the federal government;
- federal government's inability or failure to provide necessary funding to remediate contaminated federal sites;
- disposal expense accrual could prove to be inadequate in the event the waste requires re-treatment;
- inability to raise capital on commercially reasonable terms;
- inability to increase profitable revenue;
- lender refuses to waive non-compliance or revise our covenant so that we are in compliance; and
- risk factors and other factors set forth in "Special Note Regarding Forward-Looking Statements" contained in the Company's 2018 Form 10-K and the "Forward-Looking Statements" contained in the "Management's Discussion and Analysis of Financial Condition and Results of Operations" of this first quarter 2019 Form 10-Q.

Overview

Revenue decreased by \$950,000 or 7.5% to \$11,708,000 for the three months ended March 31, 2019 from \$12,658,000 for the corresponding period of 2018. The decrease was primarily within our Services Segment where revenue decreased \$1,896,000 or 51.3% primarily due to timing of our projects (see "Results of Operations – Revenues" below for a further discussion of this timing). Revenue from our Treatment Segment increased by \$946,000 or 10.6%. Gross profit decreased \$820,000 or 24.7% primarily due to the decrease in revenues in the Services Segment. Selling, General, and Administrative ("SG&A") expenses increased \$118,000 or 4.2% for the three months ended March 31, 2019 as compared to the corresponding period of 2018.

Business Environment and Outlook

Our Treatment and Services Segments' business continues to be heavily dependent on services that we provide to governmental clients directly as the contractor or indirectly as a subcontractor. We believe demand for our services will continue to be subject to fluctuations due to a variety of factors beyond our control, including the current economic conditions and the manner in which the applicable government will be required to spend funding to remediate various sites. In addition, our governmental contracts and subcontracts relating to activities at governmental sites in the United States are generally subject to termination or renegotiation on 30 days' notice at the government's option. Significant reductions in the level of governmental funding or specifically mandated levels for different programs that are important to our business could have a material adverse impact on our business, financial position, results of operations and cash flows. As previously disclosed, our Medical Segment (which has not generated any revenues to date) substantially reduced its research and development ("R&D") activities due to the need for capital to fund such activities. Our Medical Segment continues to seek various sources in order to raise this capital or partners willing to provide the funding for its R&D activities. We anticipate that our Medical Segment R&D activities will be limited until the necessary capital is obtained through its own credit facility or additional equity raise or obtaining partners willing to provide funding for its R&D activities. If the Medical Segment is unable to raise the necessary capital, the Medical Segment could be required to further reduce, delay or eliminate its R&D program.

We are continually reviewing methods to raise additional capital to supplement our liquidity requirements, when needed, and reducing our operating costs. We are committed to further reducing operating costs to bring them in line with revenue levels, when needed. Further, our recently implemented strategic plan is beginning to show success (See discussion under "Known Trends and Uncertainties – Contracts/Task Order Agreement"). Under our strategic plan, we continue to focus on expansion into both commercial and international markets to increase revenues in our Treatment and Services Segments to offset the uncertainties of government spending in the United States of America. We believe that the full implementation of our strategic plan should be accomplished over the next few years, and when fully implemented, we believe it should improve our revenue and liquidity and increase our shareholder values.

Results of Operations

The reporting of financial results and pertinent discussions are tailored to our three reportable segments: The Treatment, Services, and Medical Segments. Our Medical Segment has not generated any revenue and all costs incurred are included within R&D.

Summary – Three Months Ended March 31, 2019 and 2018

Consolidated (amounts in thousands)	Three Months Ended March 31,			
	2019	%	2018	%
Revenues	\$ 11,708	100.0	\$ 12,658	100.0
Cost of good sold	9,207	78.6	9,337	73.8
Gross profit	2,501	21.4	3,321	26.2
Selling, general and administrative	2,898	24.8	2,780	22.0
Research and development	227	1.9	232	1.8
Gain on disposal of property and equipment	—	—	(8)	(.1)
(Loss) income from operations	\$ (624)	(5.3)	\$ 317	2.5
Interest income	81	.7	49	.4
Interest expense	(87)	(.7)	(53)	(.4)
Interest expense-financing fees	(10)	(.1)	(9)	(.1)
Other	129	1.0	—	—
(Loss) income from continuing operations before taxes	(511)	(4.4)	304	2.4
Income tax expense	(39)	(.3)	(51)	(.4)
(Loss) income from continuing operations	\$ (550)	(4.7)	\$ 253	2.0

Revenues

Consolidated revenues decreased \$950,000 for the three months ended March 31, 2019, compared to the three months ended March 31, 2018, as follows:

(In thousands)	2019	% Revenue	2018	% Revenue	Change	% Change
Treatment						
Government waste	\$ 7,359	62.9	\$ 6,129	48.4	\$ 1,230	20.1
Hazardous/non-hazardous ⁽¹⁾	1,621	13.8	1,236	9.8	385	31.1
Other nuclear waste	925	7.9	1,594	12.6	(669)	(42.0)
Total	<u>9,905</u>	<u>84.6</u>	<u>8,959</u>	<u>70.8</u>	<u>946</u>	<u>10.6</u>
Services						
Nuclear services	1,045	8.9	3,186	25.1	(2,141)	(67.2)
Technical services	758	6.5	513	4.1	245	47.8
Total	<u>1,803</u>	<u>15.4</u>	<u>3,699</u>	<u>29.2</u>	<u>(1,896)</u>	<u>(51.3)</u>
Total	<u>\$ 11,708</u>	<u>100.0</u>	<u>\$ 12,658</u>	<u>100.0</u>	<u>\$ (950)</u>	<u>(7.5)</u>

⁽¹⁾ Includes wastes generated by government clients of \$611,000 and \$407,000 for the three month ended March 31, 2019 and the corresponding period of 2018, respectively.

Treatment Segment revenue increased \$946,000 or 10.6 % for the three months ended March 31, 2019 over the same period in 2018. The revenue increase was primarily due to higher revenue generated from government clients due to higher averaged price waste resulting from revenue mix. The decrease in other nuclear waste revenue was primarily due to lower waste volume. The decrease in Services Segment revenue was primarily the result of timing of its projects. Our Services Segment completed a number of projects by year end 2018. During the latter part of the first quarter 2019, our Services Segment was awarded several contracts for remediation work; however, project work for these contracts is to commence during the second quarter of 2019 (see “Known Trends and Uncertainties – Contracts/Task Order Agreement” within this Management’s Discussion and Analysis of Financial Condition and Results of Operations (“MD&A”) for a discussion of these contract awards). Our Services Segment revenues are project based; as such, the scope, duration and completion of each project vary. As a result, our Services Segment revenues are subject to differences relating to timing and project value.

Cost of Goods Sold

Cost of goods sold decreased \$130,000 for the quarter ended March 31, 2019, compared to the quarter ended March 31, 2018, as follows:

(In thousands)	2019	% Revenue	2018	% Revenue	Change
Treatment	\$ 6,948	70.1	\$ 6,179	69.0	\$ 769
Services	2,259	125.3	3,158	85.4	(899)
Total	<u>\$ 9,207</u>	<u>78.6</u>	<u>\$ 9,337</u>	<u>73.8</u>	<u>\$ (130)</u>

Cost of goods sold for the Treatment Segment increased approximately \$769,000 or 12.4%. Treatment Segment costs of goods sold for the three months ended March 31, 2019 included additional closure costs recorded in the amount of \$165,000 for our East Tennessee Materials and Energy Corporation (“M&EC”) facility due to finalization of closure requirements in connection with the closure of the facility. Excluding the closure costs, Treatment Segment cost of goods sold increased \$604,000 or 9.8%. Treatment Segment variable costs increased by approximately \$163,000 primarily in disposal, transportation, material and supplies and outside services due to higher revenues. Our overall fixed costs were higher by approximately \$441,000 resulting from the following: salaries and payroll related expenses were higher by approximately \$468,000; general expenses were higher by \$25,000 in various categories; and maintenance expenses were lower by \$52,000. Services Segment cost of goods sold decreased \$899,000 or 28.5% primarily due to the decrease in revenue as discussed above. The decrease in cost of goods sold was primarily in lower salaries and payroll related, travel, and outside services expenses totaling approximately \$606,000, lower material and supplies expenses totaling approximately \$236,000, and lower depreciation expenses totaling \$41,000 as a number of assets became fully depreciated by end of 2018. Included within cost of goods sold is depreciation and amortization expense of \$309,000 and \$353,000 for the three months ended March 31, 2019, and 2018, respectively.

