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 June 30, 2013

Or

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

Commission File No. 111596

PERMA-FIX ENVIRONMENTAL SERVICES, INC.

(Exact name of registrant as specified in its charter)

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

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

N/A

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

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the Registrant was required to submit and post such files). Yes ☒ No ☐

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

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

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

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

Class	Outstanding at August 1, 2013
Common Stock, $.001 Par Value	56,472,766 shares of registrant's Common Stock

PERMA-FIX ENVIRONMENTAL SERVICES, INC.

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PART I - FINANCIAL INFORMATION
ITEM 1. – Financial Statements

PERMA-FIX ENVIRONMENTAL SERVICES, INC.
Consolidated Balance Sheets
(Unaudited)

(Amounts in Thousands, Except for Share and per Share Amounts)	June 30, 2013	December 31, 2012
ASSETS		
Current assets:		
Cash	$ 95	$ 4,368
Restricted cash	35	35
Accounts receivable, net of allowance for doubtful accounts of $2,335 and $2,507, respectively	10,954	11,395
Unbilled receivables - current	7,103	8,530
Retainage receivable	649	312
Inventories	451	473
Prepaid and other assets	2,467	3,282
Deferred tax assets - current	3,178	1,553
Current assets related to discontinued operations	686	499
Total current assets	25,618	30,447
Property and equipment:		
Buildings and land	26,323	26,297
Equipment	34,728	34,657
Vehicles	661	661
Leasehold improvements	11,625	11,625
Office furniture and equipment	2,105	2,116
Construction-in-progress	399	334
	75,841	75,690
Less accumulated depreciation and amortization	(42,588)	(40,376)
Net property and equipment	33,253	35,314
Property and equipment related to discontinued operations	1,616	1,614
Intangibles and other long term assets:		
Permits	16,773	16,799
Goodwill	28,037	29,186
Other intangible assets – net	3,315	3,610
Unbilled receivables – non-current	82	137
Finite risk sinking fund	21,290	21,272
Deferred tax asset, net of liabilities	1,103	1,103
Other assets	1,475	1,549
Total assets	$ 132,562	$ 141,031

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

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

(Amounts in Thousands, Except for Share and per Share Amounts)	June 30, 2013	December 31, 2012
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 6,845	$ 8,657
Accrued expenses	5,008	6,254
Disposal/transportation accrual	1,233	2,294
Unearned revenue	2,825	3,695
Billings in excess of costs and estimated earnings	2,357	1,934
Current liabilities related to discontinued operations	1,725	1,512
Current portion of long-term debt	2,568	2,794
Total current liabilities	22,561	27,140
Accrued closure costs	11,425	11,349
Other long-term liabilities	707	674
Long-term liabilities related to discontinued operations	1,592	1,829
Long-term debt, less current portion	11,850	11,402
Total long-term liabilities	25,574	25,254
Total liabilities	48,135	52,394
Commitments and Contingencies		
Preferred Stock of subsidiary, $1.00 par value; 1,467,396 shares authorized, 1,284,730 shares issued and outstanding, liquidation value $1.00 per share plus accrued and unpaid dividends of $707 and $674, respectively	1,285	1,285
Stockholders' Equity:		
Preferred Stock, $.001 par value; 2,000,000 shares authorized, no shares issued and outstanding	—	—
Common Stock, $.001 par value; 75,000,000 shares authorized, 56,372,273 and 56,238,525 shares issued, respectively; 56,334,063 and 56,200,315 shares outstanding, respectively	56	56
Additional paid-in capital	102,972	102,819
Accumulated deficit	(19,794)	(16,005)
Accumulated other comprehensive loss	(4)	(2)
Less Common Stock in treasury, at cost; 38,210 shares	(88)	(88)
Total Perma-Fix Environmental Services, Inc. stockholders' equity	83,142	86,780
Non-controlling interest	—	572
Total stockholders' equity	83,142	87,352
Total liabilities and stockholders' equity	$ 132,562	$ 141,031

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 June 30, 2013	Three Months Ended June 30, 2012	Six Months Ended June 30, 2013	Six Months Ended June 30, 2012
Net revenues	$ 22,784	$ 33,698	$ 42,613	$ 71,634
Cost of goods sold	18,761	29,768	38,053	63,335
Gross profit	4,023	3,930	4,560	8,299
Selling, general and administrative expenses	3,370	4,589	7,556	9,627
Research and development	402	535	901	888
Impairment loss on goodwill	1,149	—	1,149	—
(Gain) loss on disposal of property and equipment	—	(3)	2	(3)
Loss from operations	(898)	(1,191)	(5,048)	(2,213)
Other income (expense):				
Interest income	9	7	18	21
Interest expense	(200)	(199)	(344)	(420)
Interest expense-financing fees	(24)	(26)	(47)	(60)
Other	1	1	(7)	1
Loss from continuing operations before taxes	(1,112)	(1,408)	(5,428)	(2,671)
Income tax benefit	(132)	(399)	(1,560)	(855)
Loss from continuing operations, net of taxes	(980)	(1,009)	(3,868)	(1,816)
Income (loss) from discontinued operations, net of taxes	43	(60)	15	(198)
Net loss	(937)	(1,069)	(3,853)	(2,014)
Net (loss) income attributable to non-controlling interest	(61)	102	(64)	158
Net loss attributable to Perma-Fix Environmental Services, Inc. common stockholders	$ (876)	$ (1,171)	$ (3,789)	$ (2,172)
Net loss per common share attributable to Perma-Fix Environmental Services, Inc. stockholders - basic:				
Continuing operations	$ (.02)	$ (.02)	$ (.07)	$ (.04)
Discontinued operations	$ —	$ —	$ —	$ —
Net loss per common share	$ (.02)	$ (.02)	$ (.07)	$ (.04)
Net loss per common share attributable to Perma-Fix Environmental Services, Inc. stockholders - diluted:				
Continuing operations	$ (.02)	$ (.02)	$ (.07)	$ (.04)
Discontinued operations	$ —	$ —	$ —	$ —
Net loss per common share	$ (.02)	$ (.02)	$ (.07)	$ (.04)
Number of common shares used in computing net loss per share:				
Basic	56,334	56,094	56,303	56,078
Diluted	56,334	56,094	56,303	56,078

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

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

(Amounts in Thousands)	Three Months Ended June 30, 2013	Three Months Ended June 30, 2012	Six Months Ended June 30, 2013	Six Months Ended June 30, 2012
Net loss	$ (937)	$ (1,069)	$ (3,853)	$ (2,014)
Other comprehensive (loss) income:				
Foreign currency translation (loss) gain	—	(9)	(2)	2
Total other comprehensive (loss) income	—	(9)	(2)	2
Comprehensive loss	(937)	(1,078)	(3,855)	(2,012)
Comprehensive (loss) income attributable to non-controlling interest	(61)	102	(64)	158
Comprehensive loss attributable to Perma-Fix Environmental Services, Inc. stockholders	$ (876)	$ (1,180)	$ (3,791)	$ (2,170)

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

PERMA-FIX ENVIRONMENTAL SERVICES, INC.
CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY
For the six months ended June 30, 2013
(Unaudited)

	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, 2012	56,238,525	56	$ 102,819	$ (88)	$ (2)	$ 572	$ (16,005)	$ 87,352
Net loss	—	—	—	—	—	(64)	(3,789)	(3,853)
Foreign currency translation adjustment	—	—	—	—	(2)	—	—	(2)
Distribution to non-controlling interest	—	—	—	—	—	(490)	—	(490)
Redemption of non-controlling interest	—	—	—	—	—	(18)	—	(18)
Issuance of common stock for services	133,748	—	99	—	—	—	—	99
Stock-based compensation	—	—	54	—	—	—	—	54
Balance at June 30, 2013	56,372,273	$ 56	$ 102,972	$ (88)	$ (4)	—	$ (19,794)	$ 83,142

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

PERMA-FIX ENVIRONMENTAL SERVICES, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)

(Amounts in Thousands)	Six Months Ended June 30, 2013	2012
Cash flows from operating activities:		
Net loss	$ (3,853)	$ (2,014)
Less: income (loss) on discontinued operations	15	(198)
Loss from continuing operations	(3,868)	(1,816)
Adjustments to reconcile net income to cash provided by operations:		
Depreciation and amortization	2,576	2,753
Amortization of debt discount	—	12
Amortization of fair value of customer contracts	(1,043)	(1,943)
Deferred tax benefit	(1,636)	(852)
Provision for bad debt and other reserves	43	43
Impairment loss on goodwill	1,149	—
Loss (gain) on disposal of plant, property and equipment	2	(3)
Foreign exchange (loss) gain	(2)	2
Issuance of common stock for services	99	102
Stock-based compensation	54	98
Changes in operating assets and liabilities of continuing operations, net of effect from business acquisitions:		
Accounts receivable	60	2,031
Unbilled receivables	1,482	(3,632)
Prepaid expenses, inventories and other assets	1,078	1,646
Accounts payable, accrued expenses and unearned revenue	(3,603)	(6,887)
Cash used in continuing operations	(3,609)	(8,446)
Cash used in discontinued operations	(167)	(372)
Cash used in operating activities	(3,776)	(8,818)
Cash flows from investing activities:		
Purchases of property and equipment	(175)	(387)
Change in restricted cash, net	—	1,500
Proceeds from sale of plant, property and equipment	—	3
Non-controlling distribution/redemption	(508)	—
Payment to finite risk sinking fund	(18)	(1,899)
Cash used in investing activities	(701)	(783)
Cash flows from financing activities:		
Net borrowing of revolving credit	1,671	643
Principal repayments of long term debt	(1,449)	(2,134)
Proceeds from finite risk financing	—	565
Payment of finite risk financing	—	(251)
Cash provided by (used in) financing activities of continuing operations	222	(1,177)
Principal repayments of long term debt for discontinued operations	(18)	(17)
Cash provided by (used in) financing activities	204	(1,194)
Decrease in cash	(4,273)	(10,795)
Cash at beginning of period	4,368	12,055
Cash at end of period	$ 95	$ 1,260
Supplemental disclosure:		
Interest paid	$ 353	$ 479
Income taxes paid	104	470

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

PERMA-FIX ENVIRONMENTAL SERVICES, INC.
NOTES TO CONSOLIDATED CONDENSED FINANCIAL STATEMENTS

June 30, 2013
(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, 2012.

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 six months ended June 30, 2013 are not necessarily indicative of results to be expected for the fiscal year ending December 31, 2013.

We suggest that these consolidated condensed financial statements be read in conjunction with the consolidated financial statements and the notes thereto included in the Company's Annual Report on Form 10-K for the year ended December 31, 2012.

Current Financial Position and Liquidity

During the six months ended June 30, 2013 and for the year ended December 31, 2012, the Company incurred net losses of $3,853,000 and $6,092,000, respectively. In the first and second quarters of fiscal 2013, revenues were $19,829,000 and $22,784,000, respectively. Despite this increase, which is consistent with our historical revenue trends, the 2013 revenue and our fiscal 2012 revenue were below our expectations and internal forecasts as a result of government sequestration, ending of contracts and general adverse economic conditions. Our revenue to date in fiscal 2013 has been insufficient to attain profitable operations and has generated negative operating cash flow from operations; however, historically, the Company has generated positive operating cash in the third and fourth quarters due to the government fiscal year end of September 30th and upfront contractual billing terms.

The Company's cash flow requirements during 2013 have been financed by cash on hand, operations, and our credit facility (Note 7). Should the increased revenue consistent with prior trends not materialize, we are committed to further reducing operating costs to bring them in line with reduced revenue levels. If we are unable to improve our revenue and working capital during the remainder of 2013, such could result in a material adverse impact on our results and liquidity, including potential impact on our goodwill balances.

On August 2, 2013, the Company completed a lending transaction with Messrs. Robert Ferguson and William Lampson (collectively, the "Lenders"), whereby the Company borrowed from the Lenders the sum of $3,000,000 pursuant to the terms of a Loan and Security Purchase Agreement and promissory note (Note 13). These additional funds allowed us to pay down the current revolver balance, effectively increasing our borrowing availability to approximately $6,200,000 as of August 2, 2013 based on eligible collateral. The loan is a fixed rate loan with a favorable rate that is lower than our current variable rates and thus translates to lower interest expense.

The Company continues to focus on expansion into both commercial and international markets to help offset the uncertainties of government spending. This includes new services, new customers and increased market share in our current markets. Although no assurances can be given, we believe we will be able to successfully implement this plan.

Reclassifications

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

2. Summary of Significant Accounting Policies

Our accounting policies are as set forth in the notes to consolidated financial statements referred to above and below.

Revenue Recognition

The Company recognizes revenue, but not profit, for certain significant claims when it is determined that recovery of incurred costs is probable and the amounts can be reliably estimated. Under Accounting Standards Codification ("ASC") 605-35-25 "Revenue Recognition–Construction-Type and Production-Type Contracts", these requirements are satisfied when the contract or other evidence provides a legal basis for the claim, additional costs were caused by circumstances that were unforeseen at the contract date and not the result of deficiencies in the Company's performance, claim-related costs are identifiable and considered reasonable in view of the work performed, and evidence supporting the claim is objective and verifiable. The Company periodically evaluates its position and the amounts recognized in revenue with respect to all its claims. Amounts ultimately realized from claims could differ materially from the balances included in the condensed consolidated financial statements.

Recently Adopted Accounting Standards

In February 2013, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2013-02 ("ASU 2013-02"), "Reporting of Amounts Reclassified Out of Accumulated Other Comprehensive Income." This ASU requires entities to disclose the effect of items reclassified out of accumulated other comprehensive income on each affected net income line item. For accumulated other comprehensive income reclassification items that are not reclassified in their entirety into net income, entities are required to cross-reference to other disclosures required under U.S. GAAP that provide additional detail on these amounts. This information may be provided either in the notes or parenthetically on the face of the financials. For public entities, the guidance is effective for annual reporting periods beginning after December 15, 2012 and interim periods within those years. The adoption of ASU 2013-02 did not have a material impact on the Company's financial condition or results of operations.

Recently Issued Accounting Standards

In February 2013, the FASB issued ASU 2013-04, "Obligations Resulting From Joint and Several Liability Arrangements for Which the Total Amount of the Obligation is Fixed at the Reporting Date," an amendment to FASB ASC Topic 405, "Liabilities." The update requires an entity to measure obligations resulting from joint and several liability arrangements for which the total amount of the obligation is fixed as of the reporting date as the sum of the obligation the entity agreed to pay among its co-obligors and any additional amount the entity expects to pay on behalf of its co-obligors. This ASU is effective for annual and interim periods beginning after December 15, 2013 and is required to be applied retrospectively to all prior periods presented for those obligations that existed upon adoption of the ASU. The Company is still assessing the potential impact of adopting this guidance.

In July 2013, the FASB issued ASU No. 2013-11 "Presentation of an Unrecognized Tax Benefit When a Net Operating Loss Carryforward, a Similar Tax Loss, or a Tax Credit Carryforward Exists." ASU No. 2013-11 is a new accounting standard on the financial statement presentation of unrecognized tax benefits. The new guidance requires an entity to present an unrecognized tax benefit and an net operating loss carryforward, a similar tax loss, or a tax credit carryforward on a net basis as part of a deferred tax asset, unless the unrecognized tax benefit is not available to reduce the deferred tax asset component or would not be utilized for that purpose, then a liability would be recognized. This ASU is effective for annual and interim periods beginning after December 15, 2013. We are still assessing the potential impact of adopting this guidance on our financial statements.

3. Stock Based Compensation

We follow FASB ASC 718, "Compensation – Stock Compensation" ("ASC 718") to account for stock-based compensation. ASC 718 requires all stock-based payments to employees, including grants of employee stock options, to be recognized in the income statement based on their fair values.

The Company has certain stock option plans under which it awards incentive and non-qualified stock options to employees, officers, and outside directors. Stock options granted to employees have either a ten year contractual term with one-fifth yearly vesting over a five year period or a six year contractual term with one-third yearly vesting over a three year period. Stock options granted to outside directors have a ten year contractual term with vesting period of six months.

No stock options were granted during the first six months of 2013 or 2012.

As of June 30, 2013, we had an aggregate of 1,138,000 employee stock options outstanding (from the 2004 and 2010 Stock Option Plans), of which 938,000 are vested. The weighted average exercise price of the 938,000 outstanding and fully vested employee stock options is $2.05 with a remaining weighted contractual life of 1.5 years. Additionally, we had an aggregate of 816,000 outstanding director stock options (from the 2003 Outside Directors Stock Plans), all of which are vested. The weighted average exercise price of the 816,000 outstanding and fully vested director stock options is $2.04 with a remaining weighted contractual life of 4.5 years.

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 following table summarizes stock-based compensation recognized for the three and six months ended June 30, 2013 and 2012 for our employee and director stock options.

Stock Options	Three Months Ended June 30,		Six Months Ended June 30,	
	2013	2012	2013	2012
Employee Stock Options	$ 3,000	$ 34,000	$ 36,000	$ 72,000
Director Stock Options	—	—	18,000	26,000
Total	$ 3,000	$ 34,000	$ 54,000	$ 98,000

We recognized stock-based compensation expense using a straight-line amortization method over the requisite period, which is the vesting period of the stock option grant. ASC 718 requires that stock based compensation expense be based on options that are ultimately expected to vest. ASC 718 requires forfeitures to be estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. We have generally estimated forfeiture rates based on historical trends of actual forfeitures. When actual forfeitures vary from our estimates, we recognize the difference in stock-based compensation expense in the period the actual forfeitures occur or when options vest. Our stock-based compensation expense for the three months ended June 30, 2013 included a reduction of approximately $23,000 resulting from the forfeiture of a non-qualified stock option (the "Option") due to the voluntary termination of our Safety and Ecology Corporation ("SEC" or Safety and Ecology Holdings Corporation and its subsidiaries) President from the Company which became effective May 24, 2013 (see Note 12 – "Related Party Transaction" for further information regarding the SEC President's voluntary termination from the Company). The Option was granted on October 31, 2011, with a term of 10 years from grant date and provided for the purchase of up to 250,000 shares of our Common Stock at $1.35 per share, with 25% yearly vesting over a four-year period (in accordance with a Non-Qualified Option Agreement). As of June 30, 2013, we have approximately $94,000 of total unrecognized compensation cost related to unvested options, of which $44,000 is expected to be recognized in 2013, with the remaining $50,000 in 2014.

4. Stock Plans and Non-Qualified Option Agreement

The summary of the Company's total Stock Plans and a Non-Qualified Stock Option Agreement (which has been forfeited) as of June 30, 2013 as compared to June 30, 2012, and changes during the periods then ended, are presented below. The current year Company's Plans consist of the 2004 and 2010 Stock Option Plans, and the 2003 Outside Directors Stock Plans:

	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term	Aggregate Intrinsic Value
Options outstanding Janury 1, 2013	2,644,000	$ 1.96		
Granted	–	–		
Exercised	–	–		$ –
Forfeited	(690,000)	1.87		
Options outstanding End of Period [1]	1,954,000	2.00	3.0	$ –
Options Exercisable at June 30, 2013[1]	1,754,000	$ 2.05	2.9	$ –
Options Vested and expected to be vested at June 30, 2013	1,954,000	$ 2.00	3.0	$ –

	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term	Aggregate Intrinsic Value
Options outstanding Janury 1, 2012	3,039,833	$ 1.98		
Granted	–	–		
Exercised	–	–		$ –
Forfeited	(425,333)	1.90		
Options outstanding End of Period [2]	2,614,500	1.99	3.8	$ –
Options Exercisable at June 30, 2012[2]	2,064,500	$ 2.13	3.0	$ –
Options Vested and expected to be vested at June 30, 2012	2,614,500	$ 1.99	3.8	$ –

(1) Options with exercise prices ranging from $1.10 to $2.95
(2) Options with exercise prices ranging from $1.41 to $2.95

5. (Loss) Income Per Share

Basic (loss) income per share excludes any dilutive effects of stock options, warrants, and convertible preferred stock. In periods where they are anti-dilutive, such amounts are excluded from the calculations of dilutive earnings per share.

The following is a reconciliation of basic (loss) income per share to diluted net loss per share for the three and six months ended June 30, 2013 and 2012:

	Three Months Ended June 30, (Unaudited)		Six Months Ended June 30, (Unaudited)	
(Amounts in Thousands, Except for Per Share Amounts)	2013	2012	2013	2012
Loss per share from continuing operations attributable to Perma-Fix Environmental Services, Inc.common stockholders				
Loss from continuing operations	$ (980)	$ (1,009)	$ (3,868)	$ (1,816)
Basic loss per share	$ (.02)	$ (.02)	$ (.07)	$ (.04)
Diluted loss per share	$ (.02)	$ (.02)	$ (.07)	$ (.04)
Income (loss) per share from discontinued operations attributable to Perma-Fix Environemental Services, Inc. common stockholders				
Income (loss) from discontinued operations	$ 43	$ (60)	$ 15	$ (198)
Basic income (loss) per share	$ —	$ —	$ —	$ —
Diluted income (loss) per share	$ —	$ —	$ —	$ —
Weighted average common shares outstanding – basic	56,334	56,094	56,303	56,078
Potential shares exercisable under stock option plans	—	—	—	—
Weighted average shares outstanding – diluted	56,334	56,094	56,303	56,078
Potential shares excluded from above weighted average share calculations due to their anti-dilutive effect include:				
Upon exercise of stock options	1,954	2,614	1,954	2,124

6. Other Intangible Assets and Goodwill

Other Intangible Assets

The following table summarizes information relating to the Company's other intangible assets:

		June 30, 2013			December 31, 2012		
	Useful Lives (Years)	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Intangibles (amount in thousands)							
Patent	8-18	$ 477	$ (131)	$ 346	$ 453	$ (105)	$ 348
Software	3	380	(210)	170	380	(145)	235
Non-compete agreement	1.2	265	(97)	168	265	(62)	203
Customer contracts	0.5	790	(790)	—	790	(790)	—
Customer relationships	12	3,370	(739)	2,631	3,370	(546)	2,824
Total		$ 5,282	$ (1,967)	$ 3,315	$ 5,258	$ (1,648)	$ 3,610

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

The following table summarizes the expected amortization over the next five years for our definite-lived intangible assets noted above and also includes the only definite-lived permit, which is at our Diversified Scientific Services, Inc. ("DSSI") subsidiary:

Year	Amount (In thousands)
2013 (remaining)	$ 503
2014	590
2015	488
2016	408
2017	355
	$ 2,344

Amortization expense relating to intangible assets noted above and our one definite-lived permit for the Company was $179,000 and $343,000 for the three and six months ended June 30, 2013, respectively, and $147,000 and $322,000 for the three and six months ended June 30, 2012, respectively.