(Negative) Gross Profit

Gross profit for the quarter ended March 31, 2019 decreased \$820,000 over the corresponding period of 2018, as follows:

(In thousands)	2019	% Revenue	2018	% Revenue	Change
Treatment	\$ 2,957	29.9	\$ 2,780	31.0	\$ 177
Services	(456)	(25.3)	541	14.6	(997)
Total	<u>\$ 2,501</u>	<u>21.4</u>	<u>\$ 3,321</u>	<u>26.2</u>	<u>\$ (820)</u>

Excluding the additional \$165,000 in closure costs recorded in the first quarter of 2019 as discussed above within Treatment Segment's cost of goods sold, our Treatment Segment gross profit increased by \$342,000 and gross margin increased slightly to 31.5% from 31.0% primarily due to higher revenue from higher averaged price waste resulting from revenue mix. The decrease in gross profit in the Services Segment of \$997,000 and gross margin from 14.6% to (25.3%) was primarily due to the decrease in revenue as discussed above. Additionally, our overall Services Segment gross margin is impacted by our current projects which are competitively bid on and will therefore, have varying margin structures.

SG&A

SG&A expenses increased \$118,000 for the three months ended March 31, 2019, as compared to the corresponding period for 2018, as follows:

(In thousands)	2019	% Revenue	2018	% Revenue	Change
Administrative	\$ 1,303	—	\$ 1,225	—	\$ 78
Treatment	1,039	10.5	922	10.3	117
Services	556	30.8	633	17.1	(77)
Total	<u>\$ 2,898</u>	<u>24.8</u>	<u>\$ 2,780</u>	<u>22.0</u>	<u>\$ 118</u>

Our Administrative SG&A was higher primarily due to the following: salaries and payroll related expenses were higher by approximately \$84,000; general expenses were higher by \$35,000 in various categories; and outside services were lower by \$41,000 resulting from fewer consulting/subcontract matters. Our Treatment Segment SG&A was higher due to the following: salaries and payroll related expenses were higher by approximately \$148,000; general expenses were higher by \$13,000 in various categories; and outside services were lower by \$44,000 resulting from fewer consulting/subcontract matters. The lower SG&A costs within our Services Segment was primarily due to the following: outside services expenses were lower by approximately \$17,000 resulting from fewer consulting/legal matters; salaries and payroll related expenses were lower by approximately \$40,000 and general expenses were lower by approximately \$20,000 in various categories. Included in SG&A expenses is depreciation and amortization expense of \$14,000 and \$19,000 for the three months ended March 31, 2019 and 2018, respectively.

R&D

R&D expenses decreased \$5,000 for the three months ended March 31, 2019, as compared to the corresponding period for 2018, as follows:

(In thousands)	2019	2018	Change
Administrative	\$ 6	\$ 18	\$ (12)
Treatment	147	114	33
Services	—	—	—
PF Medical	74	100	(26)
Total	\$ 227	\$ 232	\$ (5)

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

Interest Income

Interest income increased \$32,000 in the first quarter of 2019 as compared to the corresponding period of 2018 primarily due to higher interest earned on the finite risk sinking funds resulting from higher interest rates.

Interest Expense

Interest expense increased approximately \$34,000 in the first quarter of 2019 as compared to the corresponding period of 2018 primarily due to higher interest from higher averaged revolver loan balance and interest on our new finance leases which we not have in the first quarter of 2018. The overall higher interest was partially offset by lower interest expense from our declining term loan balance outstanding.

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 is in closure status, which final closure is subject to regulatory approval of necessary plans and permits.

We had net losses of \$152,000 and \$157,000 for our discontinued operations for the three months ended March 31, 2019 and 2018, respectively (net of taxes of \$0 for each period). The losses were primarily due to costs incurred in the administration and continued monitoring of our discontinued operations. Our discontinued operations had no revenues for each of the periods noted above.

Liquidity and Capital Resources

Our cash flow requirements during the three months ended March 31, 2019 were primarily financed by our operations and credit facility availability. Our cash flow requirements for the next twelve months will consist primarily of general working capital needs, scheduled principal payments on our debt obligations, remediation projects, planned capital expenditures, and remaining spending requirements in connection with the closure of our M&EC facility. We plan to fund these requirements from our operations, credit facility availability and the loan proceeds of \$2,500,000 that we received on April 1, 2019 from a loan that we consummated (see "Financing Activities" below for further information of the agreement and note). Additionally, as a result of our M&EC facility closure, we expect to receive, by the end of the second quarter of 2019, a release of approximately \$5,000,000 of the \$16,052,000 restricted finite risk sinking funds held by American International Group ("AIG") as collateral under the financial assurance policy dated June 2003 that we currently have with AIG. The release of this finite risk sinking fund is subject to approval from AIG and the appropriate regulators, and, when released, we expect will further enhance our liquidity and improve our working capital deficit. We continue to explore all sources of increasing our capital to supplement our liquidity requirements, when needed, and to improve our revenue and working capital. We are continually reviewing operating costs and are committed to further reducing operating costs to bring them in line with revenue levels, when necessary. Although there are no assurances, we believe that our cash flows from operations, our available liquidity from our credit facility and loan proceeds of \$2,500,000 received from the loan described below should be sufficient to fund our operations for the next twelve months. Additionally, the finite risk sinking funds that we expect to receive as a result of the M&EC facility closure as discussed above will provide additional funding for our operations and improve our working capital deficit. As previously discussed, our recently implemented strategic plan is beginning to show success, which we believe will help improve our results and liquidity (See discussion under "Known Trends and Uncertainties – Contracts/Task Order Agreement"). We further anticipate that over the next few years, we should be able to fully implement this strategic plan. As previously disclosed, our Medical Segment substantially reduced its R&D activities due to the need for capital to fund such activities. We continue to seek various sources of potential funding for our Medical Segment. We anticipate that our Medical Segment will not resume full R&D activities until it obtains the necessary funding through obtaining its own credit facility or additional equity raise or obtaining new partners willing to fund its R&D activities. If the Medical Segment is unable to raise the necessary capital, the Medical Segment could be required to further reduce, delay or eliminate its R&D program.

The following table reflects the cash flow activities during the first three months of 2019:

<u>(In thousands)</u>	
Cash used in operating activities of continuing operations	\$ (147)
Cash used in operating activities of discontinued operations	(182)
Cash used in investing activities of continuing operations	(223)
Cash provided by investing activities of discontinued operations	25
Cash provided by financing activities of continuing operations	137
Effect of exchange rate changes in cash	6
Decrease in cash and finite risk sinking fund (restricted cash)	<u>\$ (384)</u>

At March 31, 2019, we were in a net borrowing position (revolving credit) of approximately \$1,004,000. At March 31, 2019, we had cash on hand of approximately \$345,000, which reflects primarily account balances of our foreign subsidiaries totaling approximately \$342,000.

Operating Activities

Accounts receivable, net of allowances for doubtful accounts, totaled \$7,341,000 at March 31, 2019, a decrease of \$394,000 from the December 31, 2018 balance of \$7,735,000. The decrease was primarily due to timing of invoicing and timing of accounts receivable collection. We provide a variety of payment terms to our customers; therefore, our accounts receivable are impacted by these terms and the related timing of accounts receivable collections.

Accounts payable, totaled \$7,206,000 at March 31, 2019, an increase of \$1,709,000 from the December 31, 2018 balance of \$5,497,000. The increase in accounts payable was attributed to closure related expenses for our M&EC facility which are pending payment. Additionally, our accounts payable are impacted by the timing of payments as we are continually managing payment terms with our vendors to maximize our cash position throughout all segments.

We had a working capital deficit of \$7,567,000 (which included working capital of our discontinued operations) at March 31, 2019 as compared to a working capital deficit of \$6,753,000 at December 31, 2018. Our working capital was negatively impacted by the increase of our accounts payable which included additional accounts payables of \$632,000 for our M&EC facility which is in closure status. The loan proceeds of \$2,500,000 that we received from a loan agreement consummated on April 1, 2019 as discussed below has improved our working capital deficit. Additionally, we anticipate that cash flows to be generated from our operations and the release of the restricted finite sinking funds by AIG of \$5,000,000 which we anticipate to receive upon the closure of our M&EC facility as discussed above, will provide further improvement to our working capital deficit.

Investing Activities

For the three months ended March 31, 2019, our purchases of capital equipment totaled approximately \$228,000, of which \$4,000 was financed, with the remaining funded from cash from operations and our credit facility. These expenditures were made primarily for our Treatment Segment. We have budgeted approximately \$1,500,000 for 2019 capital expenditures for our Treatment and Services Segments to maintain operations and regulatory compliance requirements and continued footprint expansion for one of our Treatment Segment facilities. 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.

Financing Activities

We entered into an Amended and Restated Revolving Credit, Term Loan and Security Agreement, dated October 31, 2011 (“Amended Loan Agreement”), with PNC National Association (“PNC”), acting as agent and lender. The Amended Loan Agreement, as subsequently amended (“Revised Loan Agreement”), provides us with the following credit facility with a maturity date of March 24, 2021: (a) up to \$12,000,000 revolving credit (“revolving credit”) and (b) a term loan (“term loan”) of approximately \$6,100,000, which requires monthly installments of approximately \$101,600 (based on a seven-year amortization). The maximum that we can borrow under the revolving credit is based on a percentage of eligible receivables (as defined) at any one time reduced by outstanding standby letters of credit and borrowing reductions that our lender may impose from time to time.

On March 29, 2019, we entered into an amendment to our Revised Loan Agreement with our lender under the credit facility which provided the following:

- waived our failure to meet the minimum quarterly fixed charge coverage ratio (“FCCR”) requirement for the fourth quarter of 2018;
- waived the quarterly FCCR testing requirement for the first quarter of 2019;
- revised the methodology to be used in calculating the FCCR in each of the second and third quarters of 2019 (with continued requirement to maintain a minimum 1.15:1 ratio in each of the quarters);
- revised the minimum Tangible Adjusted Net Worth requirement (as defined in the Revised Loan Agreement) from \$26,000,000 to \$25,000,000;
- eliminated the London Inter Bank Offer Rate (“LIBOR”) interest payment option of paying annual rate of interest due on our term loan and revolving credit until we become compliant with our FCCR requirement again. Prior to this amendment, we had the option of paying annual rate of interest due on the revolving credit at prime (5.50% at March 31, 2019) plus 2% or LIBOR plus 3% and the term loan at prime plus 2.5% or LIBOR plus 3.5%;
- provided consent for the \$2,500,000 loan that we entered into with Robert Ferguson as discussed below. We are not allowed to make any principal prepayment on this loan until we receive the restricted finite risk sinking funds of approximately \$5,000,000 held as collateral by AIG under our financial assurance policy. We expect to receive this restricted funds resulting from the closure of our M&EC facility by the end of the second quarter of 2019 (see “Liquidity and Capital Resources” above for a discussion of this expected receipt); and
- revised the annual rate used to calculate the Facility Fee (as defined in the Revised Loan Agreement) (unused revolving credit line fee) from 0.250% to 0.375%.

Most of the other terms of the Revised Loan Agreement remain principally unchanged. In connection with this amendment, the Company paid its lender a fee of \$20,000.

Pursuant to the Revised Loan Agreement, as amended, 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. No early termination fee shall apply if we pay off our obligations after March 23, 2019.

At March 31, 2019, the borrowing availability under our revolving credit was approximately \$1,860,000, based on our eligible receivables and includes an indefinite reduction of borrowing availability of \$1,000,000 that our lender has imposed. Our borrowing availability under our revolving credit was also reduced by outstanding standby letters of credit totaling approximately \$2,639,000.

Our credit facility with our lender contains certain financial covenants, along with customary representations and warranties. A breach of any of these financial covenants, unless waived by our lender, 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 most significant quarterly financial covenant requirements under our credit facility at March 31, 2019

(Dollars in thousands)	Quarterly Requirement	1st Quarter Actual
Senior Credit Facility		
Fixed charge coverage ratio	1.15:1	Not Required
Minimum tangible adjusted net worth	\$ 25,000	\$ 25,551

Our lender waived our FCCR testing requirement for the first quarter of 2019. We met our remaining financial covenant requirements in the first quarter of 2019. As a result of the amendment discussed above which provides for further amendments to our quarterly FCCR requirements, we expect to meet our financial covenant requirements in the next twelve months; however, if we fail to meet any of our financial covenant requirements and our lender does not further waive the non-compliance or revise our covenant so that we are in compliance, our lender could accelerate the repayment of borrowings under our credit facility. In the event that our lender accelerates the payment of our borrowings, we may not have sufficient liquidity to repay our debt under our credit facility and other indebtedness.

On April 1, 2019, we completed a lending transaction with Robert Ferguson (the "Lender"), whereby we borrowed from the Lender the sum of \$2,500,000 pursuant to the terms of a Loan and Security Purchase Agreement and promissory note (the "Loan"). The Lender is a shareholder of the Company. The Lender also currently serves as a consultant to the Company in connection with the Test Bed Initiatives at our Perma-Fix Northwest Richland, Inc. facility. The proceeds from the Loan are to be used for general working capital purposes. The Loan is unsecured, with a term of two years with interest payable at a fixed interest rate of 4.00% per annum. The Loan provides for monthly payments of accrued interest only during the first year of the Loan, with the first interest payment due May 1, 2019 and monthly payments of approximately \$208,333 in principal plus accrued interest starting in the second year of the Loan. The Loan also provides for prepayment of principal payments over the term of the Loan without penalty. In connection with the above Loan, the Lender agreed under the terms of the Loan and a Subordination Agreement with our credit facility lender, to subordinate payment under the Loan, and agreed that the Loan will be junior in right of payment to the credit facility in the event of default or bankruptcy or other insolvency proceeding by us. In connection with this capital raise transaction described above and consideration for us receiving the Loan, we issued a Warrant (the "Warrant") to the Lender to purchase up to 60,000 shares of our Common Stock at an exercise price of \$3.51 per share, which was the closing bid price for a share of our Common Stock on NASDAQ.com immediately preceding the execution of the Loan and Warrant. The Warrant is exercisable six months from April 1, 2019 and expires on April 1, 2024. As further consideration for this capital raise transaction relating to the Loan, we also issued 75,000 shares of our Common Stock to the Lender. The 75,000 shares of Common Stock, the Warrant and the 60,000 shares of Common Stock that may be purchased under the Warrant will be and was issued in a private placement that was exempt from registration under Rule 506 and/or Sections 4(a)(2) and 4(a)(5) of the Securities Act of 1933, as amended (the "Act") and bear a restrictive legend against resale except in a transaction registered under the Act or in a transaction exempt from registration thereunder.

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

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

We are currently evaluating the accounting treatment of this transaction and the impact to our financial statements.

Off Balance Sheet Arrangements

From time to time, we are required to post standby letters of credit and various bonds to support contractual obligations to customers and other obligations, including facility closures. At March 31, 2019, the total amount of standby letters of credit outstanding totaled approximately \$2,639,000 and the total amount of bonds outstanding totaled approximately \$18,782,000. We also provide closure and post-closure requirements through a financial assurance policy for certain of our Treatment Segment facilities through AIG. At March 31, 2019, the closure and post-closure requirements for these facilities were approximately \$30,549,000.

Critical Accounting Policies and Estimates

In February 2016, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2016-02, “Leases (Topic 842),” which requires the recognition of lease assets and lease liabilities by lessees for those leases classified as operating leases under previous guidance. The original guidance required application on a modified retrospective basis with the earliest period presented. In July 2018, the FASB issued ASU 2018-11, “Targeted Improvements,” to Topic 842 which included an option to not restate comparative periods in transition and elect to use the effective date of Topic 842 as the date of initial application of transition, which the Company elected. As a result of the adoption of Topic 842 on January 1, 2019, the Company recorded both operating lease right-of-use (“ROU”) assets of \$2,602,000 and operating lease liabilities of \$2,622,000. The Company did not record any cumulative-effect adjustment to its beginning accumulated deficit upon adoption of ASU 2016-02 as the amount was considered immaterial. The adoption of Topic 842 had an immaterial impact on our Consolidated Statements of Operations and Cash Flows for the three months ended March 31, 2019.

Known Trends and Uncertainties

Significant Customers. Our Treatment and Services Segments have significant relationships with the U.S 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 domestic government clients (includes U.S federal, state and local), either directly as a prime contractor or indirectly as a subcontractor to government entities, representing approximately \$8,599,000 or 73.4% of our total revenue during the three months ended March 31, 2019, as compared to \$9,654,000 or 76.3% of our total revenue during the corresponding period of 2018.

Contracts/Task Order Agreement. During the latter part of March 2019, we entered into several contracts within our Services Segment which include remediation work for DOE locations throughout the United States. Additionally, during May 2019, our wholly-owned subsidiary, Perma-Fix Canada, Inc. (within our Services Segment) entered into a Task Order Agreement with the Canadian Nuclear Laboratories, LTD., with a value of approximately \$8,500,000 (U.S. dollar), for remediation work at specific sites within Ontario, Canada. The total contract value of these awards is expected to be approximately \$17,000,000 through 2019.