Goodwill impairment

Our East Tennessee Materials & Energy Corporation ("M&EC") subsidiary was awarded the CH Plateau Remediation Company ("CHPRC") subcontract by CH2M Hill Plateau Remediation Company ("CH2M Hill"), effective June 19, 2008, in connection with CH2M Hill's prime contract with the Department of Energy ("DOE"), relating to waste management and facility operations at the DOE's Hanford, Washington site. The CHPRC subcontract provides for a base contract period from October 1, 2008 through September 30, 2013, with an option of renewal for an additional five years. During the second quarter of 2013, our M&EC subsidiary was notified by CH2M Hill that the subcontract will expire on September 30, 2013 and will not be renewed. As permitted by ASC Topic 350 "Intangibles – Goodwill and Other," when an impairment indicator arises toward the end of an interim reporting period, the Company may recognize its best estimate of that impairment loss. Based on the Company's preliminary analysis prepared as of June 30, 2013, we recorded a goodwill impairment charge of $1,149,000 during the three months ended June 30, 2013. This amount represented the total goodwill for our CHPRC reporting unit – our operations under the CHPRC subcontract. The goodwill impairment charge is noncash in nature and did not affect the Company's liquidity or cash flows from operating activities. Additionally, the goodwill impairment had no effect on the Company's borrowing availability or covenants under its credit facility agreement.

The preliminary assessment for the Treatment Segment, SYA and Safety & Ecology Corporation reporting units indicated that the fair values were greater than its net book value with no initial indication of goodwill impairment. Although the Company believes that the financial projections used in the assessment were reasonable and appropriate for its four reporting units at that time, there is uncertainty inherent in those projections.

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 that drive both commercial and government clients to reduce spending. In addition, federal governmental clients have operated under reduced budgets due to Continuing Resolutions ("CR") and sequestration. We believe that this has negatively impacted the amount of waste shipped to our treatment facilities as well as jobs available in our Services Segment. Significant uncertainty exists regarding how sequestration cuts will be implemented and what challenges this may present for our industry. While members of Congress and the Administration continue to discuss various options to address sequestration and the U.S. Government's overall fiscal challenges, we cannot predict the outcome of these efforts. Currently, there is insufficient information to determine the full impact of sequestration and CR on our 2013 results of operations and cash flows, including their potential impact on our goodwill balances.

7. Long Term Debt

Long-term debt consists of the following at June 30, 2013 and December 31, 2012:

(Amounts in Thousands)	June 30, 2013	December 31, 2012
Revolving Credit facility dated October 31, 2011, borrowings based upon eligible accounts receivable, subject to monthly borrowing base calculation, variable interest paid monthly at our option of prime rate (3.25% at June 30, 2013) plus 2.0% or London Interbank Offer Rate ("LIBOR") plus 3.0%, balance due October 31, 2016. Effective interest rate for first six months of 2013 was 3.30%. [1]	$ 1,671	$ —
Term Loan dated October 31, 2011, payable in equal monthly installments of principal of $190, balance due in October 31, 2016, variable interest paid monthly at option of prime rate plus 2.5% or LIBOR plus 3.5%. Effective interest rate for first six months of 2013 was 4.06%. [1]	12,381	13,524
Promissory Note dated September 28, 2010, payable in 36 monthly equal installments of $40, which includes interest and principal, beginning October 15, 2010, interest accrues at annual rate of 6.0%. [2]	119	352
Promissory Note dated February 12, 2013, payable in monthly installments of $10, which includes interest and principal, starting February 28, 2013, interest accrues at annual rate of 6.0%, balance due January 31, 2015. [2]	184	—
Various capital lease and promissory note obligations, payable 2013 to 2014, interest at rates ranging from 5.2% to 8.0%.	116	391
	14,471	14,267
Less current portion of long-term debt	2,568	2,794
Less long-term debt related to assets held for sale	53	71
	$ 11,850	$ 11,402

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

[2] Uncollateralized note.

Revolving Credit and Term LoanAgreement

The Company entered into an Amended and Restated Revolving Credit, Term Loan and Security Agreement, dated October 31, 2011 ("Amended Loan Agreement"), with PNC Bank, National Association ("PNC"), acting as agent and lender, replacing our previous Loan Agreement with PNC. The Amended Loan Agreement provides us with the following credit facilities:

- up to $25,000,000 revolving credit facility ("Revolving Credit"), subject to the amount of borrowings based on a percentage of eligible receivables. The revolving credit advances are subject to limitations of an amount up to the sum of (a) up to 85% of Commercial Receivables aged 90 days or less from invoice date, (b) up to 85% of Commercial Broker Receivables aged up to 120 days from invoice date, (c) up to 85% of acceptable Government Agency Receivables aged up to 150 days from invoice date, and (d) up to 50% of acceptable unbilled amounts aged up to 60 days, less (e) reserves the Agent reasonably deems proper and necessary;

- a term loan ("Term Loan") of $16,000,000, which requires monthly installments of approximately $190,000 (based on a seven-year amortization); and

- equipment line of credit up to $2,500,000, subject to certain limitations.

The Amended Loan Agreement terminates as of October 31, 2016, unless sooner terminated. We may terminate the Amended Loan Agreement upon 90 days' prior written notice and upon payment in full of our obligations under the Amended Loan Agreement. We agreed to pay PNC 0.5% of the total financing if we pay off our obligations after October 31, 2012, but prior to or on October 31, 2013. No early termination fee shall apply if we pay off our obligations under the Amended Loan Agreement after October 31, 2013.

We have the option of paying an annual rate of interest due on the revolving credit facility at prime plus 2% or LIBOR plus 3% and the term loan and equipment credit facilities at prime plus 2.5% or LIBOR plus 3.5%.

In connection with the Amended Loan Agreement, we paid PNC a fee of $217,500 and incurred other direct costs of approximately $298,000, all of which are being amortized over the term of the Amended Loan Agreement as interest expense – financing fees. As of June 30, 2013, the excess availability under our revolving credit was $7,281,000, based on our eligible receivables.

On May 9, 2013, we entered into an Amendment to our Amended Loan Agreement. This Amendment waived our fixed charge coverage ratio non-compliance for the first quarter of 2013. This Amendment also changed the methodology in calculating the fixed charge coverage ratio in each subsequent quarter of 2013. The minimum fixed charge coverage ratio requirement of 1:25 to 1:00 for each subsequent quarter of 2013 remains unchanged. As a condition of this Amendment, we paid PNC a fee of $20,000, which is being amortized over the term of the Amended Loan Agreement. All other terms of the Amended Loan Agreement remain principally unchanged. We met our fixed charge coverage ratio covenant for the second quarter of 2013.

Promissory Notes and Installment Agreements

On February 12, 2013, the Company entered into an unsecured promissory note ("New Note") with Timios National Corporation ("TNC" and formerly known as Homeland Capital Security Corporation) in the principal amount of approximately $230,000 as a result of a settlement with TNC in connection with certain claims that we asserted against TNC for breach of certain representations and covenant subsequent to our acquisition of Safety & Ecology Holdings Corporation and its subsidiaries (collectively known as "SEC") from TNC on October 31, 2011. In connection with the acquisition of SEC on October 31, 2011, as partial consideration of the purchase price, we entered into a $2,500,000 unsecured, non-negotiable promissory note (the "October Note"), bearing an annual rate of interest of 6%, payable in 36 monthly installments, with TNC. As part of the settlement with TNC regarding the aforementioned claims, the October Note, with balance of approximately $1,460,000, was cancelled and terminated and the New Note was issued in replacement of the October Note. The New Note bears an annual interest rate of 6%, payable in 24 monthly installments of principal and interest of approximately $10,000, with the first payment due February 28, 2013, as agreed by us and TNC after entering into the promissory note, with subsequent payments due on the last day of each month thereafter. The New Note provides us the right to prepay such at any time without interest or penalty.

The Note payable to TNC included an embedded conversion option ("Conversion Option") that can be exercised upon default, whereby TNC has the option to convert the unpaid portion of the Note into a number of whole shares of our restricted Common Stock. The number of shares of our restricted Common Stock to be issuable under the Conversion Option is determined by the principal amount owing under the Note at the time of default plus all accrued and unpaid interest and expenses (as defined) divided by the average of the closing price per share of our Common Stock as reported by the primary national securities exchange on which our Common Stock is traded during the 30 consecutive trading day period ending on the trading day immediately prior to receipt by us of TNC's written notice of its election to receive our restricted Common Stock as a result of the event of default by us, with the number of shares of our Common Stock issuable upon such default subject to certain limitations. We concluded that the Conversion Option had and continues to have nominal value as of June 30, 2013. We will continue to monitor the fair value of the Conversion Option on a regular basis.

On September 28, 2010, the Company entered into a promissory note in the principal amount of $1,322,000, with the former shareholders of Nuvotec (now known as Perma-Fix Northwest, Inc. or "PFNW") in connection with an earn-out amount that we are required to pay upon meeting certain conditions for each earn-out measurement year ended June 30, 2008 to June 30, 2011, as a result of our acquisition of PFNW and Perma-Fix Northwest Richland, Inc. ("PFNWR") in June 2007. Interest is accrued at an annual interest rate of 6%. The promissory note provides for 36 equal monthly payments of approximately $40,000, consisting of interest and principal, starting October 15, 2010. The promissory note may be prepaid at any time without penalty. See further details of the earn-out amount in Note 8 – "Commitments and Contingencies - Earn-Out Amount."

8. Commitments and Contingencies

Hazardous Waste

In connection with our waste management services, we handle 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

On March 7, 2013, our PFNWR subsidiary received a Notice of Intent to File Administrative Complaint from the U.S. Environmental Protection Agency ("EPA"), alleging PFNWR had improperly stored certain mixed waste. If a settlement is not reached between the Company and EPA in connection with these alleged violations within 120 days of initiating negotiations, the EPA has advised it will initiate an action for civil penalties for these alleged violations. The EPA could seek penalties up to $37,500 per day per violation. The EPA has proposed a consent agreement and final order ("CAFO") and has proposed a total penalty in the CAFO in the amount of $215,500 to resolve these alleged violations. We recorded approximately $188,000 in accrued penalty (of which $4,000 was recorded in the second quarter of 2013) based on our best estimate to resolve these alleged violations. See Note 13 - "Subsequent Events – Notice of Intent to File Administrative Complaint – PFNWR" on settlement of this matter with the EPA on July 16, 2013.

Earn-Out Amount – Perma-Fix Northwest, Inc. ("PFNW") and Perma-Fix Northwest Richland, Inc. ("PFNWR")

In connection with the acquisition of PFNW and PFNWR in June 2007, we were required to pay to those former shareholders of Nuvotec an earn-out amount upon meeting certain conditions for each measurement year ended June 30, 2008 to June 30, 2011, with the aggregate of the full earn-out amount not to exceed $4,552,000, pursuant to the Merger Agreement, as amended ("Agreement"). As of June 30, 2013, an aggregate earn-out amount of $3,896,000 has been paid or is payable as follows: (i) $2,574,000 in cash; and (ii) we issued a promissory note, dated September 28, 2010, in the principal amount of $1,322,000, payable in thirty six equal monthly payments of approximately $40,000 consisting of interest and principal, starting October 15, 2010. The total $3,896,000 in earn-out amount paid to date or to be paid pursuant to the promissory note excludes approximately an aggregate $656,000 in Offset Amount, which represents an indemnification obligation (as defined by the Merger Agreement) which is payable or may be payable to the Company by the former shareholders of Nuvotec. Pursuant to the Merger Agreement, the aggregate amount of any Offset Amount may total up to $1,000,000, except an Offset Amount is unlimited as to indemnification relating to liabilities for taxes, misrepresentation or inaccuracies with respect to the capitalization of Nuvotec or PEcoS (now known as "PFNWR") or for willful or reckless misrepresentation of any representation, warranty or covenant. The $656,000 Offset Amount (which was recorded as part of the purchase price allocation of PFNWR) represents approximately $93,000 relating to an excise tax issue and a refund request from a PEcoS customer in connection with services for waste treatment prior to our acquisition of PFNWR and PFNW and an anticipated Offset Amount of $563,000 in connection with the receipt of nonconforming waste at the PFNWR facility prior to our acquisition of PFNWR and PFNW. We are currently involved in litigation with the party that delivered the nonconforming waste to the facility prior to our acquisition of PFNWR and PFNW.

Insurance

The Company has a 25-year finite risk insurance policy entered into in June 2003 with Chartis, a subsidiary of American International Group, Inc. ("AIG"), which provides financial assurance to the applicable states for our permitted facilities in the event of unforeseen closure. The policy, as amended, provides for a maximum allowable coverage of $39,000,000 and has available capacity to allow for annual inflation and other performance and surety bond requirements. We have made all of the required payments totaling $18,305,000, for this finite risk insurance policy, as amended, of which $14,472,000 has been deposited into a sinking fund account which represents a restricted cash account; $2,883,000 represented full/terrorism premium; and $950,000 represented fee payable to Chartis. As of June 30, 2013, our financial assurance coverage amount under this policy totaled approximately $38,161,000. We have recorded $15,396,000 in our sinking fund related to the policy noted above in other long term assets on the accompanying balance sheets, which includes interest earned of $925,000 on the sinking fund as of June 30, 2013. Interest income for three and six months ended June 30, 2013, was approximately $7,000 and $13,000, respectively. On the fourth and subsequent anniversaries of the contract inception, we may elect to terminate this contract. If we so elect, Chartis is obligated to pay us an amount equal to 100% of the sinking fund account balance in return for complete releases of liability from both us and any applicable regulatory agency using this policy as an instrument to comply with financial assurance requirements.

In August 2007, we entered into a second finite risk insurance policy for our PFNWR facility with Chartis. The policy provided an initial $7,800,000 of financial assurance coverage with an annual growth rate of 1.5%, which at the end of the four year term policy, provides maximum coverage of $8,200,000. We have made all of the required payments on this policy, totaling $7,158,000, of which $5,700,000 has been deposited into a sinking fund account and $1,458,000 represented premium. As of June 30, 2013, we have recorded $5,894,000 in our sinking fund related to this policy in other long term assets on the accompanying balance sheets, which includes interest earned of $194,000 on the sinking fund as of June 30, 2013. Interest income for the three and six months ended June 30, 2013 totaled approximately $2,000 and $5,000, respectively. This policy is renewed annually at the end of the four year term with a nominal fee for the variance between the policy and coverage requirement. We renewed this policy in 2011 and 2012 with an annual fee of $46,000. All other terms of the policy remain substantially unchanged.

Recognition of Revenue from Contract Claims

The Company recognizes revenue, but not profit, for certain significant claims when it is determined that recovery of incurred costs is probable and the amount can be reliably estimated in accordance with ASC 605-35-25. The Company's revenue for quarter ended June 30, 2013, includes claim revenue related to this issue for costs incurred to date on a certain fixed price contract. The Company believes the ultimate recovery of incurred costs related to the claim is probable under ASC 605-35-25, and will continue periodically to evaluate its position and the amount recognized in revenue as to this claim. The project is substantially complete; resolution of the claim is projected to extend beyond the project completion date. The Company currently is conferring this claim revenue with the customer and will seek to recover, including litigation if necessary, all amounts owed as allowed under the contract or for other work performed. The customer can file a counterclaim against the Company seeking to recover costs associated with alleged defects. Relative success of the customer's counterclaim and the Company's claims for damages could result in a substantial change to earnings.

9. Discontinued Operations and Divestitures

Our discontinued operations consist of our Perma-Fix of South Georgia, Inc. ("PFSG") facility which met the held for sale criteria under ASC 360, "Property, Plant, and Equipment" on October 6, 2010. Our discontinued operations also encompass our Perma-Fix of Fort Lauderdale, Inc. ("PFFL"), Perma-Fix of Orlando, Inc. ("PFO"), Perma-Fix of Maryland, Inc. ("PFMD"), Perma-Fix of Dayton, Inc. ("PFD"), and Perma-Fix Treatment Services, Inc. ("PFTS") facilities, which were divested on August 12, 2011, October 14, 2011, January 8, 2008, March 14, 2008, and May 30, 2008, respectively. Our discontinued operations also include two previously shut down locations, Perma-Fix of Michigan, Inc. ("PFMI"), and Perma-Fix of Memphis, Inc. ("PFM").

We continue to market our PFSG facility for sale. As required by ASC 360, based on our internal financial valuations, we concluded that no tangible asset impairments existed for PFSG as of June 30, 2013. No intangible assets exist at PFSG.

The following table summarizes the results of discontinued operations for the three and six months ended June 30, 2013 and 2012. The operating results of discontinued operations are included in our Consolidated Statements of Operations as part of our "Income (loss) from discontinued operations, net of taxes."

	Three Months Ended June 30,		Six Months Ended June 30,	
(Amounts in Thousands)	2013	2012	2013	2012
Net revenues	$ 809	$ 599	$ 1,472	$ 1,215
Interest expense	$ (9)	$ (9)	$ (13)	$ (17)
Operating income (loss) from discontinued operations	$ 67	$ (86)	$ 26	$ (294)
Income tax expense (benefit)	$ 24	$ (26)	$ 11	$ (96)
Income (loss) from discontinued operations	$ 43	$ (60)	$ 15	$ (198)

The following table presents the major classes of assets and liabilities of discontinued operations that are classified as held for sale as of June 30, 2013 and December 31, 2012. The held for sale assets and liabilities may differ at the closing of a sale transaction from the reported balances as of June 30, 2013:

(Amounts in Thousands)	June 30, 2013	December 31, 2012
Accounts receivable, net [1]	$ 578	$ 391
Inventories	37	32
Other assets	16	16
Property, plant and equipment, net [2]	1,616	1,614
Total assets held for sale	$ 2,247	$ 2,053
Accounts payable	$ 341	$ 229
Accrued expenses and other liabilities	544	528
Note payable	53	71
Environmental liabilities	1,373	1,373
Total liabilities held for sale	$ 2,311	$ 2,201

(1) net of allowance for doubtful accounts of $25,000 and $45,000 as of June 30, 2013 and December 31, 2012, respectively.

(2) net of accumulated depreciation of $60,000 for each period presented.

The following table presents the major classes of assets and liabilities of discontinued operations that are not held for sale as of June 30, 2013 and December 31, 2012:

(Amounts in Thousands)	June 30, 2013	December 31, 2012
Other assets	$ 55	$ 60
Total assets of discontinued operations	$ 55	$ 60
Accrued expenses and other liabilities	$ 796	$ 884
Accounts payable	15	15
Environmental liabilities	195	241
Total liabilities of discontinued operations	$ 1,006	$ 1,140

10. Operating Segments

In accordance with ASC 280, "Segment Reporting", we define an operating segment as a business activity:

- from which we may earn revenue and incur expenses;
- whose operating results are regularly reviewed by the Chief Operating Officer to make decisions about resources to be allocated to the segment and assess its performance; and
- for which discrete financial information is available.

We currently have two reporting segments, which are based on a service offering approach. This, however, excludes corporate headquarters, which does not generate revenue, and our discontinued operations, which includes all facilities as discussed in Note 9 – "Discontinued Operations and Divestitures."

Our reporting segments are defined as follows:

TREATMENT SEGMENT, which includes:

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

SERVICES SEGMENT, which includes:

- On-site waste management services to commercial and government customers;
- Technical services, which include:
    - professional radiological measurement and site survey of large government and commercial installations using advance methods, technology and engineering;
    - integrated Occupational Safety and Health services including industrial hygiene ("IH") assessments; hazardous materials surveys, e.g., exposure monitoring; lead and asbestosmanagement/abatement oversight; indoor air quality evaluations; health risk and exposure assessments; health & safety plan/program development, compliance auditing and training services; and Occupational Safety and Health Administration ("OSHA") citation assistance;
    - global technical services providing consulting, engineering, project management, waste management, environmental, and decontamination and decommissioning field, technical, and management personnel and services to commercial and government customers; and,

  - augmented engineering services (through our Schreiber, Yonley & Associates subsidiary – "SYA") providing consulting environmental services to industrial and government customers:
    - including air, water, and hazardous waste permitting, air, soil and water sampling, compliance reporting, emission reduction strategies, compliance auditing, and various compliance and training activities; and,
    - engineering and compliance support to other segments;
- Nuclear services, which include:
  - technology-based services including engineering, decontamination and decommissioning ("D&D"), specialty services and construction, logistics, transportation, processing and disposal;
  - remediation of nuclear licensed and federal facilities and the remediation cleanup of nuclear legacy sites. Such services capability includes: project investigation; radiological engineering; partial and total plant D&D; facility decontamination, dismantling, demolition, and planning; site restoration; site construction; logistics; transportation; and emergency response; and
- A company owned equipment calibration and maintenance laboratory that services, maintains, calibrates, and sources (i.e., rental) of health physics, IH and customized nuclear, environmental, and occupational safety and health ("NEOSH") instrumentation.

The table below presents certain financial information of our operating segments as of and for the three and six months ended June 30, 2013 and 2012 (in thousands).