Environmental Contingencies

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

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

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

At March 31, 2019, we had total accrued environmental remediation liabilities of \$877,000, of which \$40,000 is recorded as a current liability, which reflects a decrease of \$10,000 from the December 31, 2018 balance of \$887,000. The decrease of \$10,000 represents payments on remediation projects at our Perma-Fix of Dayton, Inc. subsidiary.

Item 3. Quantitative and Qualitative Disclosures about Market Risks

Not required for smaller reporting companies.

Item 4. Controls and Procedures

(a) Evaluation of disclosure controls, and procedures.

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our periodic reports filed with the Securities and Exchange Commission is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the Securities and Exchange Commission and that such information is accumulated and communicated to our management. As of the end of the period covered by this report, we carried out an evaluation with the participation of our Principal Executive Officer and Principal Financial Officer. Based on this recent assessment, our Principal Executive Officer and Principal Financial Officer have concluded that our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934, as amended) were effective as of March 31, 2019.

(b) Changes in internal control over financial reporting

Effective January 1, 2019, we adopted ASU No. 2016-02, “Leases (Topic 842)” and ASU 2018-11, “Targeted Improvements” (collectively referred to as “Topic 842”). Although the adoption of Topic 842 did not have a material impact to our Consolidated Statements of Operations and Cash Flows for the three months ended March 31, 2019, we implemented changes to our internal controls related to the lease accounting standards. These changes included performing a comprehensive lease scoping analysis to identify and evaluate each of our lease categories and implementing procedures to calculate ROU assets and lease liabilities values for our leases. There was no other change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during our most recently completed fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II – OTHER INFORMATION

Item 1 Legal Proceedings

There are no material legal proceedings pending against us and/or our subsidiaries not previously reported by us in Item 3 of our Form 10-K for the year ended December 31, 2018, which is incorporated herein by reference.

Item 1A. Risk Factors

Our Preferred Share Rights Plan may adversely affect our stockholders.

In May 2019, the Company amended its Preferred Share Purchase Rights Plan (“Rights Plan”) to extend the term of the Rights Plan another two (2) years, expiring on May 2, 2021 (“Amended Rights Plan”). The Company’s Board of Directors approved the extension of the Rights Plan as management and the Board believes, among other things, that we are beginning to show success in connection with the recent implementation of our recently-adopted strategic plan and believe that we need at least two (2) more years, without interruption, to fully implement our strategic plan. The Rights Plan is designed to assure that all of the Company’s shareholders receive fair and equal treatment in the event of any proposed takeover of the Company and to guard against partial tender abusive tactics to gain control of the Company.

In general, the Rights under the Rights Plan will be exercisable only if a person or group acquires beneficial ownership of 15% or more of the Company’s Common Stock or announces a tender or exchange offer, the consummation of which would result in ownership by a person or group of 15% or more of the Common Stock (with certain exceptions). Each Right under the Rights Plan (other than the Rights owned by such acquiring person or members of such group which are void) will entitle shareholders to buy one one-thousandth of a share of a new series of participating preferred stock at an exercise price of \$20.00. Each one one-thousandth of a share of such new preferred stock purchasable upon exercise of a Right has economic terms designed to approximate the value of one share of Common Stock. Shareholders who have beneficial ownership of 15% or more at the adoption of the new Rights Plan are grandfathered in, but may not acquire additional shares without triggering the new Rights Plan.

If the Company is acquired in a merger or other business combination transaction, each Right will entitle its holder (other than Rights owned by such acquiring person or members of such group which are void) to purchase, at the Right’s then current exercise price, a number of the acquiring company’s common shares having a market value at the time of twice the Right’s exercise price.

In addition, if a person or group (with certain exceptions) acquires 15% or more of the Company’s outstanding Common Stock, each Right will entitle its holder (other than the Rights owned by such acquiring person or members of such group which are void) to purchase, in lieu of preferred stock, at the Right’s then current exercise price, a number of shares of the Company’s Common Stock having a market value of twice the Right’s exercise price.

Following the acquisition by a person or group of beneficial ownership of 15% or more of the Company's outstanding Common Stock (with certain exceptions), and prior to an acquisition of 50% or more of the Company's Common Stock by such person or group, the Company's Board may, at its option, exchange the Rights (other than Rights owned by such acquiring person or members of such group) in whole or in part, for shares of the Company's Common Stock at an exchange ratio of one share of Common Stock (or one one-thousandth of a share of the new series of participating preferred stock) per Right.

Prior to the acquisition by a person or group of beneficial ownership of 15% or more of the Company's Common Stock (with certain exceptions), the Rights are redeemable for \$0.001 per Right at the option of the Board of Directors.

Failure to become profitable could have a material adverse effect on us.

The Company has not reported an annual profit for several years, including the first quarter of 2019. Our main objective is to increase our revenues, returning the Company to profitability and to further evaluate various methods to increase our liquidity, when needed. If we are unable to return to profitability in the near future, this could have a material adverse effect on the Company.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

On April 1, 2019, we completed a lending transaction with Robert Ferguson (the "Lender"), whereby we borrowed from the Lender the sum of \$2,500,000 pursuant to the terms of a Loan and Security Purchase Agreement and promissory note (the "Loan"). The Lender is a shareholder of the Company. The Lender also currently serves as a consultant to the Company in connection with the Test Bed Initiatives at our Perma-Fix Northwest Richland, Inc. facility. The proceeds from the Loan are to be used for general working capital purposes. The Loan is unsecured, with a term of two years with interest payable at a fixed interest rate of 4.00% per annum. The Loan provides for monthly payments of accrued interest only during the first year of the Loan, with the first interest payment due May 1, 2019 and monthly payments of approximately \$208,333 in principal plus accrued interest starting in the second year of the Loan. The Loan also provides for prepayment of principal payments over the term of the Loan without penalty. In connection with the above Loan, the Lender agreed under the terms of the Loan and a Subordination Agreement with our credit facility lender, to subordinate payment under the Loan, and agreed that the Loan will be junior in right of payment to the credit facility in the event of default or bankruptcy or other insolvency proceeding by us. In connection with this capital raise transaction described above and consideration for us receiving the Loan, we issued a Warrant (the "Warrant") to the Lender to purchase up to 60,000 shares of our Common Stock at an exercise price of \$3.51 per share, which was the closing bid price for a share of our Common Stock on NASDAQ.com immediately preceding the execution of the Loan and Warrant. The Warrant is exercisable six months from April 1, 2019 and expires on April 1, 2024. As further consideration for this capital raise transaction relating to the Loan, we also issued 75,000 shares of our Common Stock to the Lender. The 75,000 shares of Common Stock, the Warrant and the 60,000 shares of Common Stock that may be purchased under the Warrant will be and was issued in a private placement that was exempt from registration under Rule 506 and/or Sections 4(a)(2) and 4(a)(5) of the Securities Act of 1933, as amended (the "Act") and bear a restrictive legend against resale except in a transaction registered under the Act or in a transaction exempt from registration thereunder.

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

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

Item 5. Other Information

On May 6, 2019, the Company's wholly-owned subsidiary, Perma-Fix Canada ("PF Canada"), Inc. entered into a Task Order Agreement with the Canadian Nuclear Laboratories, LTD., with a value of approximately \$8,500,000 (U.S dollar), for remediation work at specific sites within Ontario, Canada through end of year 2019. PF Canada is within the Company's Services Segment.

Item 6. Exhibits

(a) **Exhibits**

- 4.1 [Eleventh 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 March 29, 2019, as incorporated by reference from Exhibit 4.14 to the Company's 2018 Form 10-K filed on April 1, 2019.](#)
- 4.2 [Loan and Securities Purchase Agreement, dated April 1, 2019 between Robert L. Ferguson and Perma-Fix Environmental Services, Inc., as incorporated by reference from Exhibit 4.15 to the Company's 2018 Form 10-K filed on April 1, 2019.](#)
- 4.3 [Common Stock Purchase Warrant dated April 1, 2019 for Robert L. Ferguson, as incorporated by reference from Exhibit 4.16 to the Company's 2018 Form 10-K filed on April 1, 2019.](#)
- 4.4 [Shareholder Rights Agreement dated and effective as of May 2, 2018 between Perma-Fix Environmental Services, Inc. and Continental Stock Transfer & Trust Company as Rights Agent, as incorporated by reference from Exhibit 4.1 to the Company's Form 8-K filed on May 2, 2018.](#)
- 4.5 [First Amendment to Shareholder Rights Agreement dated May 2, 2019 between Perma-Fix Environmental Services, Inc. and Continental Stock Transfer & Trust Company as Rights Agent, as incorporated by reference from Exhibit 4.2 to the Company's Form 8-K filed on May 3, 2019.](#)
- 10.1 [Task Order Agreement for Small Scales Remediation Package between Canadian Nuclear Laboratories LTD and Perma-Fix Canada Inc. CERTAIN INFORMATION WITHIN SCHEDULE 2 – PRICE INFORMATION OF THIS EXHIBIT HAS BEEN EXCLUDED FROM THE EXHIBIT BECAUSE IT IS NOT MATERIAL AND WOULD LIKELY CAUSE COMPETITIVE HARM TO THE COMPANY IF PUBLICLY DISCLOSED.](#)
- 31.1 [Certification by Mark Duff, Chief Executive Officer of the Company pursuant to Rule 13a-14\(a\) or 15d-14\(a\).](#)
- 31.2 [Certification by Ben Naccarato, Chief Financial Officer of the Company pursuant to Rule 13a-14\(a\) or 15d-14\(a\).](#)
- 32.1 [Certification by Mark Duff, Chief Executive Officer of the Company furnished pursuant to 18 U.S.C. Section 1350.](#)
- 32.2 [Certification by Ben Naccarato, Chief Financial Officer of the Company furnished pursuant to 18 U.S.C. Section 1350.](#)
- 101.INS XBRL Instance Document*
- 101.SCH XBRL Taxonomy Extension Schema Document*
- 101.CAL XBRL Taxonomy Extension Calculation Linkbase Document*
- 101.DEF XBRL Taxonomy Extension Definition Linkbase Document*
- 101.LAB XBRL Taxonomy Extension Labels Linkbase Document*
- 101.PRE XBRL Taxonomy Extension Presentation Linkbase Document*

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

SIGNATURES

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

Date: May 9, 2019

PERMA-FIX ENVIRONMENTAL SERVICES

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

Date: May 9, 2019

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

TASK ORDER AGREEMENT FOR
SMALL SCALE SITES REMEDIATION PACKAGE
03*

TASK ORDER#: **541369**

BETWEEN

CANADIAN NUCLEAR LABORATORIES LTD. /
LABORATOIRES NUCLÉAIRES CANADIENS LTÉE.

AND

PERMA-FIX CANADA INC.

*INFORMATION IN THIS DOCUMENT HAS BEEN EXCLUDED FROM THIS PUBLIC FILING BECAUSE IT IS NOT MATERIAL AND WOULD LIKELY CAUSE COMPETITIVE HARM TO THE COMPANY IF PUBLICLY DISCLOSED.



1. Contract Title	SMALL SCALE SITES REMEDIATION PACKAGE # 02		
2. Task Order Execution Date	April 30, 2019	3. Task Order No. Contractor shall use for all invoicing	541369
4. Framework Reference	507595	5. The Contract Type is:	Fixed Price
6. Control Order No.	Not Applicable	7. The Task Order Price is:	\$11,494,654.34
8. Contractor HST#		9. Currency is:	Canadian
10. The Site is:	Municipality of Port Hope, Ontario	11. Price Schedule is provided in SCHEDULE 2	
12. The Schedule and Key Dates :	Per Schedule 3		
	The agreed Work Schedule is provided in Schedule 3		
	13. The Task Order Term is as set out below:		
a) The Task Order Effective Date is:	Upon Execution	b) The Task Order Completion date is:	December 16, 2019
14. Warranty Period	12 Months for commercial/residential properties from issue of CNL's Certificate of Substantial Performance, and 24 Months for municipal properties from issue of CNL's Certificate of Substantial Performance. In accordance to MPH By-Law 50-2014 Phase 2 in Standard Operating Guideline Section 2.9		
15. Addresses for Notices under this Task Order			
a) CNL Representative(s)		b) Contractor Representative	
CNL at: Project Lead – Scott Schumacher Email: scott.schumacher@cnl.ca Cell:905-376-8913 With copy to: Tina Burghardt – tina.burghardt@cnl.ca		Contractor at [Address] Email: John Kelly, jkelly@perma-fix.com Cell: 865-313-3107 With copy to: Ben Naccarato, bnaccarato@perma-fix.com	
c) CNL Contracting Officer		d) Contractor's Supervisor	
CNL at: Yvonne Rogers Email: yvonne.rogers@cnl.ca Tel: 905-885-8830, ext 45649		Contractor at [Address] Email: Ray Cyr, rcyr@lakeland-multitrade.com Cell: 905-375-8051	



16. Other communication:	Not Applicable
17. Periods of Reply	As specified in Schedule 1 and the Framework Agreement
This Task Order is issued pursuant to, and fully incorporates, the terms and conditions set forth within the governing Framework Agreement for Environmental Remediation Construction Works, No. 507935, with a Contract Date of 2017 October 18, by and between Canadian Nuclear Laboratories (CNL) and Milestone Environmental Contracting Inc.	

Part 1: Description of the Work/Services	
18. Description of scope of Work (Schedule 1)	<p>In summary, Task Order Agreement is issued for remediation and construction work at specific sites within the Municipality of Port Hope, Ontario. These sites have been impacted with industrial waste and low-level radioactive waste (“LLRW”). The scope of work is summarized as follows (the “Work”):</p> <ol style="list-style-type: none"> 1. Remediation of a portion of the properties as per Specifications and Drawings Group 1B, 1C, 1G, 1H and 1I (31 properties in total) 2. The safe removal, collecting and verification of soil know to contain LLRW 3. Transportation of waste along designated routes to the Long-Term Waste Management Facility (LTWMF) in the Municipality of Port Hope. 4. Rehabilitation and Reconstruction/Restoration as per Specifications
	(Refer to Schedule 1)
19. Drawings & Documents	Refer to Schedule 1
20. Deliverables	As set out Schedule 1
21. Exclusions and Battery limits	None
22. Assumptions and Risk Register	As set out in Framework Agreement GC 6.1
23. Constraints or interdependencies	Waste deliveries to the PH LTWMF must be coordinated with the LTWMF Contractor and CNL. This includes respective SOP's and Owner's access agreements between CNL and the Owners. As set out Schedule 1 – hours of operations.
24. CNL provided items and Rely-Upon Information	Refer to Schedule 1 (as referred to in Appendix D of the RFP)



Part 2: Key Data		
25. Task Order Limits of Liability	The Contractor's limit of liability for this Task Order is:	Task Order Price
	All in accordance with the provisions of the GC 11.4.2 of the Framework Agreement.	
26. Bonds and Guarantees	Performance Bond in accordance with GC 2.9 of the Framework Agreement in the amount of 50% of the Task Order Price. Labour & Material Payment Bond in accordance with GC 2.9 of the Framework Agreement in the amount of 50% of the Task Order Price (at CNL's request and discretion, to be determined upon award).	
27. Insurances	Insurance to be furnished in accordance with GC 10.1 of the Framework Agreement and as set out below: **Commercial General Liability coverage required: \$ 5,000,000 Automobile and Transportation Liability Insurance coverage required: \$ 3,000,000 Contractor's Pollution Liability Insurance coverage required: \$ 5,000,000 Contractors Equipment Insurance (sufficient to cover all property, tools and equipment of the contractor) CNL AECL, and the Municipality shall appear as additional insureds and the policy will provide coverage for non-owned auto (if not otherwise covered below), mobile equipment, cross liability, blanket contractual liability, and an agreement by underwriters to waive rights of recourse against CNL, AECL and the Municipality. Coverage in the amount set out in this Task Order per occurrence will be maintained. Prior to award, the Contractor will have to add the Property Owner's name on their Insurance Certificate and/or, if applicable the mortgagee's name, CNL's will provide all the information.	
	Insurance to be provided and shall remain in effect in accordance with the terms of the Framework Agreement, Part 10.	
28. Incentives	Not applicable	
29. Payment	In accordance with the agreed Schedule of Values forming part of Schedule 2 and in accordance with the Framework Agreement, Article 5 Payment and Invoicing	
30. Contractual Holdback	The amount of Contractual Holdback applicable to this Task Order is:	10% in accordance with the Framework Agreement, Article 5.1(a)
31. Delay Liquidated Damages (if applicable)	Delay Liquidated Damages are: \$5,000 per Working Day from Completion The maximum Delay Liquidated Damages payable is: 10% of the Task Order Price	
32. The Task Order Special Conditions are:		
33. Adjacent Operators	Not Applicable	