Segment Reporting for the Quarter Ended June 30, 2013

	Treatment	Services	Segments Total		Corporate [2]	Consolidated Total
Revenue from external customers	$ 10,108	$ 12,676	$ 22,784	[3]	$ —	$ 22,784
Intercompany revenues	407	16	423		—	—
Gross profit	2,312	1,711	4,023		—	4,023
Interest income	—	—	—		9	9
Interest expense	22	1	23		177	200
Interest expense-financing fees	—	—	—		24	24
Depreciation and amortization	1,024	238	1,262		27	1,289
Segment profit (loss)	795	(619)	176		(1,156)	(980)
Segment assets[1]	72,422	31,810	104,232		28,330 [4]	132,562
Expenditures for segment assets	59	—	59		—	59
Total long-term debt, net of current portion	14	—	14		11,836	11,850

Segment Reporting for the Quarter Ended June 30, 2012

	Treatment	Services	Segments Total		Corporate [2]	Consolidated Total
Revenue from external customers	$ 10,037	$ 23,661	$ 33,698	[3]	$ —	$ 33,698
Intercompany revenues	549	49	598		—	—
Gross profit	1,087	2,843	3,930		—	3,930
Interest income	—	—	—		7	7
Interest expense	3	—	3		196	199
Interest expense-financing fees	—	—	—		26	26
Depreciation and amortization	1,125	218	1,343		18	1,361
Segment profit (loss)	72	989	1,061		(2,070)	(1,009)
Segment assets[1]	78,982	43,568	122,550		31,231 [4]	153,781
Expenditures for segment assets	74	103	177		2	179
Total long-term debt, net of current portion	60	2	62		12,940	13,002

Segment Reporting for the Six Months Ended June 30, 2013

	Treatment	Services	Segments Total		Corporate [2]	Consolidated Total
Revenue from external customers	$ 17,450	$ 25,163	$ 42,613	[3]	$ —	$ 42,613
Intercompany revenues	1,075	55	1,130		—	—
Gross profit	2,167	2,393	4,560		—	4,560
Interest income	—	—	—		18	18
Interest expense	27	(4)	23		321	344
Interest expense-financing fees	—	—	—		47	47
Depreciation and amortization	2,063	460	2,523		53	2,576
Segment loss	(93)	(819)	(912		(2,956)	(3,868)
Segment assets[1]	72,422	31,810	104,232		28,330 [4]	132,562
Expenditures for segment assets	175	—	175		—	175
Total long-term debt, net of current portion	14	—	14		11,836	11,850

Segment Reporting for the Six Months Ended June 30, 2012

	Treatment	Services	Segments Total		Corporate [2]	Consolidated Total
Revenue from external customers	$ 22,879	$ 48,755	$ 71,634	[3]	$ —	$ 71,634
Intercompany revenues	1,158	117	1,275		—	—
Gross profit	3,808	4,491	8,299		—	8,299
Interest income	—	—	—		21	21
Interest expense	5	6	11		409	420
Interest expense-financing fees	—	—	—		60	60
Depreciation and amortization	2,255	462	2,717		36	2,753
Segment profit (loss)	1,164	1,094	2,258		(4,074)	(1,816)
Segment assets[1]	78,982	43,568	122,550		31,231 [4]	153,781
Expenditures for segment assets	242	141	383		4	387
Total long-term debt, net of current portion	60	2	62		12,940	13,002

(1) Segment assets have been adjusted for intercompany accounts to reflect actual assets for each segment.

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

(3) Includes revenues generated from CH Plateau Remediation Company ("CHPRC") of $6,419,000 or 28.2% and $12,440,000 or 29.2% for the three and six months ended June 30, 2013, respectively and $6,323,000 or 18.8% and $12,633,000 or 17.6% for the corresponding period of 2012, respectively.

(4) Amount includes assets from discontinued operations of $2,302,000 and $2,381,000 as of June 30, 2013 and 2012, respectively.

11. Income Taxes

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

We had income tax benefits of $132,000 and $399,000 from continuing operations for the three months ended June 30, 2013 and the corresponding period of 2012, respectively, and income tax benefits of $1,560,000 and $855,000 for the six months ended June 30, 2013 and the corresponding period of 2012, respectively. The Company's effective tax rates were approximately 134.7% and 26.4% for the three months ended June 30, 2013 and 2012, respectively, and 37.0% and 30.2% for the six months ended June 30, 2013 and 2012, respectively. We have treated the goodwill impairment loss of approximately $1,149,000 recorded for our CHPRC reporting unit as a discrete item and have not included the impact of the impairment in our estimated effective tax rates for the three and six months ended June 30, 2013, in accordance with ASC 740-270-30-8 (see Note 6 – "Other Intangible Assets and Goodwill" for further information regarding this goodwill impairment).

The provision for income taxes is determined in accordance with ASC 740, "Income Taxes". Deferred income tax assets and liabilities are recognized for future tax consequences attributed to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax basis. Deferred income tax assets and liabilities are measured using enacted income tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. Any effect on deferred income tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

The Company regularly assesses the likelihood that the deferred tax asset will be recovered from future taxable income. The Company considers projected future taxable income and ongoing tax planning strategies, then records a valuation allowance to reduce the carrying value of the net deferred income tax assets to an amount that is more likely than not to be realized.

12. Related Party Transaction

On May 14, 2013, the Company entered into a Separation and Release Agreement ("Agreement") with Mr. Christopher Leichtweis ("Leichtweis"), the Company's SEC President. Pursuant to the Agreement:

(i) effective May 24, 2013 ("Separation Date"), Leichtweis voluntarily terminated and retired as an employee of the Company, Senior Vice President of the Company and President of SEC;

(ii) the Leichtweis Employment Agreement dated October 31, 2011 between the Company and Leichtweis was terminated and becomes null and void, except for the "Confidentiality of Trade Secrets and Business Information" ("Section 7") clause of the Leichtweis Employment Agreement. No severance and Special Bonus (as defined in the Leichtweis Employment Agreement) were payable to Leichtweis under the Leichtweis Employment Agreement. Leichtweis was paid all accrued salary, vacation and any benefit under the employee's benefit plan to Separation Date. Leichtweis voluntary termination of employment with the Company was for reasons other than for "Good Reason" (as defined by Leichtweis Employment Agreement) and is within the meaning of Treasury Regulation § 1.409A-1(h)(1) as of the Separation Date;

(iii) the Management Incentive Plan ("MIP") effective as of November 1, 2011, as amended on July 12, 2012, for the benefit of Leichtweis was forfeited and cancelled. No payment was payable under the MIP as of the Separation Date;

(iv) A nonqualified stock option (the "Option") granted to Leichtweis on October 31, 2011, in accordance with a Non-Qualified Stock Option Agreement, which provided for the purchase of up to 250,000 shares of the Company's Common Stock at $1.35 per share pursuant to the Leichtweis Employment Agreement was forfeited. Within 30 days after Separation Date, Leichtweis had the option to exercise 62,500 options (amount vested) to purchase 62,500 shares of the Company's common stock, which he elected not to exercise;

(v) the Company generally released Leichtweis from and against all claims against Leichtweis under the Leichtweis Employment Agreement except for claims against Leichtweis under "Section 7" of the Employment Agreement; and

(vi) Leichtweis released the Company and its subsidiaries and all of their representatives, officers, directors, employees and affiliates from and against any and all Claims (as defined in the Agreement).

In connection with the Agreement, the Company also entered into a Consulting Services Agreement ("Consulting Agreement") with Leichtweis, dated May 24, 2013 which will terminate on July 23, 2014, unless sooner terminated by either party with prior 30 days written notice. The Consulting Agreement provides for compensation at an hourly rate of $135 and reasonable travel and other expenses. Pursuant to the Consulting Agreement, the Leichtweis will be subject to a fourteen months confidentiality and non-compete agreement (as defined) from date of execution of the Consulting Agreement. On June 1, 2013, Leichtweis provided the Company with written notice of termination of the Consulting Agreement. The Consulting Agreement terminated on June 30, 2013 except for the confidentiality and non-compete provisions of the Consulting Agreement.

13. Subsequent Events

Notice of Intent to File Administrative Complaint – PFNWR

On July 16, 2013, our PFNWR subsidiary entered into a consent agreement and final order ("CAFO") with the EPA in final settlement of certain alleged violations that our PFNWR subsidiary had improperly stored certain mixed waste. In settlement of these alleged violations, our PFNWR subsidiary has agreed to pay a penalty of approximately $188,000 within thirty days of July 16, 2013. See Note 9 – "Commitment and Contingencies – Legal Matters" for further information regarding this matter.

Promissory Notes and Subordination Agreement

On August 2, 2013, the Company completed a lending transaction with Messrs. Robert Ferguson and William Lampson ("collectively, the "Lenders"), whereby the Company borrowed from the Lenders the sum of $3,000,000 pursuant to the terms of a Loan and Security Purchase Agreement and promissory note (the "Loan"). The Lenders were formerly shareholders of PFNW prior to our acquisition of PFNW and PFNWR and are also stockholders of the Company, having received shares of our Common Stock in connection with the acquisition of PFNW and PFNWR in June 2007. Mr. Ferguson also served as a Company Board member from August 2007 to February 2010 and from August 2011 to September 2012. The proceeds from the Loan will be used for general working capital purposes. The promissory note is unsecured, with a term of three years with interest payable at a fixed interest rate of 2.99% per annum. The promissory note provides for monthly payments of accrued interest only during the first year of the Loan with the first interest payment due September 1, 2013 and monthly payments of $125,000 in principal plus accrued interest for the second and third year of the Loan. In connection with the above Loan, the Lenders entered into a Subordination Agreement dated August 2, 2013, with the Company's credit facility lender, whereby the Lenders agreed 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 the Company. As consideration for the Company receiving the Loan, we issued a Warrant to each Lender to purchase up to 175,000 shares of the Company's Common Stock at an exercise price based on the closing price of the Company's Common Stock at the closing of the transaction which was determined to be $0.45. The Warrants are exercisable six months from August 2, 2013 and expire on August 2, 2016. As further consideration for the Loan, the Company also will issue an aggregate 450,000 shares of the Company's Common Stock, with each Lender receiving 225,000 shares. The 450,000 shares of Common Stock and 350,000 Common Stock purchase warrants will be issued in a private placement and bear a restrictive legend against resale except in a transaction registered under the Securities Act or in a transaction exempt from registration thereunder. The Company is currently evaluating the accounting treatment of this transaction and the impact to our financial statements.

Amended and Restated Revolving Credit, Term Loan and Security Agreement

On August 2, 2013, the Company entered into an Amendment to our Amended and Restated Revolving Credit, Term Loan and Security Agreement, dated October 31, 2011 ("Amended Loan Agreement") with PNC. This Amendment reduced our Revolving Credit facility from $25,000,000 to $18,000,000 and removed the equipment line credit of up to $2,500,000. All other terms of the Amended Loan Agreement remain principally unchanged.

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 subject to fluctuations due to variety of factors;
- uncertainty with the federal budget and the availability of funding and sequestration;
- relative success of the customer's counterclaim and Company's claims for damages could result in a substantial change to earnings;
- the Company believes the ultimate recovery of incurred costs related to the claims is probable under ASC 605-35-25;
- significant reduction in the level of governmental funding could have a material adverse impact to our business, financial position, results of operations and cash flows in the current year and in the future;
- expect to meet our financial covenants in remaining quarters of 2013;
- ability to improve operations and liquidity;
- ability to continue under existing contracts with the federal government (directly or indirectly as a subcontractor;
- potential large fluctuations in revenue in each of our quarters in the near future;
- ability to fund expenses to remediate sites from funds generated internally;
- collectability of our receivables;
- potential effect on our operations with the adoption of programs by federal or state government mandating a substantial reduction in greenhouse gas emissions;
- ability to fund budgeted capital expenditures during 2013 through our operations and lease financing;

- our cash flows from operations and our available liquidity from our amended and restated line of credit are sufficient to service the Company's current obligations;
- continue to take steps to improve our operations and liquidity and to invest working capital into our facilities to fund capital additions to our segments;
- ability to obtain similar insurance in future years, or that the cost of such insurance will not increase materially;
- we could be subject to fines, penalties or other liabilities or could be adversely affected by existing or subsequently enacted laws or regulations;
- economic conditions and environmental clean-up budgets improve;
- plan to fund any repurchases of our common stock through our internal cash flow and/or borrowing under our line of credit;
- being potentially responsible party at a remedial action site, which could have a material adverse effect; and
- we could be deemed responsible for part for the cleanup of certain properties and be subject to fines and civil penalties in connection with violations of regulatory requirements.

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

- general economic conditions;
- material reduction in revenues;
- ability to meet PNC covenant requirements;
- inability to collect in a timely manner a material amount of receivables;
- increased competitive pressures;
- the ability to maintain and obtain required permits and approvals to conduct operations;
- public not accepting our new technology;
- the ability 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;
- 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; and
- Factors set forth in "Special Note Regarding Forward-Looking Statements" contained in our 2012 Form 10-K.

The Company undertakes no obligations to update publicly any forward-looking statement, whether as a result of new information, future events or otherwise.

Overview

Revenue decreased $10,914,000 or 32.4% to $22,784,000 for the three months ended June 30, 2013 from $33,698,000 for the corresponding period of 2012 primarily due to reduced revenue within our Services Segment of approximately $10,985,000 resulting from completion/near completion of certain large contracts with the U.S. Department of Energy ("DOE") within the nuclear services area and a large contract in the technical services area. Gross profit increased $93,000 or 2.4%, primarily due to the reduction in our fixed cost structure as we continue to improve and reduce certain costs in our operations. Selling, General, and Administrative (SG&A) expenses decreased $1,219,000 or 26.6% for the three months ended June 30, 2013 as compared to the corresponding period of 2012.

Business Environment and Outlook

During the six months ended June 30, 2013 and for the year ended December 31, 2012, the Company incurred net losses of $3,853,000 and $6,092,000, respectively. In the first and second quarters of fiscal 2013, revenues were $19,829,000 and $22,784,000, respectively. Despite this increase, which is consistent with our historical revenue trends, the 2013 revenue and our fiscal 2012 revenue were below our expectations and internal forecasts as a result of government sequestration, ending of contracts and general adverse economic conditions. Our revenue to date in fiscal 2013 has been insufficient to attain profitable operations and has generated negative operating cash flow from operations; however, historically, the Company has generated positive operating cash in the third and fourth quarters due to the government fiscal year end of September 30th and upfront contractual billing terms.

The Company's cash flow requirements during 2013 have been financed by cash on hand, operations, and our credit facility. Should the increased revenue consistent with prior trends not materialize, we are committed to further reducing operating costs to bring them in line with reduced revenue levels. If we are unable to improve our revenue and working capital during the remainder of 2013, such could result in a material adverse impact on our results and liquidity, including potential impact on our goodwill balances.

On August 2, 2013, the Company completed a lending transaction with Messrs. Robert Ferguson and William Lampson (collectively, the "Lenders"), whereby the Company borrowed from the Lenders the sum of $3,000,000 pursuant to the terms of a Loan and Security Purchase Agreement and promissory note. These additional funds allowed us to pay down the current revolver balance, effectively increasing our borrowing availability to approximately $6,200,000 as of August 2, 2013 based on eligible collateral. The loan is a fixed rate loan with a favorable rate that is lower than our current variable rates and thus translates to lower interest expense.

The Company continues to focus on expansion into both commercial and international markets to help offset the uncertainties of government spending. This includes new services, new customers and increased market share in our current markets. Although no assurances can be given, we believe we will be able to successfully implement this plan.

Results of Operations

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

Consolidated (amounts in thousands)	Three Months Ended June 30, 2013	%	2012	%	Six Months Ended June 30, 2013	%	2012	%
Net revenues	$ 22,784	100.0	$ 33,698	100.0	$ 42,613	100.0	$ 71,634	100.0
Cost of goods sold	18,761	82.3	29,768	88.3	38,053	89.3	63,335	88.4
Gross profit	4,023	17.7	3,930	11.7	4,560	10.7	8,299	11.6
Selling, general and administrative	3,370	14.8	4,589	13.6	7,556	17.7	9,627	13.4
Impairment loss on intangible asset	1,149	5.0	—	—	1,149	2.7	—	—
Research and development	402	1.8	535	1.6	901	2.1	888	1.3
(Gain) loss on disposal of property and equipment	—	—	(3)	—	2	—	(3)	—
Loss from operations	(898)	(3.9)	(1,191)	(3.5)	(5,048)	(11.8)	(2,213)	(3.1)
Interest income	9	—	7	—	18	—	21	—
Interest expense	(200)	(.9)	(199)	(.6)	(344)	(.8)	(420)	(.5)
Interest expense-financing fees	(24)	(.1)	(26)	(.1)	(47)	(.1)	(60)	(.1)
Other	1	—	1	—	(7)	—	1	—
Loss from continuing operations before taxes	(1,112)	(4.9)	(1,408)	(4.2)	(5,428)	(12.7)	(2,671)	(3.7)
Income tax benefit	(132)	(0.6)	(399)	(1.2)	(1,560)	(3.6)	(855)	(1.2)
Loss from continuing operations	$ (980)	(4.3)	$ (1,009)	(3.0)	$ (3,868)	(9.1)	$ (1,816)	(2.5)

Summary – Three and Six Months Ended June 30, 2013 and 2012

Consolidated revenues decreased $10,914,000 for the three months ended June 30, 2013, compared to the three months ended June 30, 2012, as follows:

(In thousands)	2013	% Revenue	2012	% Revenue	Change	% Change
Treatment						
Government waste	$ 5,072	22.3	$ 6,885	20.4	$ (1,813)	(26.3)
Hazardous/non-hazardous	1,691	7.4	729	2.2	962	132.0
Other nuclear waste	3,345	14.7	2,423	7.2	922	38.1
Total	10,108	44.4	10,037	29.8	71	0.7
Services						
Nuclear services	11,253	49.4	17,581	52.2	(6,328)	(36.0)
Technical services	1,423	6.2	6,080	18.0	(4,657)	(76.6)
Total	12,676	55.6	23,661	70.2	(10,985)	(46.4)
Total	$ 22,784	100.0	$ 33,698	100.0	$ (10,914)	(32.4)

Net Revenue

Treatment Segment revenue increased $71,000 or 0.7% for the three months ended June 30, 2013 over the same period in 2012. The small increase was primarily due to higher averaged priced waste offset by lower waste volume. Revenue from hazardous and non-hazardous waste was up $962,000 or 132.0% primarily due to increased remediation projects. Other nuclear waste revenue increased approximately $922,000 or 38.1% primarily due to receipt of a high priced and high margin waste shipment which did not occur in the corresponding period of 2012. Services Segment revenue decreased $10,985,000 or 46.4% in the three months ended June 30, 2013 from the corresponding period of 2012 primarily as a result of the completion/near completion of certain large contracts with the DOE within the nuclear services area and a large contract in the technical services area. The decrease in our revenue was impacted by a reduction in spending by our governmental and commercial clients in connection with the treatment of waste and new remediation projects as discussed above.

Consolidated revenues decreased $29,021,000 for the six months ended June 30, 2013, as compared to the six months ended June 30, 2012, as follows:

(In thousands)	2013	% Revenue	2012	% Revenue	Change	% Change
Treatment						
Government waste	$ 9,301	21.8	$ 16,595	23.2	$ (7,294)	(44.0)
Hazardous/non-hazardous	2,379	5.6	1,585	2.2	794	50.1
Other nuclear waste	5,770	13.5	4,699	6.5	1,071	22.8
Total	17,450	40.9	22,879	31.9	(5,429)	(23.7)
Services						
Nuclear services	21,442	50.3	36,242	50.6	(14,800)	(40.8)
Technical services	3,721	8.8	12,513	17.5	(8,792)	(70.3)
Total	25,163	59.1	48,755	68.1	(23,592)	(48.4)
Total	$ 42,613	100.0	$ 71,634	100.0	$ (29,021)	(40.5)

Net Revenue

Treatment Segment revenue decreased $5,429,000 or 23.7% for the six months ended June 30, 2013 over the same period in 2012. The decrease was primarily due to lower revenue from government clients of approximately $7,294,000 or 44.0% resulting from lower waste volume. Revenue from hazardous and non-hazardous waste was up $794,000 or 50.1% primarily due to higher remediation projects. Other nuclear waste revenue increased approximately $1,071,000 or 22.8% primarily due to higher average priced waste. Services Segment revenue decreased $23,592,000 or 48.4% in the six months ended June 30, 2013 from the corresponding period of 2012 primarily as a result of the completion/near completion of certain large contracts with the DOE within the nuclear services area and a large contract in the technical services area. The decrease in our revenue was impacted by a reduction in spending by our governmental and commercial clients in connection with the treatment of waste and new remediation projects as discussed above.

Cost of Goods Sold

Cost of goods sold decreased $11,007,000 for the quarter ended June 30, 2013, as compared to the quarter ended June 30, 2012, as follows:

(In thousands)	2013	% Revenue	2012	% Revenue	Change
Treatment	$ 7,796	77.1	$ 8,950	89.2	$ (1,154)
Services	10,965	86.5	20,818	88.0	(9,853)
Total	$ 18,761	82.3	$ 29,768	88.3	$ (11,007)

Cost of goods sold for the Treatment Segment decreased $1,154,000 or 12.9% primarily due to our continued effort in reducing our cost structure. We saw significant reduction in salaries and payroll related costs ($680,000) resulting from reductions in workforce which occurred in February 2013, December 2012, and June 2012 as we continue to manage headcount and streamline our operations. We incurred lower maintenance costs, outside service costs, and general expenses throughout various categories. Services Segment cost of goods sold decreased $9,853,000 or 47.3% primarily due to reduced revenue as discussed above. We incurred lower costs throughout most categories within cost of goods sold. Salaries and payroll related expenses were significantly lower ($5,300,000) resulting from reduced revenue and a reduction in workforce which occurred in February 2013. In addition, we incurred significantly lower outside services/subcontract costs ($3,300,000). Included within cost of goods sold is depreciation and amortization expense of $1,127,000 and $1,309,000 for the three months ended June 30, 2013, and 2012, respectively.