Part 3: Contract Execution Requirements	
34. HSSEQ Requirements	As specified in Schedule 1
35. Quality Designation of Work	As specified in Schedule 1
36. Training and Security	As specified in Schedule 1
37. Codes, Standards & Regulatory Requirements	As specified in Schedule 1
38. Performance, Communication and Reporting	As specified in Schedule 8 – STAKEHOLDER ENGAGEMENT
39. Responsibilities	As specified in the Framework Agreement
40. Reporting Requirements	As specified in Schedule 1

Part 4: Schedules
<p>Relevant documents to this Task Order.</p> <ul style="list-style-type: none"> ● Schedule 1: Technical Statement of Work; ● Schedule 2: Price Schedule; ● Schedule 3: Work Schedule; ● Schedule 4: Special Conditions, Contractor’s Methodology ● Schedule 5: Subcontractors; ● Schedule 6: Field Equipment List; ● Schedule 7: Aboriginal and/or Local, Small and Medium-sized Business Engagement Plan ● Schedule 8 Contractor Stakeholder Engagement

Part 5: Execution of Task Order	
Canadian Nuclear Laboratories	Perma-Fix Canada Inc.
Name/Position: Mark Lesinski/President & CEO	Name/Position: Ben Naccarato, Vice President of Finance
Signature: <u>/s/Mark Lesinski</u>	Signature: <u>/s/Ben Naccarato</u>
Date: <u>6th May 2019</u>	Date: <u>4-30-2019</u>
Name/Position: Monica Steedman/VP Finance & CFO	Name/Position: PERMA-FIX DOES NOT REQUIRE A SECOND SIGNATORY
Signature: <u>/s/Monica Steedman</u>	Signature: _____
Date: <u>6th May 2019</u>	Date: _____

□

SCHEDULE 1 – TECHNICAL STATEMENT OF WORK



The Technical Statement of Work comprise the following:

4501-01340-TS-001, latest revision – Construction Package 3 Issued for Construction Specifications – Design Groups 1B, 1C, 1G, 1H and 1I in Port Hope, ON prepared by AMEC Foster Wheeler – .

4501-508120-MD-001, latest revision – Construction Package 3 Issued for Construction Drawings – Design Group 1B prepared by AMEC Foster Wheeler

4501-508120-MD-002, latest revision – Construction Package 3 Issued for Construction Drawings – Design Group 1G prepared by AMEC Foster Wheeler

4501-508120-MD-003, latest revision – Construction Package 3 Issued for Construction Drawings – Design Group 1C prepared by AMEC Foster Wheeler

4501-508120-MD-004, latest revision – Construction Package 3 Issued for Construction Drawings – Design Group 1H prepared by AMEC Foster Wheeler

4501-508120-MD-005, latest revision – Construction Package 3 Issued for Construction Drawings – Design Group 1I prepared by AMEC Foster Wheeler

In addition to the above, the following documents are hereby incorporated into and form part of this Task Oder by reference:



□

SCHEDULE 2 – PRICE SCHEDULE



Task Order Price

1. Unit Price quantities shown are estimates only. The associated unit prices will be used to calculate the actual value of Work performed. CNL makes no guarantee as to the quantities of Work to be actually performed by the Selected Proponent.
2. All lump sum pricing and unit pricing shall be firm, fixed and not subject to adjustment for the duration of the Task Order Term.
3. Note that where the items on the Pricing Form tab are inconsistent with the Measurement Procedures set out in the various Sections of the Specifications, the Pricing Form shall govern and take precedence over the Specifications.
4. Pricing for Labour Rates and Equipment Rates are in firm Canadian funds and will be adjusted annually in accordance with the Consumer Price Index (CPI) for the Province of Ontario (December of previous year to January of current year) using the following formula:

$(\text{December} - \text{current year} / \text{January} - \text{previous year}) * 100 - 100$

The first annual adjustment of rates as set out above shall occur no sooner than eighteen months after the Effective Date.

5. Note that all Laboratory Analysis costs incurred by the Contractor for this project will be reimbursed at cost with no Contractor mark-up of any kind. Contractor's invoices for third party laboratory costs shall include the actual costs incurred (not to exceed the Ceiling Price per Unit set out in the Pricing Form (for each chemical analysis performed) and shall be supported by the accredited laboratory's actual invoices paid by the Contractor for this project.



*****INDICATES CERTAIN INFORMATION IN THIS DOCUMENT WHICH HAS BEEN OMITTED FROM THIS PUBLIC FILING BECAUSE IT IS NOT MATERIAL AND WOULD LIKELY CAUSE COMPETITIVE HARM TO THE COMPANY IF PUBLICLY DISCLOSED.**



	<u>Specification Reference</u>	<u>Description</u>	<u>Unit of Measure</u>	<u>Estimated Quantity</u>	<u>Price per Unit</u>	<u>Total Price</u>
Group B - General Requirements						
1	02 61 00	Mobilization and Project Startup	Lump Sum	1.00	\$ ***	\$ ***
2	02 61 00	Demobilization and Project Closeout	Lump Sum	1.00	\$ ***	\$ ***
3	01 31 19	Project Meetings	Lump Sum	1.00	\$ ***	\$ ***
4	01 32 00	Construction Progress Documentation	Lump Sum	1.00	\$ ***	\$ ***
5	01 32 16	Construction Progress Schedule	Lump Sum	1.00	\$ ***	\$ ***
6	01 35 29	Health and Safety Plan	Lump Sum	1.00	\$ ***	\$ ***
7	01 35 29	Implementation of Health and Safety - All Sites	Lump Sum	1.00	\$ ***	\$ ***
8	01 35 30	Radiation Protection Plan - All Sites	Lump Sum	1.00	\$ ***	\$ ***
9	01 35 30	Implementation of Radiation Protection - All Sites	Lump Sum	1.00	\$ ***	\$ ***
10	01 35 43	Environmental Protection Manual and Dust Management Plan - All Sites	Lump Sum	1.00	\$ ***	\$ ***
11	01 35 43	Implementation of Environmental Protection and Dust Management - All Sites	Lump Sum	1.00	\$ ***	\$ ***
12	01 45 00	Quality Assurance Plan	Lump Sum	1.00	\$ ***	\$ ***
13	01 45 00	Implementation of QA/QC - All Sites	Lump Sum	1.00	\$ ***	\$ ***
14	01 51 00	Provision and Maintenance of Temporary Utilities - (Contractor Use)	Lump Sum	1.00	\$ ***	\$ ***
15	01 52 00	Provision and Construction Facilities - All Sites	Lump Sum	1.00	\$ ***	\$ ***

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16	02 61 00	Permitting as per OBC and MPH SOP-SOG, OMOECC, CN/CP - all sites	Lump Sum	1.00	\$	***	\$	***
17		Traffic Control - All sites	Lump Sum	1.00	\$	***	\$	***
18	01 33 00	All Other Submittals	Lump Sum	1.00	\$	***	\$	***
19	01 14 00	Site Security	Lump Sum	1.00	\$	***	\$	***
20		Bonding & Insurance	Lump Sum	1.00	\$	***	\$	***
21	01 14 00	Training and Security Clearance	Lump Sum	1.00	\$	***	\$	***
22	01 78 00	Closeout Submittal	Lump Sum	1.00	\$	***	\$	***
23	01 56 00	Supply, Install, Maintain, and Remove Sediment Erosion Control fencing	Linear meters	95	\$	***	\$	***
24	01 56 00	Supply, Install, Maintain, and Remove - Perimeter Safety Fencing	Linear meters	185	\$	***	\$	***
25	02 61 00	Supply, Install, Maintain and Remove Access Gates as shown	each	4	\$	***	\$	***
26	See Figure attached	Tree Protection Fencing	Linear meters	40	\$	***	\$	***
Total Price - General Requirements							<u>\$</u>	<u>***</u>

Group B Requirements - 24 Smith Street

Removals								
1	02 61 00	Pre-construction Property Condition Assessment	Lump Sum	1	\$	***	\$	***
2	02 61 00	Complete gamma survey and XRF scan of completed excavation surface	Lump Sum	1	\$	***	\$	***
3	02 61 00	Collection of soil sample for signature COPCs and the reporting of results following Laboratory Analysis	Lump Sum	1	\$	***	\$	***

***INDICATES CERTAIN INFORMATION IN THIS DOCUMENT WHICH HAS BEEN OMITTED FROM THIS PUBLIC FILING BECAUSE IT IS NOT MATERIAL AND WOULD LIKELY CAUSE COMPETITIVE HARM TO THE COMPANY IF PUBLICLY DISCLOSED.

4	02 61 00	Laboratory Analysis of soil sample for signature COPCs	Lump Sum	1	\$	***	\$	***
5	02 61 00	Collection of soil sample for secondary COPCs and the reporting of results following laboratory analysis	Lump Sum	1	\$	***	\$	***
6	02 61 00	Laboratory Analysis of composite soil sample for secondary COPCs	Lump Sum	1	\$	***	\$	***
7	02 61 00	Preparation and Submission of Verification Documentation	Lump Sum	1	\$	***	\$	***
8	02 41 16	Demolish Existing Site Structures that require removal, verify not radiologically impacted and dispose off site a licensed receiving facility	Lump Sum	1	\$	***	\$	***
9	02 41 13	Concrete Sidewalk Removal - verify not radiological impacted and dispose offsite at a licensed receiving facility	sq. meters	12	\$	***	\$	***
10	02 41 13	Concrete Stair Removal - verify not radiological impacted and dispose offsite at a licensed receiving facility	Lump Sum	1	\$	***	\$	***
11	02 61 00	Remove and Dispose of Trees, shrubs, hedges, and all other plants above ground, verify not radiological impacted and dispose offsite at a licensed receiving facility	Lump Sum	1	\$	***	\$	***
12	02 61 00	Remove all other surface landscape features, relocate offsite to secure location for future re-installment	Lump Sum	1	\$	***	\$	***
13	02 61 00	Excavate, stockpile, load, haul and dispose at LTWMF Facility Contaminated soil and tree roots	cubic meters	10	\$	***	\$	***
14		Secondary Excavation (if required)	cubic meters		\$	***		

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Earthworks								
1	31 00 01	Supply, place, compact and grade clean imported fill per MPH SOP/SOGs (based on 2 tonnes per cubic meter)	tonnes	2	\$	***	\$	***
2	31 00 01	Supply, place, compact and grade Granular A (based on 2 tonnes per cubic meter)	tonnes	4	\$	***	\$	***
3	31 00 01	Supply, place, compact and grade Granular B (based on 2 tonnes per cubic meter)	tonnes	4	\$	***	\$	***
4	31 00 01	Supply, place, and grade Topsoil	cubic meters	5	\$	***	\$	***
Site Restoration								
1	as per Drawings	Supply and Place Concrete Sidewalk as per specifications	sq. meters	12	\$	***	\$	***
2	31 32 50	Water management, sampling, transportation, and disposal at LTMWF	Lump Sum	1.00	\$	***	\$	***
3	as per Drawings	Supply and Place concrete stairs as per specifications	treads	9	\$	***	\$	***
4	32 90 00	Landscape Restoration	Allowance	1	\$	***	\$	***
Total Price - 24 Smith							\$	***

Group B Requirements - 26 Smith Street

Removals								
1	02 61 00	Pre-construction Property Condition Assessment	Lump Sum	1	\$	***	\$	***
2	02 61 00	Complete gamma survey and XRF scan of completed excavation surface	Lump Sum	1	\$	***	\$	***

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3	02 61 00	Collection of soil sample for signature COPCs and the reporting of results following Laboratory Analysis	Lump Sum	1	\$	***	\$	***
4	02 61 00	Laboratory analysis of soil sample for signature COPCs	Lump Sum	1	\$	***	\$	***
5	02 61 00	Collection of soil sample for secondary COPCs and the reporting of results following laboratory analysis	Lump Sum	1	\$	***	\$	***
6	02 61 00	Laboratory analysis of composite soil sample for secondary COPCs	Lump Sum	1	\$	***	\$	***
7	02 61 00	Preparation and submission of Verification Documentation	Lump Sum	1	\$	***	\$	***
8	02 41 13	Gravel Driveway Removal - verify not radiological impacted and dispose offsite at a licensed receiving facility	sq.meters	9	\$	***	\$	***
9	02 41 16	Demolish Existing Site Structures that require removal, verify not radiologically impacted and dispose off site a licensed receiving facility	Lump Sum	1	\$	***	\$	***
10	02 41 13	Concrete Sidewalk Removal - verify not radiological impacted and dispose offsite at a licensed receiving facility	sq. meters	23	\$	***	\$	***
11	02 41 13	Concrete Patio Removal - verify not radiological impacted and dispose offsite at a licensed receiving facility	sq. meters	40	\$	***	\$	***
12	31 11 00	Remove and Dispose of Trees, shrubs, hedges, and all other plants above ground, verify not radiological impacted and dispose offsite at a licensed receiving facility	Lump Sum	1	\$	***	\$	***

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13	02 61 00	Remove all other surface landscape features, relocate off-site to secure location for future re-installment	Lump Sum	1	\$	***	\$	***
14	02 61 00	Excavate, stockpile, load, haul and dispose at LTWMF Facility Contaminated soil and tree roots	cubic meters	60	\$	***	\$	***
15		Secondary Excavation (if required)	cubic meters		\$	***		
Earthworks								
1	31 00 01	Supply, place, compact and grade clean imported fill per MPH SOP/SOGs (based on 2 tonnes per cubic meter)	tonnes	40	\$	***	\$	***
2	31 00 01	Supply, place, compact and grade Granular A (based on 2 tonnes per cubic meter)	tonnes	20	\$	***	\$	***
3	31 00 01	Supply, place, compact and grade Granular B (based on 2 tonnes per cubic meter)	tonnes	20	\$	***	\$	***
4	31 00 01	Supply, place, and grade Topsoil	cubic meters	20	\$	***	\$	***
Site Restoration								
1	as per Drawings	Supply and Install covered porch as shown including all footings, etc., including all permits	square meters	22	\$	***	\$	***
2	as per Drawings	Supply, Place, Gravel Driveway as per specifications	square meters	9	\$	***	\$	***
2	as per Drawings	Supply and Place Concrete Sidewalk as per specifications	square meters	23	\$	***	\$	***
3	as per Drawings	Supply and Place Concrete Patio as per specifications	square meters	40	\$	***	\$	***

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4	as per Drawings	Supply and Place concrete stairs as per specifications	treads	10	\$	***	\$	***
5	32 90 00	Landscape Restoration	Allowance	1	\$	***	\$	***
6	31 32 50	Water management, sampling, transportation, and disposal at LTMWF	Lump Sum	1.00	\$	***	\$	***
7	as per Drawings	Supply and Place Fence	Linear meters	25.00	\$	***	\$	***
Total Price - 26 Smith							\$	***

Group B Requirements - 28 Smith Street

Removals								
1	02 61 00	Pre-construction Property Condition Assessment	Lump Sum	1	\$	***	\$	***
2	02 61 00	Complete gamma survey and XRF scan of completed excavation surface	Lump Sum	1	\$	***	\$	***
3	02 61 00	Collection of soil sample for signature COPCs and the reporting of results following Laboratory Analysis	Lump Sum	1	\$	***	\$	***
4	02 61 00	Laboratory analysis of soil sample for signature COPCs	Lump Sum	1	\$	***	\$	***
5	02 61 00	Collection of soil sample for secondary COPCs and the reporting of results following laboratory analysis	Lump Sum	1	\$	***	\$	***
6	02 61 00	Laboratory analysis of composite soil sample for secondary COPCs	Lump Sum	1	\$	***	\$	***
7	02 61 00	Preparation and submission of Verification Documentation	Lump Sum	1	\$	***	\$	***
8	02 41 16	Demolish Existing Site Structures that require removal, verify not radiologically impacted and dispose off site a licensed receiving facility	Lump Sum	1	\$	***	\$	***

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9	02 41 13	Concrete Sidewalk Removal - verify not radiological impacted and dispose offsite at a licensed receiving facility	square meters	23	\$	***	\$	***
10	02 41 13	Concrete Patio Removal - verify not radiological impacted and dispose offsite at a licensed receiving facility	square meters	40	\$	***	\$	***
11	02 41 13	Retaining Wall Removal - verify not radiologically impacted, offsite disposal at a licensed receiving facility, include all necessary support and bracing as required	Lump sum	1	\$	***	\$	***
12	02 41 13	Concrete Stair Removal - verify not radiological impacted and dispose offsite at a licensed receiving facility	Lump Sum	1	\$	***	\$	***
13	31 11 00	Remove and Dispose of Trees, shrubs, hedges, and all other plants above ground, verify not radiological impacted and dispose offsite at a licensed receiving facility	Lump Sum	1	\$	***	\$	***
14		Remove all other surface landscape features, relocate offsite to secure location for future re-installment	Lump Sum	1	\$	***	\$	***
15		Removal of Outbuilding Contents, storage in secured area, and return of objects upon restoration	Lump Sum	1	\$	***	\$	***
16	02 61 00	Excavate, stockpile, load, haul and dispose at LTWMF Facility Contaminated soil and tree roots	cubic meters	195	\$	***	\$	***
17		Secondary Excavation (if required)	cubic meters		\$	***		***