Cost of goods sold decreased $25,282,000 for the six months ended June 30, 2013, as compared to the six months ended June 30, 2012, as follows:

(In thousands)	2013	% Revenue	2012	% Revenue	Change
Treatment	$ 15,283	87.6	$ 19,071	83.4	$ (3,788)
Services	22,770	90.5	44,264	90.8	(21,494)
Total	$ 38,053	89.3	$ 63,335	88.4	$ (25,282)

Cost of goods sold for the Treatment Segment decreased $3,788,000 or 19.9% primarily due to reduced revenue from lower waste volume and our continued effort in reducing our cost structure. We incurred lower costs throughout most categories within cost of goods sold. We incurred significant reduction in salaries and payroll related expenses ($1,600,000) resulting from reductions in workforce which occurred in February 2013, December 2012, and June 2012 as we continue to manage headcount and streamline our operations. The reduced costs mentioned above were partially offset by approximately $111,000 increase in severance expense in the six months ended June 30, 2013 as compared to the corresponding period of 2012. In addition, our costs for the six months ended June 30, 2013 included an estimated $188,000 of penalty recorded (of which approximately $184,000 was recorded in the first quarter of 2013) in connection with a Notice of Intent to File Administrative Complaint which we received on March 7, 2013, from the U.S. Environmental Protection Agency, alleging our PFNWR subsidiary had improperly stored certain mixed waste (see "Known Trends and Uncertainties – Legal Matters" in this section for further information regarding settlement of this matter). Services Segment cost of goods sold decreased $21,494,000 or 48.6% primarily due to reduced revenue as discussed above. We incurred lower costs throughout most categories within cost of goods sold. Salaries and payroll related expenses were significantly lower ($11,800,000) resulting from reduced revenue and a reduction in workforce which occurred in February 2013. In addition, we incurred significantly lower outside services/subcontract costs ($6,700,000). The reduced costs were partially offset by approximately $115,000 increase in severance expense. Included within cost of goods sold is depreciation and amortization expense of $2,268,000 and $2,632,000 for the six months ended June 30, 2013, and 2012, respectively.

Gross Profit

Gross profit for the quarter ended June 30, 2013, increased $93,000 over 2012, as follows:

(In thousands)	2013	% Revenue	2012	% Revenue	Change
Treatment	$ 2,312	22.9	$ 1,087	10.8	$ 1,225
Services	1,711	13.5	2,843	12.0	(1,132)
Total	$ 4,023	17.7	$ 3,930	11.7	$ 93

The Treatment Segment gross profit increased by $1,225,000 or 112.7% and gross margin increased to 22.9% from 10.8% primarily due to revenue mix and the reduction in salaries and payroll related costs and certain of our other fixed costs as we continue to reduce our cost structure. In the Services Segment, gross profit decreased $1,132,000 or 39.8% primarily due to reduced revenue as discussed in the revenue section above; however, the increase in gross margin resulted from the reduction in force which occurred in February 2013 as we continue to streamline our costs.

Gross profit for the six months ended June 30, 2013, decreased $3,739,000 over 2012, as follows:

(In thousands)	2013	% Revenue	2012	% Revenue	Change
Treatment	$ 2,167	12.4	$ 3,808	16.6	$ (1,641)
Services	2,393	9.5	4,491	9.2	(2,098)
Total	$ 4,560	10.7	$ 8,299	11.6	$ (3,739)

The Treatment Segment gross profit decreased $1,641,000 or 43.1% and gross margin decreased to 12.4% from 16.6% primarily due to decreased revenue from lower waste volume, revenue mix and the impact of our fixed costs. We continue to streamline our cost structure as evidenced in the significant reduction in salaries and payroll related costs as noted in our discussion above. The reduced gross profit also included a $188,000 penalty recorded for our PFNWR subsidiary as discussed above. In the Services Segment, gross profit decreased $2,098,000 or 46.7% due to reduced revenue as discussed in the revenue section above.

Selling, General and Administrative

Selling, general and administrative ("SG&A") expenses decreased $1,219,000 for the three months ended June 30, 2013, as compared to the corresponding period for 2012, as follows:

(In thousands)	2013	% Revenue	2012	% Revenue	Change
Administrative	$ 920	—	$ 1,785	—	$ (865)
Treatment	1,002	9.9	886	8.8	116
Services	1,448	11.4	1,918	8.1	(470)
Total	$ 3,370	14.8	$ 4,589	13.6	$ (1,219)

The decrease in administrative SG&A was primarily the result of lower outside services expenses resulting from fewer corporate legal, consulting and business matters ($180,000), lower payroll and healthcare costs ($388,000), and lower public company expense. During the second quarter of 2012, we wrote off approximately $117,000 in costs related to our shelf registration statement on Form S-3 which expired on June 26, 2012. In addition, general expenses were lower throughout all categories. Treatment SG&A was higher primarily due to higher commission ($55,000) due to higher waste receipt, higher bad debt expense ($19,000), higher legal expenses ($12,000) related to the notice of violation alleging improper waste storage at our PFNWR subsidiary as discussed previously, and higher health claim costs ($17,000). Services SG&A was lower in almost all categories. We incurred lower salaries and payroll related expenses resulting from reduced headcount due to completion of integration of administrative functions ($271,000), lower outside services expenses resulting from lower consulting, legal, and sub-contract expenses ($110,000), lower travel expenses ($65,000), with the remaining in lower general expenses in various categories as we continue to streamline our costs. Included in SG&A expenses is depreciation and amortization expense of $108,000 and $52,000 for the three months ended June 30, 2013, and 2012, respectively.

SG&A expenses decreased $2,071,000 for the six months ended June 30, 2013, as compared to the corresponding period for 2012, as follows:

(In thousands)	2013	% Revenue	2012	% Revenue	Change
Administrative	$ 2,508	—	$ 3,525	—	$ (1,017)
Treatment	2,190	12.6	2,150	9.4	40
Services	2,858	11.4	3,952	8.1	(1,094)
Total	$ 7,556	17.7	$ 9,627	13.4	$ (2,071)

The decrease in administrative SG&A was primarily the result of lower outside services expenses resulting from fewer corporate legal, consulting and business matters ($320,000), lower payroll and healthcare costs ($366,000), and lower public company expense. During the second quarter of 2012, we wrote off approximately $117,000 in costs related to our shelf registration statement on Form S-3 which expired on June 26, 2012. In addition, travel and general expenses were lower throughout all categories. Treatment SG&A was slightly higher primarily due to higher commission due to higher waste receipt which was mostly offset by lower general expenses from various categories. Services SG&A was lower in most categories. We incurred lower salaries and payroll related expenses resulting from reduced headcount due to completion of integration of administrative functions ($773,000), lower outside services expenses resulting from lower consulting and sub-contract expenses ($158,000), lower travel expenses ($87,000), with the remaining in lower general expenses in various categories as we continue to streamline our costs. Included in SG&A expenses is depreciation and amortization expense of $201,000 and $121,000 for the six months ended June 30, 2013 and 2012, respectively.

Research and Development ("R&D")

Research and development costs decreased $133,000 and increased $13,000 for the three and six months ended June 30, 2013, respectively, as compared to the corresponding period of 2012. Research and development costs consist primarily of employee salaries and benefits, laboratory costs, third party fees, and other related costs associated with the development and enhancement of new potential waste treatment processes. The decrease for the three months ended June 30, 2013 was primarily due to lower salaries and payroll related costs and lower lab costs incurred on R&D projects. No significant change was noted for the six months ended June 30, 2013 as compared to the corresponding period of 2012. Included in research and development expense is depreciation expense of $54,000 and $0 for the three months ended June 30, 2013 and the corresponding period of 2012, respectively, and $107,000 and $0 for the six months ended June 30, 2013 and the corresponding period of 2012, respectively.

Goodwill Impairment

During the second quarter of 2013, we completed a preliminary assessment of the fair value of our four reporting units and the potential for goodwill impairment. Our preliminary assessment for Treatment Segment, SYA and Safety & Ecology Corporation reporting units indicated that its fair value were greater than its net book value with no initial indication of goodwill impairment. We determined that the estimated fair value of our CH Plateau Remediation Company ("CHPRC") reporting unit was less than the net book value indicating that its allocated goodwill are impaired; accordingly, we recorded a goodwill impairment charge of $1,149,000 during the three months ended June 30, 2013, which represented the total goodwill for our CHPRC reporting unit – our operations under the CHPRC subcontract. Our East Tennessee Materials & Energy Corporation ("M&EC") subsidiary was awarded the CHPRC subcontract by CH2M Hill Plateau Remediation Company ("CH2M Hill"), effective June 19, 2008, in connection with CH2M Hill's prime contract with the Department of Energy ("DOE"), relating to waste management and facility operations at the DOE's Hanford, Washington site. The CHPRC subcontract provides for a base contract period from October 1, 2008 through September 30, 2013, with an option of renewal for an additional five years. During the second quarter of 2013, our M&EC subsidiary was notified by CH2M Hill that the subcontract will expire on September 30, 2013 and will not be renewed. The impairment charge is noncash in nature and did not affect our liquidity or cash flows from operating activities. Additionally, the goodwill impairment had no effect on our borrowing availability or covenants under our credit facility agreement.

Interest Expense

Interest expense increased $1,000 and decreased $76,000 for the three and six months ended June 30, 2013, respectively, as compared to the corresponding period of 2012.

	Three Months			Six Months		
(In thousands)	2013	2012	Change	2013	2012	Change
PNC interest	$ 161	$ 155	$ 6	$ 286	$ 310	$ (24)
Other	39	44	(5)	58	110	(52)
Total	$ 200	$ 199	$ 1	$ 344	$ 420	$ (76)

No significant change in interest expense occurred for the quarter ended June 30, 2013 as compared to the corresponding period of 2012. Interest expense decreased approximately $76,000 for the six months ended June 30, 2013 as compared to the corresponding period of 2012 primarily due to reducing our Term Loan balance from monthly payments. In addition, interest expense was lower from a reduced loan balance and termination of the $2,500,000 note we entered into with TNC from the acquisition of SEC on October 31, 2011 and a reducing loan balance of the $1,322,000 earn-out note dated September 28, 2010. The lower interest expense mentioned above was partially offset by higher interest expense resulting from higher averaged Revolving Credit balance. Our monthly average Revolving Credit balance was approximately $1,587,000 during the six months ended June 30, 2013 as compared to $368,000 for the corresponding period of 2012. See "Liquidity and Capital Resources – Financing Activities" below for further details of these notes.

Interest Expense- Financing Fees

No significant change in interest expense-financing fees occurred for the quarter ended June 30, 2013 as compared to the corresponding period of 2012. Interest expense-financing fees decreased approximately $13,000 for the six months ended June 2013, as compared to the corresponding period of 2012. The decrease was primarily due to the final amortization of debt discount in April 2012 in connection with the extension of two Warrants issued as consideration of extending the due date of a $3,000,000 loan dated May 8, 2009 from May 8, 2011 to April 8, 2012.

Income Tax Benefit

We had income tax benefits of $132,000 and $399,000 from continuing operations for the three months ended June 30, 2013 and the corresponding period of 2012, respectively, and income tax benefits of $1,560,000 and $855,000 for the six months ended June 30, 2013 and the corresponding period of 2012, respectively. The Company's effective tax rates were approximately 134.7% and 26.4% for the three months ended June 30, 2013 and 2012, respectively, and 37.0% and 30.2% for the six months ended June 30, 2013 and 2012, respectively. We have treated the goodwill impairment loss of approximately $1,149,000 recorded for our CHPRC reporting unit as a discrete item and have not included the impact of the impairment in our estimated effective tax rates for the three and six months ended June 30, 2013, in accordance with ASC 740-270-30-8. We estimate our tax liability based on our estimated annual effective tax rate, which is based on our expected annual income (loss), statutory tax rates and tax planning opportunities available in the various jurisdictions in which we operate.

Discontinued Operations and Divestitures

Our discontinued operations consist of our Perma-Fix of South Georgia, Inc. ("PFSG") facility which met the held for sale criteria under ASC 360, "Property, Plant, and Equipment" on October 6, 2010. Our discontinued operations also encompass our Perma-Fix of Fort Lauderdale, Inc. ("PFFL"), Perma-Fix of Orlando, Inc. ("PFO"), Perma-Fix of Maryland, Inc. ("PFMD"), Perma-Fix of Dayton, Inc. ("PFD"), and Perma-Fix Treatment Services, Inc. ("PFTS") facilities, which were divested on August 12, 2011, October 14, 2011, January 8, 2008, March 14, 2008, and May 30, 2008, respectively. Our discontinued operations also includes two previously closed locations, Perma-Fix of Michigan, Inc. ("PFMI") and Perma-Fix of Memphis, Inc. ("PFM"), which were approved as discontinued operations by our Board of Directors effective October 4, 2004, and March 12, 1998, respectively.

We continue to market our PFSG facility for sale. As required by ASC 360, based on our internal financial valuations, we concluded that no tangible asset impairments existed for PFSG as of June 30, 2013. No intangible assets exist at PFSG.

Our discontinued operations had net revenue of $809,000 and $1,472,000 for the three and six months ended June 30, 2013, as compared to $599,000 and $1,215,000 for the corresponding period of 2012. We had net income of $43,000 and $15,000 for our discontinued operations for the three and six months ended June 30, 2013, respectively, as compared to net loss of $60,000 and $198,000 for the three and six months ended June 30, 2012, respectively.

Assets related to discontinued operations totaled $2,302,000 and $2,113,000 as of June 30, 2013, and December 31, 2012, respectively, and liabilities related to discontinued operations totaled $3,317,000 and $3,341,000 as of June 30, 2013, and December 31, 2012, respectively.

Liquidity and Capital Resources

Our capital requirements consist of general working capital needs, scheduled principal payments on our debt obligations and capital leases, remediation projects and planned capital expenditures. Our capital resources consist primarily of cash generated from operations, funds available under our revolving credit facility and proceeds from issuance of our Common Stock. Our capital resources are impacted by changes in accounts receivable as a result of revenue fluctuation, economic trends, collection activities, and the profitability of the segments.

At June 30, 2013, we had cash of $95,000. The following table reflects the cash flow activities during the six months of 2013:

(In thousands)	2013
Cash used in operating activities of continuing operations	$ (3,609)
Cash used in operating activities of discontinued operations	(167)
Cash used in investing activities of continuing operations	(701)
Cash provided by financing activities of continuing operations	222
Principal repayment of long-term debt for discontinued operations	(18)
Decrease in cash	$ (4,273)

As of June 30, 2013, we were in a net borrowing position (revolving credit facility) and therefore attempt to move all excess cash balances that are subject to our borrowing availability immediately to the revolving credit facility, so as to reduce debt and interest expense. We utilize a centralized cash management system, which includes a remittance lock box and is structured to accelerate collection activities and reduce cash balances, as idle cash is moved without delay to the revolving credit facility or the Money Market account, if applicable. The cash balance at June 30, 2013, primarily represents cash provided by operations and minor petty cash and local account balances used for miscellaneous services and supplies.

Operating Activities

Accounts Receivable, net of allowances for doubtful accounts, totaled $10,954,000 at June 30, 2013, a decrease of $441,000 from the December 31, 2012 balance of $11,395,000. The decrease was primarily due to reduction in invoicing resulting from decreased revenue.

As of June 30, 2013, unbilled receivables totaled $7,185,000, a decrease of $1,482,000 from the December 31, 2012 balance of $8,667,000. Treatment unbilled receivables decreased $1,561,000 from $5,147,000 as of December 31, 2012 to $3,586,000 as of June 30, 2013. Services Segment unbilled receivables (which are all current) increased $79,000 from a balance of $3,520,000 as of December 31, 2012 to $3,599,000 as of June 30, 2013. The delays in processing invoices usually take several months to complete and the related receivables are normally considered collectible within twelve months. However, as we have historical data in our Treatment Segment to review the timing of these delays, we realize that certain issues including, but not limited, to delays at our third party disposal site, can extend collection of some of these receivables greater than twelve months. Therefore, we have segregated the unbilled receivables between current and long term. The current portion of the unbilled receivables as of June 30, 2013 was $7,103,000, a decrease of $1,427,000 from the balance of $8,530,000 as of December 31, 2012. The long term portion as of June 30, 2013 was $82,000, a decrease of $55,000 from the balance of $137,000 as of December 31, 2012.

Disposal/transportation accrual as of June 30, 2013, totaled $1,233,000, a decrease of $1,061,000 over the December 31, 2012 balance of $2,294,000. Our disposal accrual can vary based on revenue mix and the timing of waste shipment for final disposal. As the majority of disposal accrual is impacted by on-site waste inventory, during the first quarter of 2013, we shipped more waste for disposal which is reflected in a lower inventory on-site as compared to year end.

Our working capital was $3,057,000 (which included working capital of our discontinued operations) as of June 30, 2013, as compared to a working capital of $3,307,000 as of December 31, 2012. Our working capital was primarily impacted by the slowdown in waste receipt and work generated under both segments which negatively impacted our accounts receivables and unbilled receivables. See further discussion of our liquidity in “Business Environment and Outlook” in this Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

Investing Activities

For the six months ended June 30, 2013, our purchase of capital equipment totaled approximately $175,000. These expenditures were primarily for improvements to our Treatment Segment. These capital expenditures were funded by the cash provided by operating activities. We have budgeted approximately $2,500,000 for 2013 capital expenditures for our segments to expand our operations into new markets, reduce the cost of waste processing and handling, expand the range of wastes that can be accepted for treatment and processing, and to maintain permit compliance requirements. Certain of these budgeted projects are discretionary and may either be delayed until later in the year or deferred altogether.

Financing Activities

The Company entered into an Amended and Restated Revolving Credit, Term Loan and Security Agreement, dated October 31, 2011 ("Amended Loan Agreement"), with PNC Bank, National Association ("PNC"), acting as agent and lender, replacing our previous Loan Agreement with PNC. The Amended Loan Agreement provides us with the following credit facilities: (a) up to $25,000,000 revolving credit facility ("Revolving Credit"), subject to the amount of borrowings based on a percentage of eligible receivables (as defined); (b) a term loan ("Term Loan") of $16,000,000, which requires monthly installments of approximately $190,000 (based on a seven-year amortization); and (c) equipment line of credit up to $2,500,000, subject to certain limitations. The Amended Loan Agreement terminates as of October 31, 2016, unless sooner terminated. We may terminate the Amended Loan Agreement upon 90 days' prior written notice and upon payment in full of our obligations under the Amended Loan Agreement. We agreed to pay PNC 0.5% of the total financing if we pay off our obligations after October 31, 2012, but prior to or on October 31, 2013. No early termination fee shall apply if we pay off our obligations under the Amended Loan Agreement after October 31, 2013.

We have the option of paying an annual rate of interest due on the revolving credit facility at prime plus 2% or London Interbank Offer Rate ("LIBOR") plus 3% and the term loan and equipment credit facilities at prime plus 2.5% or LIBOR plus 3.5%.

On August 2, 2013, the Company entered into an Amendment to our Amended Loan Agreement. This Amendment reduced our Revolving Credit facility from $25,000,000 to $18,000,000 and removed the equipment line credit of up to $2,500,000. All other terms of the Amended Loan Agreement remain principally unchanged. As of August 2, 2013, after the effect of this Amendment, the excess availability under our revolving credit was approximately $6,200,000, based on our eligible receivables.

Our credit facility with PNC Bank 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. On May 9, 2013, we entered into an Amendment to our Amended Loan Agreement. This Amendment waived our fixed charge coverage ratio non-compliance for the first quarter of 2013. This Amendment also changed the methodology in calculating our fixed charge coverage ratio in each subsequent quarter of 2013. The minimum fixed charge coverage ratio requirement of 1:25 to 1:00 for each subsequent quarter of 2013 remains unchanged. As a condition of this Amendment, we paid PNC a fee of $20,000, which is being amortized over the term of the Amended Loan Agreement. All other terms of the Amended Loan Agreement remain principally unchanged.

We met our financial covenants in each of the quarters in 2012. As discussed above, our fixed charge coverage ratio non-compliance for the first quarter of 2013 was waived by PNC and we met our fixed charge ratio for the second quarter of 2013. We expect to meet our financial covenants in the remaining quarters of 2013. The following table illustrates the most significant financial covenants under our credit facility and reflects the quarterly compliance required by the terms of our senior credit facility as of June 30, 2013:

(Dollars in thousands)	Quarterly Requirement	1st Quarter Actual	2nd Quarter Actual
Senior Credit Facility			
Fixed charge coverage ratio	1.25:1	0.63:1	2.14:1
Minimum tangible adjusted net worth	$30,000	$55,349	$55,106

On February 12, 2013, the Company entered into an unsecured promissory note ("New Note") with Timios National Corporation ("TNC" and formerly known as Homeland Capital Security Corporation) in the principal amount of approximately $230,000 as a result of a settlement with TNC in connection with certain claims that we asserted against TNC for breach of certain representations and covenant subsequent to our acquisition of Safety & Ecology Holdings Corporation and its subsidiaries (collectively known as "SEC") from TNC on October 31, 2011. In connection with the acquisition of SEC on October 31, 2011, as partial consideration of the purchase price, we entered into a $2,500,000 unsecured, non-negotiable promissory note (the "October Note"), bearing an annual rate of interest of 6%, payable in 36 monthly installments, with TNC. As part of the settlement with TNC regarding the aforementioned claims, the October Note, with balance of approximately $1,460,000, was cancelled and terminated and the New Note was issued in replacement of the October Note. The New Note bears an annual interest rate of 6%, payable in 24 monthly installments of principal and interest of approximately $10,000, with the first payment due February 28, 2013, as agreed by us and TNC after entering into the promissory note, with subsequent payments due on the last day of each month thereafter. The New Note provides us the right to prepay such at any time without interest or penalty.

In connection with the acquisition of Perma-Fix Northwest, Inc. ("PFNW") and Perma-Fix Northwest Richland, Inc. ("PFNWR") in June 2007, we issued a promissory note, dated September 28, 2010, in the principal amount of $1,322,000 to the former shareholders of Nuvotec (now known as PFNW) in connection with an earn-out amount that we were required to pay upon meeting certain conditions for each measurement year ended June 30, 2008 to June 2011. The note provides for 36 equal monthly payments of $40,000, consisting of interest (annual interest rate of 6%) and principal, starting October 15, 2010.

On August 2, 2013, the Company completed a lending transaction with Messrs. Robert Ferguson and William Lampson ("collectively, the "Lenders"), whereby the Company borrowed from the Lenders the sum of $3,000,000 pursuant to the terms of a Loan and Security Purchase Agreement and promissory note (the "Loan"). The Lenders were formerly shareholders of PFNW prior to our acquisition of PFNW and PFNWR and are also stockholders of the Company, having received shares of our Common Stock in connection with the acquisition of PFNW and PFNWR in June 2007. Mr. Ferguson also served as a Company Board member from August 2007 to February 2010 and from August 2011 to September 2012. The proceeds from the Loan will be used for general working capital purposes. The promissory note is unsecured, with a term of three years with interest payable at a fixed interest rate of 2.99% per annum. The promissory note provides for monthly payments of accrued interest only during the first year of the Loan with the first interest payment due September 1, 2013 and monthly payments of $125,000 in principal plus accrued interest for the second and third year of the Loan. In connection with the above Loan, the Lenders entered into a Subordination Agreement dated August 2, 2013, with the Company's credit facility lender, whereby the Lenders agreed 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 the Company. As consideration for the Company receiving the Loan, we issued a Warrant to each Lender to purchase up to 175,000 shares of the Company's Common Stock at an exercise price based on the closing price of the Company's Common Stock at the closing of the transaction which was determined to be $0.45. The Warrants are exercisable six months from August 2, 2013 and expire on August 2, 2016. As further consideration for the Loan, the Company also will issue an aggregate 450,000 shares of the Company's Common Stock, with each Lender receiving 225,000 shares. The 450,000 shares of Common Stock and 350,000 Common Stock purchase warrants will be issued in a private placement and bear a restrictive legend against resale except in a transaction registered under the Securities Act or in a transaction exempt from registration thereunder. The Company is currently evaluating the accounting treatment of this transaction and the impact to our financial statements.

On October 7, 2011, the Company's Board of Directors authorized a repurchase program of up to $3,000,000 of the Company's Common Stock. The Company may purchase Common Stock through open market and privately negotiated transactions at prices deemed appropriate by management. The timing, the amount of repurchase transactions and the prices paid for the stock under this program will depend on market conditions as well as corporate and regulatory limitations, including blackout period restrictions. The Board approved the repurchase plan in consideration of the Company's improved cash position and current market volatility. We plan to fund any repurchases under this program through our internal cash flow and/or borrowing under our line of credit. As of the date of this report, we have not repurchased any of our Common Stock under the program as we continue to evaluate this repurchase program within our internal cash flow and/or borrowings under our line of credit based on what is in our best interest and the best interest of our stockholders.

In summary, we continue to take steps to improve our operations and liquidity and to invest working capital into our facilities to fund capital additions in our Segments. We believe that our cash flow from operations and our available liquidity from the amended and restated line of credit are sufficient to service the Company's current obligations.

Contractual Obligations

The following table summarizes our contractual obligations at June 30, 2013, and the effect such obligations are expected to have on our liquidity and cash flow in future periods (in thousands):

		Payments due by period			
Contractual Obligations	Total	2013	2014-2015	2016 - 2017	After 2017
Long-term debt	$ 14,418	$ 1,368	$ 4,712	$ 8,338	$ —
Interest on fixed rate long-term debt [1]	10	6	4	—	—
Interest on variable rate debt [2]	1,364	269	849	246	—
Operating leases	3,267	439	1,538	1,116	174
Pension withdrawal liability [3]	170	120	50	—	—
Environmental contingencies [4]	1,568	192	993	153	230
Total contractual obligations	$ 20,797	$ 2,394	$ 8,146	$ 9,853	$ 404

[1] The Company entered into a promissory note dated September 28, 2010, in the principal amount of $1,322,000 at an annual interest rate of 6.0%, with the former shareholders of Nuvotec in connection with an earn-out amount that we are required to pay upon meeting certain conditions, as a result of our acquisition of PFNW and PFNWR. On February 12, 2013, the Company issued a two-year, non-negotiable, unsecured promissory note in the principal amount of approximately $230,000 in settlement in connection with certain claims that we asserted against TNC for breach of certain representations and covenant subsequent to our acquisition of SEC on October 31, 2011. The promissory note bears an annual interest rate of 6%, payable in 24 monthly installments of approximately $10,000 consisting of principal and interest, with first payment due February 28, 2013. See "Liquidity and Capital Resources – Financing Activities" for further information on these promissory notes.

[2] We have variable interest rates on our Term Loan and Revolving Credit of 2.5% and 2.0%, respectively, over the prime rate of interest, or variable interest rates on our Term Loan and Revolving Credit of 3.5% and 3.0%, respectively, over LIBOR. Our calculation of interest on our Term Loan and Revolving Credit was estimated using the more favorable LIBOR option of approximately 4.0% and 3.5% (assuming LIBOR of .5%), respectively, in years 2013 to October 31, 2016. See "Liquidity and Capital Resources – Financing Activities" for further information on the Amended and Restated Revolving Credit, Term Loan and Security Agreement entered into with PNC Bank on October 31, 2011.

(3) The pension withdrawal liability is the estimated liability to us upon termination of our union employees at our discontinued operation, PFMI and remains the financial obligations of the Company. See "Discontinued Operations and Divestitures" earlier in this section for discussion on our discontinued operations.

(4) The environmental contingencies and related assumptions are discussed further in the "Environmental Contingencies" section of this Management's Discussion and Analysis, and are based on estimated cash flow spending for these liabilities.

Critical Accounting Policies and Estimates

There were no significant changes in our accounting policies or critical accounting estimates that are discussed in our Annual Report on Form 10-K for the year ended December 31, 2012.

Known Trends and Uncertainties

The DOE and U.S. Department of Defense ("DOD") represent major customers for our Treatment Segment and Services Segment. For our Treatment Segment, federal clients have operated under reduced budgets due to Continuing Resolution ("CR") and sequestration which have negatively impacted the amount of waste shipped to our treatment facilities and remediation of contaminated federal sites. The uncertainty with the federal budget and the availability of funding will continue to impact both Segments until economic conditions and environmental clean-up budget improve. Historical seasonal variances in revenue whereby large shipments are received during the third quarter in conjunction with the federal government's September 30 fiscal year-end from this Segment cannot be assured due to these uncertainties.

Our Services Segment generally experiences a seasonal slowdown during the winter months due to transition from heavy construction activities to project planning, engineering, design, and responding to project solicitations. Our heavy construction projects are typically performed in the early Spring to late Fall months and winter weather conditions preclude productive work at project sites. Likewise, our technical services experience reduced activities and related billable hours throughout the November and December holiday period thus driving down revenues and utilization results. As with our Treatment Segment, revenue from this Segment is heavily dependent on federal government funding; therefore, we may see large fluctuations in each of our quarters in the near future.

Economic Conditions:

See " – Business Environment and Outlook" in this section ("Item 2 – Management's Discussion and Analysis of Financial Condition and Results of Operations") for a discussion of the potential impact the Company's business environment and its outlook could have on its results of operations and cash flow.

Legal Matters:

Perma-Fix of Northwest Richland, Inc. ("PFNWR")

PFNWR filed suit (PFNWR vs. Philotechnics, Ltd.) in the U.S. District Court, Eastern District of Tennessee, asserting contract breach and seeking specific performance of the "return-of-waste clause" in the brokerage contract between a prior facility owner (now owned by PFNWR) and Philotechnics, Ltd. ("Philo"), as to certain non-conforming waste Philo delivered for treatment from Philo's customer, El du Pont de Nemours and Company ("DuPont"), to the PFNWR facility, before PFNWR acquired the facility. Our complaint seeks an order that Philo: (A) specifically perform its obligations under the contract's "return-of-waste" clause by physically taking custody of and by removing the nonconforming waste, (B) pay PFNWR all additional costs of maintaining and managing the waste, and (C) pay PFNWR the cost to treat and dispose of the nonconforming waste so as to allow PFNWR to compliantly dispose of that waste offsite.

On March 7, 2013, PFNWR received a Notice of Intent to File Administrative Complaint from the U.S. Environmental Protection Agency ("EPA"), alleging PFNWR had improperly stored certain mixed waste. If a settlement is not reached between the Company and EPA in connection with these alleged violations within 120 days of initiating negotiations, the EPA has advised it will initiate an action for civil penalties for these alleged violations. The EPA could seek penalties up to $37,500 per day per violation. The EPA proposed a consent agreement and final order ("CAFO") and proposed a total penalty in the CAFO in the amount of $215,500 to resolve these alleged violations. We recorded approximately $188,000 in accrued penalty (of which $4,000 was recorded in the second quarter of 2013) based on our best estimate to resolve these alleged violations. On July 16, 2013, PFNWR entered into a CAFO with the EPA in final settlement of these alleged violations. PFNWR has agreed to pay a penalty of approximately $188,000 within thirty days of July 16, 2013 in settlement of these alleged violations.

Significant Customers. Our segments have significant relationships with the federal government, and continue to enter into contracts, directly as the prime contractor or indirectly as a subcontractor, with the federal government. 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) could have a material adverse effect on our operations and financial condition.

We performed services relating to waste generated by the federal government, either directly as a prime contractor or indirectly as a subcontractor (including the customers as discussed below) to the federal government, representing approximately $13,210,000 or 58.0% and $27,801,000 or 65.2% of our total revenue from continuing operations during the three and six months ended June 30, 2013, respectively, as compared to $28,244,000 or 83.8% and $60,058,000 or 83.8% of our total revenue from continuing operations during the corresponding period of 2012, respectively. As previously discussed, the reductions are due to a variety of negative conditions, most of which are beyond our control, including current economic conditions, sequestration, government deficits and reduced spending for waste treatment and remediation of contaminated sites by the federal government.

Revenues from CHPRC totaled $6,419,000 or 28.2% and $12,440,000 or 29.2% for the three and six months ended June 30, 2013, respectively, as compared to $6,323,000 or 18.8% and $12,633,000 or 17.6% for the corresponding period of 2012, respectively. Revenue generated from CHPRC includes revenue generated from the CHPRC subcontract (a cost plus award fee subcontract) at our Services Segment and three waste processing contracts at our Treatment Segment.

Insurance. We maintain insurance coverage similar to, or greater than, the coverage maintained by other companies of the same size and industry, which complies with the requirements under applicable environmental laws. We evaluate our insurance policies annually to determine adequacy, cost effectiveness, and desired deductible levels. Due to the continued uncertainty in the economy and changes within the environmental insurance market, we have no guarantees that if Chartis does not provide insurance coverage that we will be able to obtain similar insurance in future years, or that the cost of such insurance will not increase materially.

Climate Change. Climate change is receiving ever increasing attention from scientists and legislators alike. The debate is ongoing as to the extent to which our climate is changing, the potential causes of this change and its potential impacts. Some attribute global warming to increased levels of greenhouse gases, including carbon dioxide, which has led to significant legislative and regulatory efforts to limit greenhouse gas emissions.

Presently there are no federally mandated greenhouse gas reduction requirements in the United States. However, there are a number of legislative and regulatory proposals to address greenhouse gas emissions, which are in various phases of discussion or implementation. The outcome of federal and state actions to address global climate change could result in a variety of regulatory programs including potential new regulations. Any adoption by federal or state governments mandating a substantial reduction in greenhouse gas emissions could increase costs associated with our operations. Until the timing, scope and extent of any future regulation becomes known, we cannot predict the effect on our financial position, operating results and cash flows.

Recognition of Revenue from Contract Claims. The Company recognizes revenue, but not profit, for certain significant claims when it is determined that recovery of incurred costs is probable and the amount can be reliably estimated in accordance with ASC 605-35-25. The Company's revenue for quarter ended June 30, 2013, includes claim revenue related to this issue for costs incurred to date on a certain fixed price contract. The Company believes the ultimate recovery of incurred costs related to the claim is probable under ASC 605-35-25, and will continue periodically to evaluate its position and the amount recognized in revenue as to this claim. The project is substantially complete; resolution of the claim is projected to extend beyond the project completion date. The Company currently is conferring this claim revenue with the customer and will seek to recover, including litigation if necessary, all amounts owed as allowed under the contract or for other work performed. The customer can file a counterclaim against the Company seeking to recover costs associated with alleged defects. Relative success of the customer's counterclaim and the Company's claims for damages could result in a substantial change to earnings.

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. 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 facilities where the remediation expenditures will be made are the leased property in Dayton, Ohio (EPS), a former RCRA storage facility as operated by the former owners of PFD, PFM's facility in Memphis, Tennessee, PFSG's facility in Valdosta, Georgia, and PFMI's facility in Brownstown, Michigan. The environmental liability of PFD (as it relates to the remediation of the EPS site assumed by the Company as a result of the original acquisition of the PFD facility) was retained by the Company upon the sale of PFD in March 2008. All of the reserves are within our discontinued operations. While no assurances can be made that we will be able to do so, we expect to fund the expenses to remediate these sites from funds generated internally.

At June 30, 2013, we had total accrued environmental remediation liabilities of $1,568,000, of which $500,000 is recorded as a current liability, which reflects a decrease of $46,000 from the December 31, 2012, balance of $1,614,000. The net decrease represents payments on remediation projects. The June 30, 2013 current and long-term accrued environmental balance is recorded as follows (in thousands):

	Current Accrual	Long-term Accrual	Total
PFD	$ 14	$ 55	$ 69
PFM	15	30	45
PFSG	470	903	1,373
PFMI	1	80	81
Total Liability	$ 500	$ 1,068	$ 1,568

Item 3. Quantitative and Qualitative Disclosures about Market Risks

We are exposed to certain market risks arising from adverse changes in interest rates, primarily due to the potential effect of such changes on our variable rate loan arrangements with PNC. The interest rates payable to PNC are based on a spread over prime rate or a spread over LIBOR. As of June 30, 2013, we had approximately $14,052,000 in variable rate borrowings. Assuming a 1% change in the average interest rate as of June 30, 2013, our interest cost would change by approximately $140,520. As of June 30, 2013, we had no interest swap agreement outstanding.

We consider our direct exposure to foreign exchange rate fluctuation to be minimal. We have a small foreign operation, Perma-Fix UK Limited - a United Kingdom corporation, located in Blaydon On Tyne, England. As of June 30, 2013, Perma-Fix UK Limited's assets were $45,000 or .03% of our total consolidated assets and had generated revenues of approximately $72,000 in U.S. dollars for the six months ended June 30, 2013 (which represented 0.2% of our total revenue for continuing operations for the six months ended June 30, 2013); therefore, increases or decreases to the value of the U.S dollar relative to the British pound would not have a material impact to our financial results.

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 (the "Commission") is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the Securities and Exchange Commission and that such information is accumulated and communicated to our management. As of the end of the period covered by this report, we carried out an evaluation with the participation of our Principal Executive Officer and Principal Financial Officer. Based on this recent assessment, our Principal Executive Officer and Principal Financial Officer have concluded that our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934, as amended) were effective, as of June 30, 2013.

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

There was no change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) in the six months ended June 30, 2013 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 developments with regard to legal proceedings previously reported or additional material legal proceedings pending against us and/or our subsidiaries not previously reported by us in Item 3 of our Form 10-K for the year ended December 31, 2012, which is incorporated herein by reference, except the following:

On March 7, 2013, PFNWR received a Notice of Intent to File Administrative Complaint from the U.S. Environmental Protection Agency ("EPA"), alleging PFNWR had improperly stored certain mixed waste. If a settlement is not reached between the Company and EPA in connection with these alleged violations within 120 days of initiating negotiations, the EPA has advised it will initiate an action for civil penalties for these alleged violations. The EPA could seek penalties up to $37,500 per day per violation. The EPA proposed a consent agreement and final order ("CAFO") and proposed a total penalty in the CAFO in the amount of $215,500 to resolve these alleged violations. We recorded approximately $188,000 in accrued penalty (of which $4,000 was recorded in the second quarter of 2013) based on our best estimate to resolve these alleged violations. On July 16, 2013, PFNWR entered into a CAFO with the EPA in final settlement of these alleged violations. PFNWR has agreed to pay a penalty of approximately $188,000 within thirty days of July 16, 2013 in settlement of these alleged violations.

Item 1A. Risk Factors

Investors should carefully consider the updated risk factors below and the other risk factors in Part I, Item 1A of our 2012 Annual Report on Form 10-K, in addition to the other information in our Annual Report and our Quarterly Reports on Form 10-Q.

Our Common Stock may be delisted from the NASDAQ Stock Market LLC ("NASDAQ") if we do not satisfy continued listing requirements.

On December 4, 2012, we were notified by NASDAQ that, based upon the closing bid price of our Common Stock for the last 30 consecutive business days, our Common Stock did not meet the minimum bid price of $1.00 per share required for continued listing on NASDAQ pursuant to NASDAQ Marketplace Rule 5550(a)(2) (the "Minimum Bid Price Rule"). On June 4, 2013, we were notified by NASDAQ that the Company was granted an additional 180 calendar days, or until December 2, 2013, to regain compliance with the Minimum Bid Price Rule. We intend to seek shareholder approval at our next annual meeting of shareholders, schedule for September 12, 2013, to authorize the Board of Directors, without further action of the shareholders, to amend the Company's Restated Certificate of Incorporation, as amended, to effect a reverse stock split of the issued and outstanding shares of Common Stock of the Company at a ratio within the range of 1-for-2 to 1-for-7 at any time prior to November 8, 2013, with the exact ratio to be determined by the Board of Directors. However, we have no assurance that our shareholders will approve this proposal. If our shareholders do not approve this proposal resulting in our Board of Directors' inabilities to effect a reverse stock split, or, if approved, such does not result in our Common Stock meeting the Minimum Bid Price Rule pursuant to Rule 5550(a)(2), the NASDAQ could take action to delist our Common Stock. If our shareholders approve this proposal and our Board of Directors effectuate a reverse stock split within a ratio of 1-for-2 to 1-for-7 to cure the condition, the condition will be deemed cured if our closing share price promptly reaches $1.00 or above per share, and the price remains at $1.00 or above for at least 10 consecutive trading days prior to or ending December 2, 2013. However, we have no assurance that the reverse stock split, if effectuated, will cause our share price to improve as expected.

Item 6. Exhibits

(a) **Exhibits**

4.1	Third Amendment to Amended and Restated Revolving Credit, Term Loan and Security Agreement between PNC Bank, National Association and Perma-Fix Environmental Services, Inc., dated August 2, 2013. .
4.2	Third Amended, Restated and Substituted Revolving Credit Note between PNC Bank, National Association and Perma-Fix Environmental Services, Inc., dated August 2, 2013.
4.3	Subordination Agreement dated August 2, 2013 by and among William Lampson and Robert Ferguson and PNC Bank, National Association.
4.4	Loan and Securities Purchase Agreement, dated August 2, 2013 between William N. Lampson, Robert L. Ferguson, and Perma-Fix Environmental Services, Inc.
4.5	Promissory Note dated August 2, 2013 between William N. Lampson, Robert L. Ferguson, and Perma-Fix Environmental Services.
4.6	Common Stock Purchase Warrant dated August 2, 2013 for William N. Lampson.
4.7	Common Stock Purchase Warrant dated August 2, 2013 for Robert L. Ferguson.

10.1	Separation and Release Agreement dated May 14, 2013 by and between Christopher Leichtweis and Perma-Fix Environmental Services, Inc., incorporated by reference from Exhibit 99.1 to the Company's Form 8-K filed on May 17, 2013.
10.2	Consulting Services Agreement dated May 14, 2013 by and between Christopher Leichtweis and Perma-Fix Environmental Services, Inc., incorporated by reference from Exhibit 99.2 to the Company's Form 8-K Filed on May 17, 2013.
31.1	Certification by Dr. Louis F. Centofanti, Chief Executive Officer of the Company pursuant to Rule 13a-14(a) or 15d-14(a).
31.2	Certification by Ben Naccarato, Chief Financial Officer of the Company pursuant to Rule 13a-14(a) or 15d-14(a).
32.1	Certification by Dr. Louis F. Centofanti, Chief Executive Officer of the Company furnished pursuant to 18 U.S.C. Section 1350.
32.2	Certification by Ben Naccarato, Chief Financial Officer of the Company furnished pursuant to 18 U.S.C. Section 1350.
101.INS	XBRL Instance Document*
101.SCH	XBRL Taxonomy Extension Schema Document*
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document*
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document*
101.LAB	XBRL Taxonomy Extension Labels Linkbase Document*
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document*

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

SIGNATURES

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

PERMA-FIX ENVIRONMENTAL SERVICES

Date: August 8, 2013

By: /s/ Dr. Louis F. Centofanti
Dr. Louis F. Centofanti
Chairman of the Board
Chief Executive Officer

Date: August 8, 2013

By: /s/ Ben Naccarato
Ben Naccarato
Chief Financial Officer and Chief Accounting Officer

EXHIBIT 4.1

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

THIS THIRD AMENDMENT TO AMENDED AND RESTATED REVOLVING CREDIT, TERM LOAN AND SECURITY AGREEMENT, dated as of August 2, 2013 (this "Amendment"), relating to the Credit Agreement referenced below, is by and among PERMA-FIX ENVIRONMENTAL SERVICES, INC., a Delaware corporation (the "Borrower"), the lenders identified on the signature pages hereto (the "Lenders"), and PNC Bank, National Association, a national banking association, as agent for the Lenders (in such capacity, the "Agent"). Terms used herein but not otherwise defined herein shall have the meanings provided to such terms in the Credit Agreement.

W I T N E S S E T H

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

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

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

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

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

(a) New definitions of "Change in Law", "Covered Entity", "FATCA", "Law", "Reportable Compliance Event", "Sanctioned Country", "Sanctioned Person", "Subordinated Lender", "Subordinated Loan" and "Subordination Agreement" are added to Section 1.2 in correct alphabetical order to read as follows:

> " "Change in Law" shall mean the occurrence, after the Closing Date, of any of the following: (a) the adoption or taking effect of any Applicable Law; (b) any change in any Applicable Law or in the administration, implementation, interpretation or application thereof by any Governmental Body; or (c) the making or issuance of any request, rule, guideline or directive (whether or not having the force of law) by any Governmental Body; provided that notwithstanding anything herein to the contrary, (x) the Dodd-Frank Wall Street Reform and Consumer Protection Act and all requests, rules, regulations, guidelines, interpretations or directives thereunder or issued in connection therewith (whether or not having the force of Applicable Law) and (y) all requests, rules, regulations, guidelines, interpretations or directives promulgated by the Bank for International Settlements, the Basel Committee on Banking Supervision (or any successor or similar authority) or the United States or foreign regulatory authorities (whether or not having the force of law), in each case pursuant to Basel III, shall in each case be deemed to be a Change in Law regardless of the date enacted, adopted, issued, promulgated or implemented.