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Earthworks								
1	31 00 01	Supply, place, compact and grade clean imported fill per MPH SOP/SOGs (based on 2 tonnes per cubic meter)	Tonnes	140	\$	***	\$	***
2	31 00 01	Supply, place, compact and grade Granular A (based on 2 tonnes per cubic meter)	Tonnes	50	\$	***	\$	***
3	31 00 01	Supply, place, compact and grade Granular B (based on 2 tonnes per cubic meter)	Tonnes	50	\$	***	\$	***
4	31 00 01	Supply, place, and grade Topsoil	cubic meters	75	\$	***	\$	***
Site Restoration								
1	as per Drawings	Supply and Install detached Garage as shown including all footings, floors etc.	square meters	56	\$	***	\$	***
2	as per Drawings	Supply and Place Concrete Sidewalk as per specifications	square meters	23	\$	***	\$	***
3	as per Drawings	Supply and Place Concrete Patio as per specifications	square meters	40	\$	***	\$	***
4	as per Drawings	Supply and install Covered Porch (Rear) as shown including all permits	square meters	22	\$	***	\$	***
5	as per Drawings	Supply and Place Retaining Wall as per specifications	Linear meters	5	\$	***	\$	***
6	as per Drawings	Supply and Place concrete stairs as per specifications	treads	10	\$	***	\$	***
7	32 90 00	Landscape Restoration	Allowance	1	\$	***	\$	***
8	31 32 50	Water management, sampling, transportation, and disposal at LTMWF	Lump Sum	1.00	\$	***	\$	***
Total Price - 28 Smith							\$	***

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Group B Requirements - 30 Smith Street

Removals							
1	02 61 00	Pre-construction Property Condition Assessment	Lump Sum	1	\$	***	\$ ***
2	02 61 00	Complete gamma survey and XRF scan of completed excavation surface	Lump Sum	1	\$	***	\$ ***
3	02 61 00	Collection of soil sample for signature COPCs and the reporting of results following Laboratory Analysis	Lump Sum	1	\$	***	\$ ***
4	02 61 00	Laboratory analysis of soil sample for signature COPCs	Lump Sum	1	\$	***	\$ ***
5	02 61 00	Collection of soil sample for secondary COPCs and the reporting of results following laboratory analysis	Lump Sum	1	\$	***	\$ ***
6	02 61 00	Laboratory analysis of composite soil sample for secondary COPCs	Lump Sum	1	\$	***	\$ ***
7	02 61 00	Preparation and submission of Verification Documentation	Lump Sum	1	\$	***	\$ ***
8	02 41 16	Demolish existing Site structures that require removal, verify not radiologically impacted and dispose off site a licensed receiving facility	Lump Sum	1	\$	***	\$ ***
9	02 41 13	Gravel Driveway Removal - verify not radiological impacted and dispose offsite at a licensed receiving facility	sq.meters	7	\$	***	\$ ***
10	02 41 13	Concrete Sidewalk Removal - verify not radiological impacted and dispose offsite at a licensed receiving facility	sq.meters	14	\$	***	\$ ***

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11	02 41 13	Paving stone / interlocking brick patio Removal - verify not radiological impacted and dispose offsite at a licensed receiving facility	square meters	66	\$	***	\$	***
12	02 41 13	Retaining Wall Removal - verify not radiologically impacted, offsite disposal at a licensed receiving facility, include all necessary support and bracing as required	Lump sum	1	\$	***	\$	***
13	02 41 13	Concrete Stair Removal - verify not radiological impacted and dispose offsite at a licensed receiving facility	Lump Sum	1	\$	***	\$	***
14	02 41 13	Remove existing fence, verify not radiologically impacted and dispose offsite at licensed receiving facility	Lump Sum	1	\$	***	\$	***
15	31 11 00	Remove and Dispose of Trees, shrubs, hedges, and all other plants above ground, verify not radiological impacted and dispose offsite at a licensed receiving facility	Lump Sum	1	\$	***	\$	***
16		Remove all other surface landscape features, relocate offsite to secure location for future re-installment	Lump Sum	1	\$	***	\$	***
17		Removal of Outbuilding Contents, storage in secured area, and return of objects upon restoration	Lump Sum	1	\$	***	\$	***
18	02 61 00	Excavate, stockpile, load, haul and dispose at LTWMF Facility Contaminated soil and tree roots	cubic meters	425	\$	***	\$	***
19		Secondary Excavation (if required)	cubic meters		\$	***		

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Earthworks								
1	31 00 01	Supply, place, compact and grade clean imported fill per MPH SOP/SOGs (based on 2 tonnes per cubic meter)	tonnes	510	\$	***	\$	***
2	31 00 01	Supply, place, compact and grade Granular A (based on 2 tonnes per cubic meter)	tonnes	80	\$	***	\$	***
3	31 00 01	Supply, place, compact and grade Granular B (based on 2 tonnes per cubic meter)	tonnes	80	\$	***	\$	***
4	31 00 01	Supply, place, and grade Topsoil	cubic meters	90	\$	***	\$	***
Site Restoration								
1	as per Drawings	Supply and Install Storage Sheds as shown including all footings, floors etc.	each	1	\$	***	\$	***
2	as per Drawings	Supply, Place, Gravel Driveway as per specifications	square meters	7	\$	***	\$	***
3	as per Drawings	Supply and Place Concrete Sidewalk as per specifications	square meters	14	\$	***	\$	***
4	as per Drawings	Supply, Place Covered Porch (Front) as shown including all permits	square meters	23	\$	***	\$	***
5	06 15 00	Supply, Place Wooden deck (Rear) as shown including all permits	square meters	18	\$	***	\$	***
6	as per Drawings	Supply and Place Paving Stone / Interlocking Brick Patio as per specifications	square meters	66	\$	***	\$	***
7	as per Drawings	Supply and Place Retaining Wall as per specifications	Linear meters	25	\$	***	\$	***

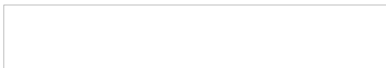
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8	as per Drawings	Supply and Place concrete stairs as per specifications	treads	6	\$	***	\$	***
9	31 32 50	Water management, sampling, transportation, and disposal at LTMWF	Lump Sum	1.00	\$	***	\$	***
10	as per Drawings	Supply and Place Fence	Linear meters	26	\$	***	\$	***
11	32 90 00	Landscape Restoration	Allowance	1	\$	***	\$	***
Total Price - 30 Smith							\$	***

Total Remediation, Earthworks and Restoration Only \$ ***

	<u>Specification Reference</u>	<u>Description</u>	<u>Unit of Measure</u>	<u>Estimated Quantity</u>	<u>Price per Unit</u>	<u>Total Price</u>
Group C - General Requirements						
1	02 61 00	Mobilization and Project Startup	Lump Sum	1.00	\$	***
2	02 61 00	Demobilization and Project Closeout	Lump Sum	1.00	\$	***
3	01 31 19	Project Meetings	Lump Sum	1.00	\$	***
4	01 32 00	Construction Progress Documentation	Lump Sum	1.00	\$	***
5	01 32 16	Construction Progress Schedule	Lump Sum	1.00	\$	***
6	01 35 29	Health and Safety Plan	Lump Sum	1.00	\$	***
7	01 35 29	Implementation of Health and Safety - All Sites	Lump Sum	1.00	\$	***
8	01 35 30	Radiation Protection Plan - All Sites	Lump Sum	1.00	\$	***
9	01 35 30	Implementation of Radiation Protection - All Sites	Lump Sum	1.00	\$	***
10	01 35 43	Environmental Protection Manual and Dust Management Plan - All Sites	Lump Sum	1.00	\$	***

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PROTECTED SENSITIVE

11	01 35 43	Implementation of Environmental Protection and Dust Management - All Sites	Lump Sum	1.00	\$	***	\$	***
12	01 45 00	Quality Assurance Plan	Lump Sum	1.00	\$	***	\$	***
13	01 45 00	Implementation of QA/QC - All Sites	Lump Sum	1.00	\$	***	\$	***
14	01 51 00	Provision and Maintenance of Temporary Utilities - (Contractor Use)	Lump Sum	1.00	\$	***	\$	***
15	01 52 00	Provision and Construction Facilities - All Sites	Lump Sum	1.00	\$	***	\$	***
16	02 61 00	Permitting as per OBC and MPH SOP-SOG, OMOECC, CN/CP - all sites	Lump Sum	1.00	\$	***	\$	***
17		Traffic Control - All sites	Lump Sum	1.00	\$	***	\$	***
18	01 33 00	All Other Submittals	Lump Sum	1.00	\$	***		