"Covered Entity" shall mean (a) Borrower, each of Borrower's Subsidiaries, all Guarantors and all pledgers of Collateral and (b) each Person that, directly or indirectly, is in control of a Person described in clause (a) above. For purposes of this definition, control of a Person shall mean the direct or indirect (x) ownership of, or power to vote, 25% or more of the issued and outstanding equity interests having ordinary voting power for the election of directors of such Person or other Persons performing similar functions for such Person, or (y) power to direct or cause the direction of the management and policies of such Person whether by ownership of equity interests, contract or otherwise.

"FATCA" shall mean Sections 1471 through 1474 of the Code, as of the date of this Agreement (or any amended or successor version that is substantively comparable and not materially more onerous to comply with) and any current or future regulations or official interpretations thereof.

"Law" shall mean any law(s) (including common law), constitution, statute, treaty, regulation, rule, ordinance, opinion, issued guidance, release, ruling, order, executive order, injunction, writ, decree, bond, judgment, authorization or approval, lien or award of or any settlement arrangement, by agreement, consent or otherwise, with any Governmental Body, foreign or domestic.

"Reportable Compliance Event" shall mean that any Covered Entity becomes a Sanctioned Person, or is charged by indictment, criminal complaint or similar charging instrument, arraigned, or custodially detained, in connection with any Anti-Terrorism Law or any predicate crime to any Anti-Terrorism Law, or has knowledge of facts or circumstances to the effect that it is reasonably likely that any aspect of its operations is in actual or probable violation of any Anti-Terrorism Law.

"Sanctioned Country" shall mean a country subject to a sanctions program maintained under any Anti-Terrorism Law.

"Sanctioned Person" shall mean any individual person, group, regime, entity or thing listed or otherwise recognized as a specially designated, prohibited, sanctioned or debarred person, group, regime, entity or thing, or subject to any limitations or prohibitions (including but not limited to the blocking of property or rejection of transactions), under any Anti-Terrorism Law.

"Subordinated Lender" shall mean, collectively, William N. Lampson and Robert Ferguson.

"Subordinated Loan" shall mean the loan and Indebtedness evidenced by the **[Promissory Note]** dated as of August 2, 2013 in the original principal amount of $3,000,000 between Borrower and Subordinated Lender.

"Subordination Agreement" shall mean the Subordination Agreement dated August 2, 2013 among Agent, Borrower and Subordinated Lender."

(b) The definitions of "Anti-Terrorism Laws", "Maximum Loan Amount", "Maximum Revolving Advance Amount" and "Other Documents" in Section 1.2 are amended to read as follows:

" "Anti-Terrorism Laws" shall mean any Laws relating to terrorism, trade sanctions programs and embargoes, import/export licensing, money laundering or bribery, and any regulation, order, or directive promulgated, issued or enforced pursuant to such Laws, all as amended, supplemented or replaced from time to time.

"Maximum Loan Amount" shall mean $30,000,000.01 less repayments of the Term Loan.

"Maximum Revolving Advance Amount" shall mean $18,000,000.

"Other Documents" shall mean the Mortgage, the Note, the Questionnaire, the Pledge Agreement, the Secured Subsidiaries Guaranty, any Lender-Provided Interest Rate Hedge, any Letter of Credit Document, the Subordination Agreement and any and all other agreements, instruments and documents, including guaranties, pledges, powers of attorney, consents, interest or currency swap agreements or other similar agreements and all other writings heretofore, now or hereafter executed by any Credit Party and/or delivered to Agent or any Lender in respect of the transactions contemplated by this Agreement."

(c) The definitions of "Equipment Loans", "Equipment Note" and "Maximum Equipment Loan Amount" set forth in Section 1.2 are deleted in their entirety and all provisions relating to the Equipment Loan, including, without limitation, Section 2.4(b) are deleted in their entirety.

(d) Section 2.2(g) is amended by adding the phrase "including without limitation any Change in Law," after the word "thereof" and the comma in the second line of the subparagraph.

(e) Section 3.7(a) is amended by replacing the phrase ", or any change therein or in the interpretation or application thereof," after the words "Applicable Law" in the first line of the subparagraph with the phrase "or any Change in Law".

(f) Section 3.9(a) is amended by replacing the phrase "or any change therein" in the second line of the subparagraph with the phrase "or any Change in Law".

(g) A new Section 3.11(d) is added to read as follows:

"(d) If a payment made to a Lender, Issuer, Participant or Agent under any Document would be subject to U.S. Federal withholding Tax imposed by FATCA if such Person fails to comply with the applicable reporting requirements of FATCA (including those contained in Section 1471(b) or 1472(b) of the Code, as applicable), such Lender, Issuer, Participant or Agent shall deliver to Agent (in the case of a Lender or Issuer) and Borrowers (A) a certification signed by the chief financial officer, principal accounting officer, treasurer or controller of such Person, and (B) other documentation reasonably requested by Agent or Borrowers sufficient for Agent and Borrowers to comply with their obligations under FATCA and to determine that such Lender, Participant, Issuer, or Agent has complied with such applicable reporting requirements."

(h) Section 5.24 is amended to read as follows:

"5.24 Anti-Terrorism Laws.

(a) Borrower represents and warrants that (i) no Covered Entity is a Sanctioned Person and (ii) no Covered Entity, either in its own right or through any third party, (A) has any of its assets in a Sanctioned Country or in the possession, custody or control of a Sanctioned Person in violation of any Anti-Terrorism Law; (B) does business in or with, or derives any of its income from investments in or transactions with, any Sanctioned Country or Sanctioned Person in violation of any Anti-Terrorism Law; or (C) engages in any dealings or transactions prohibited by any Anti-Terrorism Law.

(b) Borrower covenants and agrees that (i) no Covered Entity will become a Sanctioned Person, (ii) no Covered Entity, either in its own right or through any third party, will (A) have any of its assets in a Sanctioned Country or in the possession, custody or control of a Sanctioned Person in violation of any Anti-Terrorism Law; (B) do business in or with, or derive any of its income from investments in or transactions with, any Sanctioned County or Sanctioned Person in violation of any Anti-Terrorism Law; (C) engaged in any dealings or transactions prohibited by any Anti-Terrorism Law or (D) use the Advances to fund any operations in, finance any investments or activities in, or, make any payments to, a Sanctioned Country or Sanctioned Person in violation of any Anti-Terrorism Law, (iii) the funds used to repay the Obligations will not be derived from any unlawful activity, (iv) each Covered Entity shall comply with all Anti-Terrorism Laws and (v) Borrower shall promptly notify Agent in writing upon the occurrence of a Reportable Compliance Event."

(i) Section 5.25 is deleted in its entirety.

(j) Section 7.8 is amended by (i) deleting the semicolon and the word "and" in subsection (h); (ii) replacing the period in subsection (i) with a semicolon; and (iii) adding a new subsection (j) to read as follows:

"(j) Indebtedness due under the Subordinated Loan Documentation; and any refinancings of such Indebtedness, provided that in connection with such refinancing: (i) the aggregate principal amount of such Indebtedness is not increased, (ii) the scheduled maturity date of such Indebtedness is not shortened, (iii) the covenants or defaults are not materially more restrictive or more onerous than analogous provisions in the Subordinated Loan Documentation as in effect on the date hereof, and (iv) an intercreditor agreement in form and substance satisfactory to Agent and the Required Lenders shall have been executed and delivered to Agent prior to the consummation of such refinancing (it being agreed that an intercreditor agreement containing terms substantially similar to the terms set forth in the Subordination Agreement will be satisfactory);".

(k) Section 7.17 is amended to read as follows:

"7.17. Prepayment of Indebtedness.

At any time, prepay, repurchase, redeem, retire or otherwise acquire, or make any payment on account of any principal of, interest on or premium payable in connection with the prepayment or redemption of any Indebtedness for borrowed money (other than Indebtedness owed to the Lender under this Agreement or the Other Documents), except any such prepayment, repurchase, redemption, retirement or acquisition (i) expressly permitted in the Subordination Agreement or (ii) in connection with the refinancing of Indebtedness in compliance with Section 7.8(j)."

(l) Article X is amended by (i) replacing the period at the end of Section 10.17 with a semicolon and the word "or" and (ii) adding a new Section 10.18 to read as follows:

"10.18 Subordinated Loan Default.

An event of default has occurred under the Subordinated Loan Documents, which default shall not have been cured or waived within any applicable grace period or if any Person party to a Subordination Agreement breaches or violates, or attempts to terminate or challenge the validity of, such agreement."

(m) Section 15.17 is amended to read as follows:

"15.17 Certifications From Banks and Participants; USA PATRIOT Act.

(a) Each Lender or assignee or participant of a Lender that is not incorporated under the Laws of the United States of America or a state thereof (and is not excepted from the certification requirement contained in Section 313 of the USA PATRIOT Act and the applicable regulations because it is both (i) an affiliate of a depository institution or foreign bank that maintains a physical presence in the United States or foreign country, and (ii) subject to supervision by a banking authority regulating such affiliated depository institution or foreign bank) shall deliver to Agent the certification, or, if applicable, recertification, certifying that such Lender is not a "shell" and certifying to other matters as required by Section 313 of the USA PATRIOT Act and the applicable regulations: (1) within ten (10) days after the Closing Date, and (2) as such other times as are required under the USA PATRIOT Act.

(b) The USA PATRIOT Act requires all financial institutions to obtain, verify and record certain information that identifies individuals or business entities which open an "account" with such financial institution. Consequently, Lender may from time to time request, and Borrower shall provide to Lender, Borrower's name, address, tax identification number and/or such other identifying information as shall be necessary for Lender to comply with the USA PATRIOT Act and any other Anti-Terrorism Law."

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

(a) the execution of this Amendment by the Borrower, the Required Lenders and the Agent;

(b) the execution by the Borrower of the Third Amended, Restated and Substituted Revolving Credit Note; and

(c) the execution by the Subordinated Lender, the Agent and the Borrower of the Subordination Agreement.

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

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

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

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

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

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

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

BORROWER:

PERMA-FIX ENVIRONMENTAL SERVICES, INC.

By: /s/Ben Naccarato
Name: Ben Naccarato
Title: CFO

AGENT AND LENDER:

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

By: /s/Alex M. Council IV
Name: Alex M. Council IV
Title: Vice President

EXHIBIT 4.2

THIRD AMENDED, RESTATED AND SUBSTITUTED
REVOLVING CREDIT NOTE

$18,000,000 August 2, 2013

This Third Amended, Restated and Substituted Revolving Credit Note is executed and delivered under and pursuant to the terms of that certain Amended and Restated Revolving Credit, Term Loan and Security Agreement dated as of October 31, 2011 (as amended, restated, supplemented or modified from time to time, the "Credit Agreement") by and among the undersigned, as Borrower, the various financial institutions named therein or which hereafter become a party thereto (each individually a "Lender" and collectively, "Lenders") and PNC BANK, NATIONAL ASSOCIATION (in its individual capacity, "PNC"), as agent for Lenders (in such capacity, "Agent"). Capitalized terms not otherwise defined herein shall have the meanings provided in the Credit Agreement.

FOR VALUE RECEIVED, the Borrower hereby promises, to pay to the order of PNC BANK, NATIONAL ASSOCIATION ("Payee"), at the office of Agent located at PNC Bank Center, Two Tower Center, 8th Floor, East Brunswick, New Jersey 08816 or at such other place as Agent may from time to time designate to Borrower in writing:

(i) the principal sum of EIGHTEEN MILLION DOLLARS ($18,000,000) or, if different, from such amount, the unpaid principal balance of Payee's Commitment Percentage of the Revolving Advances as may be due and owing under the Credit Agreement, payable in accordance with the provisions of the Credit Agreement, subject to acceleration upon the occurrence of an Event of Default under the Credit Agreement or earlier termination of the Credit Agreement pursuant to the terms thereof; and

(ii) interest on the principal amount of the Revolving Advances under this Revolving Credit Note from time to time outstanding until such principal amount is paid in full at the applicable Revolving Rate in accordance with the provisions of the Credit Agreement. In no event, however, shall interest exceed the amount collectible at the maximum interest rate permitted by law. Upon and after the occurrence of an Event of Default, and during the continuation thereof, interest shall be payable at the Default Rate.

This Revolving Credit Note is one of the Revolving Credit Notes referred to in the Credit Agreement and is secured by the liens granted pursuant to the Credit Agreement and the Other Documents, is entitled to the benefits of the Credit Agreement and the Other Documents and is subject to all of the agreements, terms and conditions therein contained.

This Revolving Credit Note is subject to mandatory prepayment and may be voluntarily prepaid, in whole or in part, on the terms and conditions set forth in the Credit Agreement.

If an Event of Default under Section 10.7 of the Credit Agreement shall occur, then this Revolving Credit Note shall immediately become due and payable, without notice, together with reasonable attorneys' fees if the collection hereof is placed in the hands of an attorney to obtain or enforce payment hereof. If any other Event of Default shall occur under the Credit Agreement or any of the Other Documents, and the same is not cured within any applicable grace or cure period, then this Revolving Credit Note may, as provided in the Credit Agreement, be declared to be immediately due and payable, without notice, together with reasonable attorneys' fees, if the collection hereof is placed in the hands of an attorney to obtain or enforce payment hereof.

This Revolving Credit Note shall be construed and enforced in accordance with the laws of the State of New York.

The Borrower expressly waives any presentment, demand, protest, notice of protest, or notice of any kind except as expressly provided in the Credit Agreement.

This Revolving Credit Note is an amendment to, and is in substitution and replacement of, that certain Second Amended, Restated and Substituted Revolving Credit Note dated as of October 31, 2011 in the amount of $25,000,000 (the "Replaced Note"). This Revolving Credit Note represents the same indebtedness as the Replaced Note and is secured by the same collateral securing the Replaced Note and is not intended to constitute a novation in any manner whatsoever.

PERMA-FIX ENVIRONMENTAL SERVICES,
INC., a Delaware corporation

By: /s/Ben Naccarato
Name: Ben Naccarato
Title: CFO

EXHIBIT 4.3

SUBORDINATION AGREEMENT

THIS SUBORDINATION AGREEMENT, dated as of August 2nd, 2013 (the "Agreement"), is by and among WILLIAM N. LAMPSON, a resident of the State of Washington, and ROBERT FERGUSON, a resident of the State of Washington (collectively, the "Subordinated Creditor"); and PNC BANK, NATIONAL ASSOCIATION, a national banking association, as agent for the Lenders (defined below) (in such capacity, the "Agent").

RECITALS:

A. The Lenders have agreed to make loans to Perma-Fix Environmental Services, Inc., a Delaware corporation (the "Borrower"), of up to $43,500,000 pursuant to the terms of an Amended and Restated Revolving Credit, Term Loan and Security Agreement dated as of October 31, 2011 among the Borrower, the various financial parties thereto (the "Lenders") and the Agent (hereinafter such Amended and Restated Revolving Credit, Term Loan and Security Agreement as amended from time to time shall be referred to as the "Loan Agreement"), and promissory notes in the aggregate principal amount of $43,500,000 dated as of October 31, 2011 executed by the Borrower in favor of the Agent (as such notes may be amended, modified or replaced from time to time, the "Senior Notes").

B. The Borrower owes the Subordinated Creditor $3,000,000 or such lesser amount as evidenced by that certain Promissory Note dated as of August 2, 2013 by and among the Subordinated Creditor and the Borrower (the "Subordinated Indebtedness").

C. In order to induce the Lenders and the Agent to make the above-referenced loans and extensions of credit to the Borrower, and because of the direct benefit to the Subordinated Creditor of such loan to the Borrower, the Subordinated Creditor has agreed to enter into this Subordination Agreement.

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

ARTICLE I

Definitions

1.1 Certain Defined Terms. For the purposes hereof:

(a) "Senior Obligations" means (i) the principal amount of, and accrued interest (including, without limitation, any interest which accrues after the commencement of any case, proceeding or other action relating to the bankruptcy, insolvency or reorganization of the Borrower) on, the Senior Notes and on any loans or extensions of credit made by the Lenders or the Agent to the Borrower under the Loan Agreement, and (ii) all other indebtedness, obligations and liabilities of the Borrower to the Lenders or the Agent now existing or hereafter incurred or created under or with respect to the Loan Agreement or pursuant to any Other Documents.

(b) "Subordinated Obligations" means (i) the principal amount of, and accrued interest (including, without limitation, any interest which accrues after the commencement of any case, proceeding or other action relating to the bankruptcy, insolvency or reorganization of the Borrower) on, the Subordinated Indebtedness, and (ii) any and all guarantees of any of the foregoing.

1.2 Other Definitional Provisions. All capitalized terms not otherwise defined herein shall have the meanings set forth in the Loan Agreement.

ARTICLE II

Terms of Subordination

2.1 Subordination. (a) The Subordinated Creditor agrees that the Subordinated Obligations are expressly subordinate and junior in right of payment (as defined in subsection 2.1(b)) to all Senior Obligations.

(b) "Subordinated and junior in right of payment" shall mean that:

(i) Upon and after the occurrence and during the continuance of any Event of Default under the Loan Agreement and provided no acceleration of the Senior Obligations has occurred, the Subordinated Creditor will not, without the express prior written consent of the Agent, take, demand or receive, and the Borrower will not make, give or permit, directly or indirectly, by setoff, redemption, purchase or in any other manner, any payment of principal or interest on the whole or any part of the Subordinated Obligations and, without the express prior written consent of the Agent, the Subordinated Creditor will not accelerate the scheduled maturities of any amounts owing under the Subordinated Indebtedness. Provided that no Event of Default has occurred and is continuing under the Loan Agreement and provided no acceleration of the Senior Obligations has occurred, and subject to the foregoing sentence, the Borrower may make and the Subordinated Creditor may receive regularly scheduled payments, when due, on the Subordinated Indebtedness.

(ii) Until the date the Senior Obligations shall have been paid in full and satisfied, the Subordinated Creditor shall not accelerate, declare to be immediately due and payable, enforce or take any action to enforce or collect, the Subordinated Obligations or any portion thereof or any security therefore without the prior written consent of the Agent. For the avoidance of doubt, nothing contained in this Section 2.1(b)(ii) shall prevent the Subordinated Creditor from (a) delivering a default notice to the Borrower (provided that such notice does not accelerate the maturity of the Subordinated Obligations), (b) filing or voting a claim in any insolvency or bankruptcy proceeding involving the Borrower or its assets or (c) instituting or charging the default rate of interest on the Subordinated Indebtedness following the occurrence and during the continuance of an event of default thereunder.

(iii) Upon and after the occurrence and during the continuance of any Event of Default under the Loan Agreement and provided no acceleration of the Senior Obligations has occurred, no payment or distribution of any kind or character, whether in cash, property or securities (including without limitation, proceeds of collateral for the Subordinated Obligations), which, but for the subordination provisions contained herein, would otherwise be payable or deliverable to the Subordinated Creditor upon or in respect of the Subordinated Obligations shall be paid to the Subordinated Creditor, and the Subordinated Creditor shall not receive or accept any payment or distribution or any benefit therefrom unless and until the date the Senior Obligations shall have been fully paid and satisfied.

(iv) Without limiting the generality of the foregoing provisions of this Section 2.1, in the event of any liquidation, termination, revocation or other winding-up of the Borrower, or in the event of any receivership, insolvency, reorganization or bankruptcy proceedings, assignment for the benefit of creditors or any proceeding by or against the Borrower for any relief under any bankruptcy, reorganization or insolvency law or laws, federal or state, or any law, federal or state, relating to the relief of debtors, readjustment of indebtedness, reorganization, composition or extension of indebtedness, then, and in any such event, all Senior Obligations shall first be paid in full, before any payment or distribution is made in respect of the Subordinated Obligations, and any payment or distribution of any kind or character, whether in cash, property or securities (including without limitation, proceeds of collateral for the Subordinated Obligations), which, but for the subordination provisions contained herein, would otherwise be payable or deliverable to the Subordinated Creditor upon or in respect of the Subordinated Obligations, shall instead be paid over or delivered to the Senior Creditor or its representatives, and the Subordinated Creditor shall not receive any such payment or distribution or any benefit therefrom unless and until the Senior Obligations shall have been fully paid and satisfied. Notwithstanding the foregoing, the Subordinated Creditor shall be entitled to keep and retain any substitute or replacement debt or equity securities issued to it pursuant to any confirmed plan of reorganization involving the Borrower.

2.2 Payments Received by Subordinated Creditor. Should any payment or distribution or security, or the proceeds of any thereof, be collected or received by the Subordinated Creditor in respect of the Subordinated Obligations, and such collection or receipt is not expressly permitted hereunder, the Subordinated Creditor will forthwith turn over the same to the Agent in the form received (except for endorsement or assignment by the Subordinated Creditor when necessary) and, until so turned over, the same shall be held in trust by the Subordinated Creditor as the property of the Agent.

2.3 Subrogation. The Subordinated Creditor shall not be subrogated to the rights of the Agent to receive payments or distributions of assets of the Borrower on the Senior Obligations.

ARTICLE III

Modification of Senior Obligations; Reliance

3.1 The Subordinated Creditor consents that, without the necessity of any reservation of rights against the Subordinated Creditor, and without notice to or further assent by the Subordinated Creditor, (a) any demand for payment of any Senior Obligations may be continued, and the Senior Obligations or the liability of the Borrower or any other party upon or for any part thereof, or any collateral security or guaranty therefor, or right of offset with respect thereto, may, from time to time, in whole or in part, be renewed, extended, modified, accelerated, compromised, waived, surrendered, or released and (b) the Senior Notes, the Loan Agreement and any document or instrument evidencing or governing the terms of any other Senior Obligations or any collateral security documents or guaranties or documents in connection with the Senior Notes, the Loan Agreement or the Senior Obligations may be amended, modified, supplemented or terminated, in whole or in part, as the Agent may deem advisable from time to time, and any collateral security at any time held by the Agent for the payment of any of the Senior Obligations may be sold, exchanged, waived, surrendered or released, in each case all without notice to or further assent by the Subordinated Creditor, which will remain bound under this Agreement, and all without impairing, abridging, releasing or affecting the subordination provided for herein, notwithstanding any such renewal, extension, modification, acceleration, compromise, amendment, supplement, termination, sale, exchange, waiver, surrender or release. The Subordinated Creditor waives any and all notice of the creation, modification, renewal, extension or accrual of any of the Senior Obligations and notice of or proof of reliance by the Agent upon this Agreement, and the Senior Obligations, and any of them, shall conclusively be deemed to have been created, contracted or incurred in reliance upon this Agreement, and all dealings between the Borrower and the Agent, shall be deemed to have been consummated in reliance upon this Agreement. The Subordinated Creditor acknowledges and agrees that the Agent has relied upon the subordination provided for herein in entering into this Agreement. The Subordinated Creditor waives notice of or proof of reliance on this Agreement and protest, demand for payment and notice of default.

ARTICLE IV

Modification of Subordinated Indebtedness

4.1 Until the Senior Obligations have been paid in full and satisfied, the Subordinated Creditor will not, without the prior written consent of the Agent in each instance, (i) amend, modify, waive or supplement the terms of payment with respect to principal or interest on the Subordinated Indebtedness, (ii) release, compromise, adjust or settle any of the Subordinated Obligations, or (iii) accept any security interest, lien or mortgage on any assets or property of the Borrower or any subsidiary or affiliate thereof, or of any officer or shareholder of such entity, as security for the Subordinated Obligations.

ARTICLE V

Transfer of Subordinated Indebtedness

5.1 Until the Senior Obligations have been paid in full and satisfied, the Subordinated Creditor will not (a) sell, assign or otherwise transfer, in whole or in part, the Subordinated Indebtedness held by such Subordinated Creditor or any interest therein to any other person or entity (a "Transferee") unless the Transferee agrees to be bound by the terms of this Agreement or (b) create, incur or suffer to exist any security interest, lien, charge or other encumbrance whatsoever upon the Subordinated Indebtedness in favor of any Transferee.

ARTICLE VI

Miscellaneous

6.1 No Waiver; Cumulative Remedies. No failure to exercise, and no delay in exercising on the part of the Agent, from time to time, any rights, power and privileges under the Senior Obligations, or any right, power or privilege under this Agreement shall operate as a waiver thereof; nor shall any single or partial exercise of any right, power or privilege under this Agreement preclude any other or further exercise thereof or the exercise of any other right, power or privilege. The rights and remedies provided in this Agreement and in any agreement relating to any of the Senior Obligations and all other agreements, instruments and documents referred to in any of the foregoing are cumulative and shall not be exclusive of any rights or remedies provided by law.

6.2 Further Assurances. The Subordinated Creditor agrees to execute and deliver such further documents and to do such other acts and things as the Agent may reasonably request in order fully to effect the purposes of this Agreement.

6.3 Governing Law; Successors and Assigns. This Agreement and the rights and obligations of the parties under this Agreement shall be governed by, and construed and interpreted in accordance with, the laws of the State of New York applicable to contracts made and to be performed in such state, shall be binding upon and inure to the benefit of the Agent, the Subordinated Creditor, and their respective successors, transferees and assigns.

6.4 Counterparts. This Agreement may be executed by the parties hereto in any number of separate counterparts all of which taken together shall constitute one and the same instrument.

6.5 Waivers, Amendments, Etc. The subordination provisions contained herein are for the benefit of the Agent, the Lenders and their successors and assigns as holder from time to time of Senior Obligations and may not be rescinded or cancelled or modified in any way, nor, unless otherwise expressly provided for herein, may any provision of this Agreement be waived or changed without the express prior written consent thereto of the Required Lenders.

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

/s/William N. Lampson
William N. Lampson

Address: 8308 Sunset Lane
Pasco, Washington 99301

/s/Robert Ferguson
Robert Ferguson

Address: 393 Columbia Pt. Drive
Richland, Washington 99352

The undersigned agrees to comply with the provisions of this Subordination Agreement applicable to it and to make payment to the Subordinated Creditor only in strict accordance with the terms hereof.

PERMA-FIX ENVIRONMENTAL SERVICES, INC.

By: /s/Ben Naccarato
Name: Ben Naccarato
Title: CFO

Address: 8302 Dunwoody Place #250
Atlanta, Georgia 30350
Attn: Ben Naccarato

Accepted and agreed to:

PNC BANK, NATIONAL ASSOCIATION, as Agent

By: /s/Alex M. Council IV
Name: Alex M. Council IV
Title: Vice President

Address: One Piedmont Town Center
4720 Piedmont Row Drive
Suite 300
Charlotte, North Carolina 28210
Attn: Alex Council

EXHIBIT 4.4

LOAN AND SECURITIES PURCHASE AGREEMENT

THIS LOAN AND SECURITIES PURCHASE AGREEMENT (this "Loan Agreement") is entered into on this 2nd day of August, 2013, between PERMA-FIX ENVIRONMENTAL SERVICES, INC., a Delaware corporation ("PESI"), having a notice address of 8302 Dunwoody Place #250, Atlanta, Georgia 30350, and WILLIAM N. LAMPSON, an individual ("Lampson"), residing at 8308 Sunset Lane, Pasco, Washington; and Robert Ferguson, an individual ("Ferguson"), residing at 393 Columbia Pt. Drive, Richland WA, 99352(Lampson and Ferguson are individually called "Lender" and collectively called the "Lenders").

W I T N E S S E T H

WHEREAS, the Lenders desire to lend to PESI, and PESI desires to borrow from the Lender, the sum of $3,000,000 pursuant to the terms and conditions set forth in this Loan Agreement, and, in consideration thereof, the Lenders desire to acquire and PESI agrees to issue to the Lenders certain shares of PESI common stock and warrants to acquire PESI common stock, par value $.001 per share, on the terms and conditions set forth herein;

WHEREAS, Lampson and Ferguson were principal shareholders and directors of Nuvotec USA. Inc., n/k/a Perma-Fix Northwest, Inc. ("Nuvotec") at the time of PESI's acquisition of Nuvotec in June 2007, and as shareholders of Nuvotec and being accredited investors, as defined in Rule 501 promulgated under the Securities Act of 1933, as amended (the "Act"): (a) received their proportionate share of cash and PESI common stock in such acquisition, (b) are currently entitled to receive certain outstanding consideration under the terms of the acquisition, and

WHEREAS, each of the Lenders has been previously furnished copies of the PESI's SEC filings (as defined below).

NOW THEREFORE, in consideration of the mutual covenants and agreements hereinafter set forth and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged the parties agree as follows.

1. Lending Agreement. Subject to the terms and conditions hereinafter set forth, the Lenders, jointly and severally, agree to lend to PESI, and PESI agrees to borrow from the Lenders, a sum of THREE MILLION DOLLARS ($3,000,000.00) (the "Loan"), as evidenced by the Note (as defined below).

2. Promissory Note. The Loan shall be evidenced by a Promissory Note of even date herewith in the principal amount of THREE MILLION DOLLARS ($3,000,000.00), in substantially the form and substance as set forth in Exhibit "A" to this Loan Agreement (the "Note"). The Note will bear interest on the unpaid principal thereof at a fixed rate of 2.99% per annum. Commencing on September 1, 2013, and on the 1st day of each month thereafter for a period of twelve months, PESI shall pay to the Lenders payments of interest accrued on the outstanding principal balance of the Note. Beginning the thirteenth month PESI shall pay to the Lenders equal successive payments of principal in the amount of $125,000 plus interest accrued on the outstanding principal balance of the Note. The entire unpaid principal balance of the Note and all accrued interest thereon is due and payable on August 2, 2016 (the "Maturity Date").

Purpose. The funds advanced under the Note will be used by the PESI, in connection with working capital purposes in the ordinary course of PESI' business.

2.1 Prepayment. PESI may prepay the Note at any time, without premium or penalty. Prepayments will not reduce the amount of the regular annual payment of principal due under the Note.

3. Recourse. The Note will be full recourse to PESI, but the payment of the Note and the obligations of PESI in this Loan Agreement will otherwise be unsecured. Obligations represented by this Loan Agreement and the Note shall be a second position loan after PNC Bank, n.a.

4. Issuance of Shares and Warrants. In consideration of the Loan and in reliance on the representations, warranties, and covenants of the Lenders set forth in this Loan Agreement, within five days following the Closing Date (as defined below), PESI will issue to Lampson and Ferguson (a) an aggregate of 450,000 shares (the "Shares") of the common stock, par value $.001 per share, of PESI, with Lampson receiving 225,000 shares and Ferguson receiving 225,000 shares; and (b) warrants to purchase up to 350,000 shares of PESI common stock (the "Warrant Shares") at the exercise price of "market" price on the day of close (currently $0.50 per share), with Lampson receiving a warrant to purchase up to 175,000 shares and Ferguson receiving a warrant to purchase up to 175,000 shares (the "Warrants"). The Warrants may be exercised during the period beginning six months from the date of issuance and ending three years from the date of issuance. The Warrants will be substantially in the form attached as Exhibits "B" and "C" to this Loan Agreement.

5. Closing Date; Conditions Precedent. The Lenders shall, jointly and severally, fund the full amount of the Note as soon as all of the conditions precedent set forth at paragraph 5.1 through 5.3 hereof have been satisfied (the "Closing Date"):

5.1 Authority. This Loan Agreement, the Note, and issuance of the Shares, the Warrants, and the Warrant Shares shall have been duly reviewed and approved by the Audit Committee of the Board of Directors and authorized by the entire Board of Directors of PESI;

5.2 PNC Approval. PESI's lender, PNC Bank, n.a., shall have provided the necessary written approvals to allow the Loan on terms satisfactory to PESI.

6. Representations and Warranties of PESI. PESI represents and warrants to the Lenders that:

6.1 Reporting Company. PESI is subject to the reporting requirements of Section 13 or Section 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Since January 1, 2013, PESI has filed with the SEC all reports required to be filed under the Exchange Act and PESI is and, as of the time Closing Date will be, current in its reporting obligations under the Exchange Act.

6.2 Material Changes. To PESI's knowledge, no material event has occurred or exists with respect to PESI that is required to be disclosed under the securities laws and that has not been disclosed by PESI under applicable securities laws or which has not been publicly announced as of the date hereof or disclosed to the Lenders and which has or would have a Material Adverse Effect (as defined in paragraph 11.4) on PESI and its subsidiaries, taken as a whole.

6.3 Power and Authority. PESI has the necessary corporate authority and right to enter into and carry out the provisions of this Loan Agreement and other documents contemplated herein and to consummate the transactions contemplated hereby.

6.4 Litigation. There is no action, suit, proceeding or investigation pending, threatened against on PESI, which, if adversely determined, would have a Material Adverse Effect on PESI and its subsidiaries, taken as a whole.

6.5 No Default. The making and performance by PESI of this Loan Agreement or the documents to be executed in connection herewith will not violate any provision or constitute a default under any indenture, agreement or instrument to which PESI is bound or affected, the effect of which would result in a Material Adverse Effect on PESI and its subsidiaries, taken as a whole, except as disclosed in PESI's SEC Filings or disclosed in Schedule 6.5 hereof.

6.6 Enforceability. Each of the this Loan Agreement, the Note, and the Warrants constitute the valid and legally binding obligations of PESI enforceable against PESI in accordance with their respective terms, except as may be limited by bankruptcy, insolvency, reorganization or other similar laws affecting the enforcement of creditor's rights generally and by general principals of equity.

7. Investor Representations and Warranties. Each of the Lenders hereby acknowledges, represents, warrants, and covenants, jointly and severally, to PESI as follows:

7.1 Investment Intent. Each Lender is acquiring the Shares and Warrants for his own account as principal, not as a nominee or agent, for investment purposes only, and not with a view to, or for, resale, distribution or fractionalization thereof in whole or in part and no other person has a direct or indirect beneficial interest in such Shares and Warrants. The Lenders do not have any contract, undertaking, agreement or arrangement with any person to sell, transfer or grant participation to such person or to any third person, with respect to any of the Shares and Warrants for which the Lenders is subscribing;

7.2 Authority. Each Lender has full power and authority to enter into this Loan Agreement, and this Loan Agreement constitutes a valid and legally binding obligation of the Lenders;

7.3 SEC Filings. PESI has previously furnished each of the Lenders copies of the following documents which have been filed by PESI with the SEC pursuant to Sections 13(a), 14(a), (b) or (c) or 15(d) of the Exchange Act (such documents are hereinafter collectively called the "SEC Filings"):

Annual Report on Form 10-K for the year ended December 31, 2012 (the "Form 10-K"), which report includes, among other things, consolidated Balance Sheets as at December 31, 2011 and December 31, 2010, and Consolidated Statements of Operations, Consolidated Statements of Shareholders' Equity and Consolidated Statements of Changes in Financial Position of PESI for the three year periods ended December 31, 2012, December 31, 2011 and December 31, 2010, examined and reported on by BDO Seidman, LLP, independent certified public accountants; and

(b) Current Reports on Form 8-K filed with the Securities and Exchange Commission on February 15, 2013, March 22, 2013, May 10, 2013, May 17, 2013, June 7, 2013, June 12, 2013, and June 24, 2013.

7.4 Investment Representations. Each of the Lenders acknowledges and agrees that the Shares and Warrants acquired under this Loan Agreement and the Warrant Shares issuable under the Warrants are not being registered under any state securities laws on the ground that the issuance thereof is exempt from registration, and are not being registered under the Act on the ground that the issuance thereof is exempt from registration under Rule 506 of Regulation D and/or 4(2) of the Act and that reliance by PESI on such exemptions is predicated in part on each Lenders' representations and warranties set forth in this Loan Agreement. In furtherance thereof, the Lenders represent and warrant to and agrees with PESI and its affiliates as follows:

(a) The Lenders realize that the basis for the exemption may not be present if, notwithstanding such representations, the Lenders have in mind merely acquiring the Shares, Warrants or Warrant Shares for a fixed or determinable period in the future, or for a market rise, or for sale if the market does not rise. The Lenders do not have any such intention;

(b) The Lenders have the financial ability to bear the economic risk of his investment, has adequate means for providing for current needs and personal contingencies and has no need for liquidity with respect to an investment in PESI;

(c) The Lenders have such knowledge and experience in financial and business matters as to be capable of evaluating the merits and risks of the prospective investment in the Shares, Warrants and the Warrant Shares; and

(d) Each Lender is an accredited investor as defined in Rule 501 of the Act, for the following reasons, which are not intended to be exclusive. Both Lampson and Ferguson have net worths in excess of $1,000,000 and net incomes in excess of $200,000 in each of the most recent years and has reasonable expectation of reaching the same income level in the current year.

7.5 Due Diligence. The Lenders:

(a) have been furnished for a reasonable period of time prior to the date hereof with the SEC Filings and any documents which may have been made available upon request (collectively with this Loan Agreement, the "Investment Materials") and the Lenders have carefully read and evaluated the Investment Materials and understand the risks involved in an investment in the Shares and Warrants, including the risks set forth under the section titled "Risk Factors" in the Form 10-K and the considerations set forth in the Investment Materials, and have relied solely (except as indicated in subsections (b) and (c) below) on the information contained in the Investment Materials (including all exhibits thereto);

(b) have been provided an opportunity, for a reasonable period of time prior to the date hereof, to obtain additional information concerning the acquisition of the Shares and Warrants, PESI and all other information to the extent PESI possesses such information or can acquire it without unreasonable effort or expense;

(c) have been given the opportunity, for a reasonable period of time prior to the date hereof, to ask questions of and receive answers from, PESI or its representatives concerning the terms and conditions of the acquisition of the Shares and Warrants and other matters pertaining to an investment therein, and have been given the opportunity for a reasonable period of time prior to the date hereof to obtain such additional information necessary to verify the accuracy of the information contained in the Investment Materials or that which was otherwise provided in order to evaluate the merits and risks of a purchase of the Shares and Warrants;

(d) have not been furnished with any oral representation or oral information in connection with the acquisition of the Shares and Warrants which is not contained in the Investment Materials; and

(e) have determined that the Shares and Warrants are a suitable investment for the Lenders and that at this time the Lenders could bear a complete loss of such investment.

7.6 No Reliance. The Lenders are not relying on PESI, or its affiliates with respect to economic considerations involved in an investment in the Shares and Warrants. The Lenders have relied on the advice of, or has consulted with only their lawyers, accountants, and advisors in connection with the transactions contemplated by this Loan Agreement. Each Lender is capable of evaluating the merits and risks of an investment in the Shares and Warrants on the terms and conditions set forth in this Loan Agreement.

7.7 Restrictions on Transfer. The Lenders represent, warrant and agree that he will not sell or otherwise transfer the Shares and Warrants without registration under the Act or an exemption therefrom and fully understands and agrees to bear the economic risk of any purchase because, among other reasons, the Shares and the Warrant Shares have not been registered under the Act or under the securities laws of any state and, therefore, cannot be resold, pledged, assigned or otherwise disposed of unless, *inter alia*, they are subsequently registered under the Act and under the applicable securities laws of such states or an exemption from such registration is available. In particular, the Lenders are aware that the Shares and Warrants are "restricted securities," as such term is defined in Rule 144 promulgated under the Act ("Rule 144"), and they may not be sold pursuant to Rule 144 unless all of the conditions of Rule 144 are met. The Lenders also understand that PESI is under no obligation to register the Shares, the Warrants, or the Warrant Shares on the Lenders' behalf or to assist the Lenders in complying with any exemption from registration under the Act or applicable state securities laws. The Lenders further understands that U. S. securities laws, applicable state securities laws, and the provisions of this Loan Agreement further restrict sales or transfers of the Shares, Warrants and Warrant Shares.

7.8 Representations. No representations or warranties have been made to the Lenders by PESI, or any officer, employee, agent, affiliate or subsidiary of PESI, other than the representations of PESI contained herein and in connection with this Loan Agreement the Lenders have not relied upon any representations other than those expressly contained herein.

7.9 Financial Information. Any information which the Lenders have heretofore furnished to PESI with respect to his financial position and business experience is correct and complete as of the date of this Loan Agreement and if there should be any material change in such information the Lenders shall immediately furnish such revised or corrected information to PESI.

7.10 Restrictive Legends. The Lenders understand and agree that the certificates for the Shares and Warrants will bear, substantially, the following legend until (a) such securities will have been registered under the Act and effectively been disposed of in accordance with an effective registration statement; or (b) in the opinion of counsel for PESI such securities may be sold without registration under the Act, as well as any applicable "Blue Sky" or state securities laws:

THE SECURITIES REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"), AND ARE SUBJECT TO RESTRICTIONS ON TRANSFERABILITY AS SET FORTH IN THIS CERTIFICATE. THE SECURITIES REPRESENTED HEREBY MAY NOT BE OFFERED, SOLD, PLEDGED, HYPOTHECATED, ASSIGNED, TRANSFERRED OR OTHERWISE DISPOSED OF IN THE ABSENCE OF AN EFFECTIVE REGISTRATION STATEMENT UNDER THE ACT WHICH IS CURRENT WITH RESPECT TO THESE SECURITIES OR PURSUANT TO A SPECIFIC EXEMPTION FROM REGISTRATION UNDER THE ACT BUT ONLY UPON A HOLDER HEREOF FIRST HAVING OBTAINED THE WRITTEN OPINION OF COUNSEL, REASONABLY ACCEPTABLE TO COUNSEL FOR PESI, TO THE EFFECT THAT THE PROPOSED DISPOSITION MAY BE EFFECTUATED WITHOUT REGISTRATION UNDER THE ACT."

7.11 Speculative Investment. The Lenders understand that an investment in the Shares and Warrants is a speculative investment that involves a high degree of risk and the potential loss of the entire investment.

7.12 Overall Commitments. Each Lender's overall commitment to investments that are not readily marketable is not disproportionate to the Lender's net worth, and an investment in the Shares and Warrants will not cause such overall commitment to become excessive.

7.13 Survival. The representations, warranties and agreements of the Lenders set forth in this Loan Agreement will survive the Closing.

8. Indemnity. The Lenders agree, jointly and severally, to indemnify and hold harmless PESI, its officers and directors, employees and its affiliates and each other person, if any, who controls any thereof, against any loss, liability, claim, damage and expense whatsoever (including, but not limited to, any and all expenses whatsoever reasonably incurred in investigating, preparing or defending against any litigation commenced or threatened or any claim whatsoever) arising out of or based upon any false representation or warranty or breach or failure by the Lenders to comply with any of the provisions of paragraph 7 of this Loan Agreement.

9. Default. A default will occur under the Note (a "Default") upon the failure of PESI to pay within 30 days when due any interest on or principal of the Note or any renewals or modifications thereof.

10. Remedies. Upon a Default (as defined in paragraph 9, above), the Lenders will have the option to declare the Note and any renewals, extensions or modifications thereof to be immediately due and payable whereupon the Note or any renewals or modifications thereof shall become forthwith due and payable upon written demand, and the Lenders will thereafter have the right to elect by written election delivered to PESI to receive in full and complete satisfaction of all of PESI's obligations under the Note either:

(a) the cash amount equal to the sum of the unpaid principal balance owing under the Note and all accrued and unpaid interest thereon (the "Payoff Amount"); or

(b) the number of whole shares of PESI common stock (the "Payoff Shares") determined by dividing the Payoff Amount by the dollar amount equal to the closing bid price of PESI's common stock on the date immediately prior to the date of Default of this Note, as reported or quoted on the primary nationally recognized exchange or automated quotation system on which the common stock is listed.

The Lenders option to elect the Payoff Amount or the Payoff Shares is mutually exclusive, and the Lenders may not elect a combination of the Payoff Amount and the Payoff Shares. If the Lenders elect to receive the Payoff Shares, the issuance of the Payoff Shares will be subject to the Lenders providing, as of the issuance of the Payoff Shares, substantially the same representations and warranties as set forth in paragraph 7 of this Loan Agreement. If issued the Payoff Shares will not be registered and the Lenders will not be entitled to registration rights with respect to the Payoff Shares. Notwithstanding any other provision of this Loan Agreement, the Note, or the Warrants, the aggregate number of Shares, Warrant Shares, and Payoff Shares that are or will be issued to the Lenders pursuant to this Loan Agreement, the Note, and the Warrants, together with the aggregate shares of PESI common stock and other PESI voting securities owned by the Lenders as of the date of issuance of the Payoff Shares, shall not exceed (a) the number of shares equal to 19.9% of the number of shares of PESI common stock issued and outstanding as of the date of this Loan Agreement or (b) 19.9% of the voting power of all PESI voting securities issued and outstanding as of the date of this Loan Agreement. Subject to the terms of this Loan Agreement, PESI will issue the common stock certificates representing the Payoff Shares to the Lenders in the following denominations: 50% of the Payoff Shares to Lampson and 50% of the Payoff Shares to Ferguson. PESI will not issue any fractional shares of common stock.

11. Miscellaneous. It is further agreed as follows:

11.1 KeyBank. The Lenders intend to borrow from KeyBank National Association ("KeyBank") up to $3,000,000 (the "KeyBank Loan") to fund the Loan to PESI in accordance with paragraph 1 of this Loan Agreement. PESI agrees to pay, on behalf of the Lenders, all reasonable and customary closing costs and bank fees assessed against the Lenders by KeyBank in connection with the KeyBank Loan and legal fees incurred by Lampson and Ferguson for review of agreements necessary for this transaction. At the written direction of the Lenders, payments under the Note will be paid to Lenders' account at KeyBank.

11.2 Amendment and Waiver. This Loan Agreement may not be amended or modified in any way, except by an instrument in writing executed by all of the parties hereto; provided, however, the Lenders may, in writing: (a) extend the time for performance of any of the obligations of PESI; (b) waive any default by PESI; and (c) waive the satisfaction of any condition that is precedent to the performance of the Lenders' obligations under this Loan Agreement.

11.3 Non-Waiver; Cumulative Remedies. No failure on the part of the Lenders to exercise and no delay in exercising any right hereunder shall operate as a waiver thereof, nor shall any single or partial exercise by the Lenders of any right hereunder preclude any other or further right of exercise thereof. The remedies herein provided are cumulative and not alternative.

11.4 Material Adverse Effect. The term "Material Adverse Effect" when used in connection with an entity means any change, event, violation, inaccuracy, circumstance or effect, individually or when aggregated with other changes, events, violations, inaccuracies, circumstances or effects, that is materially adverse to the business, assets (including intangible assets), revenues, financial condition or results of operations of such entity, it being understood that none of the following alone or in combination shall be deemed, in and of itself, to constitute a Material Adverse Effect: (a) changes attributable to the public announcement or pendency of the transactions contemplated hereby, (b) changes in general national or regional economic conditions, or (c) any SEC rulemaking.

11.5 Governing Law. This Loan Agreement shall be governed by and construed in accordance with the law of the State of Washington regardless of the law that might otherwise govern under applicable principals of conflicts of law thereof.

11.6 Descriptive Headings. The descriptive headings of the paragraphs of this Loan Agreement are for convenience only and shall not be used in the construction of the terms hereof.

11.7 Integrated Agreement. This Loan Agreement, the Note and the Warrants executed pursuant hereto or in connection herewith constitute the entire agreement between the parties hereto, and there are no agreements, understandings, warranties or representations between the parties other than those set forth in such documents.

11.8 Binding Effect. This Loan Agreement shall be binding on and inure to the benefit of the parties hereto and their respective successors, personal representatives, legal representatives and assigns.

11.9 Third Party Beneficiary. Nothing in this Loan Agreement, express or implied, is intended to confer on any person, other than the parties hereto and their respective successors and assigns, any rights or remedies under or by reason of this Loan Agreement.

11.10 Maximum Legal Rate of Interest. Notwithstanding any other provisions of this Loan Agreement or the Note to the contrary, the total interest charges incurred by PESI pursuant to the Note shall not exceed the maximum legal rate of interest under Washington law. If the holder of the Note shall ever be entitled to receive, collect or apply, as interest on the Loan, any amount in excess of the maximum legal rate of interest permitted to be charged by applicable law, and, in the event any holder of the Note ever receives, collects or applies, as interest, any such excess, such amount which would be excessive interest shall be applied to the reduction of the unpaid principal balance of the applicable Note, and if the principal balance is paid in full, any remaining excess shall be forthwith paid to PESI. In determining whether or not the interest paid or payable under any specific contingency exceeds the highest lawful rate, PESI and the Lenders shall, to the maximum extent permitted, under applicable law: (a) characterize any non-principal payment as an expense, fee or premium rather than as interest; (b) exclude voluntary prepayments and the effects thereof; (c) "spread" the total amount of interest on the Note throughout the entire term of the Note so that the interest rate is uniform throughout the entire term of the Note.

11.11 No Responsibility of Lenders. Notwithstanding any term or provision of this Loan Agreement or the Note, the Lenders shall not have any rights as to management, conduct or operation of the business and affairs of PESI or any of their subsidiaries.

11.12 Counterparts; Facsimile Signatures. This Loan Agreement may be executed in one or more counterparts, all of which shall be considered one and the same agreement and shall become effective when one or more counterparts have been signed by each of the parties and delivered to the other party, it being understood that all parties need not sign the same counterpart. Delivery by facsimile to counsel for the other party of a counterpart executed by a party shall be deemed to meet the requirements of the previous sentence.

11.13 Assignment. No party may assign either this Loan Agreement or any of its rights, interests, or obligations hereunder without the prior written approval of the other parties. This Loan Agreement shall be binding upon and shall inure to the benefit of the parties hereto and their respective successors and permitted assigns.

11.14 Attorneys' Fees. The substantially prevailing party in any situation or suit to enforce any provision of this agreement shall be entitled to reasonable attorney's fees and any costs incurred, including, without limitation, costs of collection, enforcing a judgment and on appeal or in any bankruptcy proceeding (including efforts to modify or vacate any automatic stay or injunction).

IN WITNESS WHEREOF, the parties have caused this Loan and Securities Purchase Agreement to be duly executed as of the day and year first above written.

PERMA-FIX ENVIRONMENTAL
SERVICES, INC., a Delaware corporation

By: /s/Ben Naccarato
B. Naccarato CFO

("PESI")

/s/William Lampson
WILLIAM N. LAMPSON, an individual

("Lampson")

Robert Ferguson
ROBERT FERGUSON, an individual

("Ferguson")

(Lampson and Ferguson are collectively,
the "Lender

EXHIBIT 4.5

Exhibit "A"

PROMISSORY NOTE

$3,000,000.00 August 2, 2013

FOR VALUE RECEIVED, the undersigned PERMA-FIX ENVIRONMENTAL SERVICES, INC., a Delaware corporation ("Borrower") promises to pay to the order of WILLIAM N. LAMPSON, an individual ("Lampson"), and ROBERT FERGUSON, an individual ("Ferguson") (Lampson and Ferguson are collectively, the "Lenders"), for the account of Lenders as directed by the Lenders in writing to the Borrower at KeyBank National Association ("KeyBank"), located at 23 W. Kennewick Avenue, Kennewick, Washington 99336, or at such other place as may be designated in writing by the Lenders, the principal sum of THREE MILLION AND 00/100 DOLLARS ($3,000,000.00), together with interest thereon at the interest rates hereinafter stated, payable as set forth below.

Unless otherwise defined herein, all terms defined or referenced in that certain Loan and Securities Purchase Agreement of even date herewith between the Borrower and the Lenders (the "Loan Agreement") will have the same meanings herein as therein.

Interest on this Note will be paid at the interest rate of 2.99% per annum commencing on September 1, 2013, and on the 1st day of each month thereafter, for a period of twelve months, PESI shall pay to the Lenders payments of interest accrued on the outstanding principal balance of the Note. Beginning the thirteenth month PESI shall pay to the Lenders equal successive payments of principal in the amount of $125,000 plus interest accrued on the outstanding principal balance of the Note. The entire unpaid principal balance of the Note and all accrued interest thereon is due and payable on August 2, 2016 (the "Maturity Date").

This Note is executed and delivered in connection with, and subject to the terms and conditions contained in, the Loan Agreement. It is specifically agreed that the entire principal amount of this Note has been advanced as of the date hereof, and that no additional advances will be made hereunder. All payments will first be applied to the payment of accrued interest and the balance will be applied in reduction of the principal balance hereof.

The Borrower will have the right to prepay this Note in whole or in part at any time and from time to time without premium or penalty, but with interest accrued to the date of prepayment.

The Borrower agrees that if the Borrower is in default in its payment obligations under the terms of this Note if, as a result, this Note is placed in the hands of an attorney for collection or to defend or enforce any of the Lenders' rights hereunder, the Borrower will pay the Lenders' reasonable attorneys' fees and expenses, all court costs and all other reasonable expenses incurred by the Lenders in connection therewith; provided that the Lenders are represented by a single attorney or law firm.

This Note is to be construed according to the internal laws of the State of Delaware, expect with respect to usury laws, the usury laws of the State of Washington will govern.

On the failure to pay any principal or interest within 30 days when due hereunder, the Lenders will have the option to declare this Note and any renewals, extensions or modifications hereof to be immediately due and payable whereupon this Note or any renewals or modifications thereof shall become forthwith due and payable upon written demand, and the Lenders will thereafter have the right to elect by written election delivered to Borrower to receive in full and complete satisfaction of all Borrower's obligations under this Note either:

(a) the cash amount equal to the sum of the unpaid principal balance owing under the Note and all accrued and unpaid interest thereon (the "Payoff Amount"); or

(b) the number of whole shares of the common stock, par value $.001 per share, of the Borrower (the "Payoff Shares") determined by dividing the Payoff Amount by the dollar amount equal to the closing bid price of the Borrower's common stock on of the date immediately prior to the date of Default of this Note as reported or quoted on the primary nationally recognized exchange or automated quotation system on which the common stock is listed.

The Lenders option to elect the Payoff Amount or the Payoff Shares is mutually exclusive, and the Lenders may not elect a combination of the Payoff Amount and the Payoff Shares. If the Lenders elect to receive the Payoff Shares, the issuance of the Payoff Shares will be subject to the Lenders providing, as of the issuance of the Payoff Shares, substantially the same representations and warranties as set forth in paragraph 7 of the Loan Agreement. If issued, the Payoff Shares will not be registered, and the Lenders will not be entitled to registration rights with respect to the Payoff Shares. Notwithstanding any other provision of this Note, the aggregate number of Payoff Shares that will be issued to the Lenders will be subject to the restrictions, qualifications, and limitations set forth in the Loan Agreement, including without limitation, compliance with federal and state securities laws, the percentage of the Payoff Shares to be issued to each Lender, and the limitations on the maximum number of Payoff Shares to be issued to the Lenders.

IN WITNESS WHEREOF, the Borrower has executed this instrument effective the date first above written.

PERMA-FIX ENVIRONMENTAL
SERVICES, INC , a Delaware corporation

By: /s/Ben Naccarato
Name: B Naccarato
Title CFO

(the "Borrower")

EXHIBIT "B"

NEITHER THIS SECURITY NOR THE SECURITIES INTO WHICH THIS SECURITY IS EXERCISABLE HAVE BEEN REGISTERED WITH THE SECURITIES AND EXCHANGE COMMISSION OR THE SECURITIES COMMISSION OF ANY STATE IN RELIANCE UPON AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"), AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD EXCEPT PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE ACT OR PURSUANT TO AN AVAILABLE EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND IN ACCORDANCE WITH APPLICABLE STATE SECURITIES LAWS AS EVIDENCED BY A LEGAL OPINION OF COUNSEL TO THE TRANSFEROR REASONABLY ACCEPTABLE TO THE COMPANY TO SUCH EFFECT, THE SUBSTANCE OF WHICH SHALL BE REASONABLY ACCEPTABLE TO THE COMPANY.

COMMON STOCK PURCHASE WARRANT

To Purchase 175,000 Shares
of Common Stock of

PERMA-FIX ENVIRONMENTAL SERVICES, INC.

THIS COMMON STOCK PURCHASE WARRANT (the "Warrant") CERTIFIES that, for value received, WILLIAM N. LAMPSON, an individual (the "Holder"), is entitled, upon the terms and subject to the limitations on exercise and the conditions hereinafter set forth, at any time on or after six months from the date of issuance of this Warrant (the "Initial Exercise Date") and on or prior to the third anniversary of the date of this Warrant (the "Termination Date") but not thereafter, to subscribe for and purchase from Perma-Fix Environmental Services, Inc., a Delaware corporation (the "Company"), up to 175,000 shares (the "Warrant Shares") of common stock, par value $0.001 per share, of the Company. The purchase price of one share of common stock (the "Exercise Price") under this Warrant is "market" price on the day of close (currently $0.50 per share)**, s**ubject to adjustment hereunder. The Exercise Price and the number of Warrant Shares for which the Warrant is exercisable shall be subject to adjustment as provided herein. **This Warrant shall be subject to, and the capitalized terms used and not otherwise defined herein shall have the meanings set forth in, that certain Loan and Securities Purchase Agreement (the "Loan Agreement"), dated August 2, 2013, between, the Company, the Holder and Robert Ferguson, an individual.**

1. Title to Warrant. Prior to the Termination Date and subject to compliance with applicable laws and paragraph 7 of this Warrant, this Warrant and all rights hereunder are transferable, in whole or in part, at the office or agency of the Company by the Holder in person or by duly authorized attorney, upon surrender of this Warrant together with the Assignment Form annexed hereto properly endorsed; provided, however, that the assignee is an accredited investor, as such term is defined in Rule 501 promulgated under the Securities Act of 1933, as amended (the Securities Act"). The transferee shall sign an investment letter in form and substance reasonably satisfactory to the Company.

2. Authorization of Shares. The Company covenants that all Warrant Shares which may be issued upon the exercise of the purchase rights represented by this Warrant will, upon exercise of the purchase rights represented by this Warrant, be duly authorized, validly issued, fully paid and nonassessable and free from all taxes, liens and charges in respect of the issue thereof (other than taxes in respect of any transfer occurring contemporaneously with such issue).

3. Exercise of Warrant.

3.1 Procedure. Exercise of the purchase rights represented by this Warrant may be made at any time or times on or after the Initial Exercise Date and on or before the Termination Date by satisfying each of the following:

(a) delivery to the Company of a duly executed facsimile copy of the Notice of Exercise Form attached hereto;

(b) surrender of this Warrant to the Company and receipt by the Company of this Warrant within 10 days of the date the Notice of Exercise is delivered to the Company;

(c) receipt by the Company of payment of the aggregate Exercise Price of the shares to be purchased, with such payment made by wire transfer or cashier's check drawn on a United States bank;

(d) receipt by the Company of such written investment representations and warranties by the Holder as the Company may reasonably request in accordance with paragraph 7 of the Loan Agreement.

This Warrant will be deemed to have been exercised (the "Exercise Date") on the later of (x) the date the Notice of Exercise is delivered to the Company by facsimile copy, (y) the date this Warrant is received by the Company, and (z) the date the Exercise Price is received by the Company.

3.2 Issuance of Warrant Shares. Certificates representing the shares of common stock purchased hereunder will be delivered to the Holder within 10 Trading Days following the Exercise Date ("Warrant Share Delivery Date"). The Warrant Shares shall be deemed to have been issued, and Holder or any other person so designated to be named therein shall be deemed to have become a holder of record of such shares for all purposes, as of the date the Exercise Date. If the Company fails to deliver to the Holder a certificate or certificates representing the Warrant Shares pursuant to this paragraph 3.2 within 20 Trading Days following the Warrant Share Delivery Date, then the Holder will have the right to rescind such exercise. If this Warrant shall have been exercised in part, the Company shall, at the time of delivery of the certificate or certificates representing Warrant Shares, deliver to Holder a new Warrant evidencing the rights of Holder to purchase the unpurchased Warrant Shares called for by this Warrant, which new Warrant shall in all other respects be identical with this Warrant.

3.3 Charges, Taxes and Expenses. Issuance of certificates for Warrant Shares shall be made without charge to the Holder for any issue or transfer tax or other incidental expense in respect of the issuance of such certificate, all of which taxes and expenses shall be paid by the Company, and such certificates shall be issued in the name of the Holder or in such name or names as may be directed by the Holder; provided, however, that if certificates for Warrant Shares are to be issued in a name other than the name of the Holder, this Warrant when surrendered for exercise shall be accompanied by the Assignment Form attached hereto duly executed by the Holder; and the Company may require, as a condition thereto, the payment of a sum sufficient to reimburse it for any transfer tax incidental thereto.

4. No Fractional Shares or Scrip. No fractional shares or scrip representing fractional shares shall be issued upon the exercise of this Warrant. As to any fraction of a share which Holder would otherwise be entitled to purchase upon such exercise, the Company shall pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Exercise Price.

5. Transfer, Division and Combination.

5.1 Transfer. Subject to compliance with any applicable securities laws and the conditions set forth in paragraphs 1 and 5.4 hereof and to the provisions of paragraph 7.7 of the Loan Agreement, this Warrant and all rights hereunder are transferable, in whole or in part, upon surrender of this Warrant at the principal office of the Company, together with a written assignment of this Warrant substantially in the form attached hereto duly executed by the Holder or its agent or attorney and funds sufficient to pay any transfer taxes payable upon the making of such transfer. Promptly following such surrender and, if required, such payment, the Company shall execute and deliver a new Warrant or Warrants in the name of the assignee or assignees and in the denomination or denominations specified in such instrument of assignment, and shall issue to the assignor a new Warrant evidencing the portion of this Warrant not so assigned, and this Warrant shall promptly be cancelled. A Warrant, if properly assigned, may be exercised by a new holder for the purchase of Warrant Shares without having a new Warrant issued.

5.2 Division; Combination. This Warrant may be divided or combined with other Warrants upon presentation hereof at the aforesaid office of the Company, together with a written notice specifying the names and denominations in which new Warrants are to be issued, signed by the Holder or its agent or attorney. Subject to compliance with paragraph 5.1, as to any transfer which may be involved in such division or combination, the Company shall execute and deliver a new Warrant or Warrants in exchange for the Warrant or Warrants to be divided or combined in accordance with such notice.

5.3 Issuance; Records. The Company shall prepare, issue and deliver at its own expense (other than transfer taxes) the new Warrant or Warrants under this paragraph 5. The Company agrees to maintain, at its aforesaid office, books for the registration and the registration of transfer of the Warrants.

5.4 Securities Laws Compliance. If, at the time of the surrender of this Warrant in connection with any transfer of this Warrant, the transfer of this Warrant shall not be registered pursuant to an effective registration statement under the Securities Act and under applicable state securities or blue sky laws, the Company may require, as a condition of allowing such transfer, that:

(a) the Holder or transferee of this Warrant, as the case may be, furnish to the Company a written opinion of counsel (which opinion shall be in form, substance and scope customary for opinions of counsel in comparable transactions) to the effect that such transfer may be made without registration under the Securities Act and under applicable state securities or blue sky laws;

(b) the holder or transferee execute and deliver to the Company an investment letter in form and substance acceptable to the Company; and

(c) the transferee be an "accredited investor" as defined in Rule 501 promulgated under the Securities Act or a qualified institutional buyer as defined in Rule 144A under the Securities Act.

6. No Rights as Shareholder until Exercise. This Warrant does not entitle the Holder to any voting rights or other rights as a shareholder of the Company prior to the exercise hereof. The Warrant Shares shall be deemed to have been issued, and Holder or any other person so designated to be named therein shall be deemed to have become a holder of record of such shares for all purposes, as of the close of business on the date the Exercise and all taxes required to be paid by the Holder, if any, pursuant to paragraph 3.3 prior to the issuance of such shares, have been paid.

7. Loss, Theft, Destruction or Mutilation of Warrant. The Company covenants that upon receipt by the Company of evidence reasonably satisfactory to it of the loss, theft, destruction or mutilation of this Warrant or any stock certificate relating to the Warrant Shares, and in case of loss, theft, or destruction of indemnity or security reasonably satisfactory to it (which, in the case of the Warrant, shall not include the posting of any bond), and upon surrender and cancellation of such Warrant or stock certificate, if mutilated, the Company will make and deliver a new Warrant or stock certificate of like tenor and dated as of such cancellation, in lieu of such Warrant or stock certificate.

8. Saturdays, Sundays, Holidays, etc. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall be a Saturday, Sunday or a legal holiday, then such action may be taken or such right may be exercised on the next succeeding day not a Saturday, Sunday or legal holiday.

9. Adjustments of Exercise Price and Warrant Shares. The number and kind of securities purchasable upon the exercise of this Warrant and the Exercise Price shall be subject to adjustment from time to time upon the happening of any of the following. If the Company:

(a) pays a dividend in shares of common stock or make a distribution in shares of common stock to holders of its outstanding common stock,

(b) subdivides its outstanding shares of common stock into a greater number of shares,

(c) combines its outstanding shares of common stock into a smaller number of shares of common stock, or

(d) issues any shares of its capital stock in a reclassification of the common stock,

then the number of Warrant Shares purchasable upon exercise of this Warrant immediately prior thereto shall be adjusted so that the Holder shall be entitled to receive the kind and number of Warrant Shares or other securities of the Company which it would have owned or have been entitled to receive had such Warrant been exercised in advance thereof. Upon each such adjustment of the kind and number of Warrant Shares or other securities of the Company which are purchasable hereunder, the Holder shall thereafter be entitled to purchase the number of Warrant Shares or other securities resulting from such adjustment at an Exercise Price per Warrant Share or other security obtained by multiplying the Exercise Price in effect immediately prior to such adjustment by the number of Warrant Shares purchasable pursuant hereto immediately prior to such adjustment and dividing by the number of Warrant Shares or other securities of the Company that are purchasable pursuant hereto immediately after such adjustment. An adjustment made pursuant to this paragraph shall become effective immediately after the effective date of such event retroactive to the record date, if any, for such event.

10. Reorganization, Reclassification, Merger, Consolidation or Disposition of Assets. If the Company shall reorganize its capital, reclassify its capital stock, consolidate or merge with or into another corporation (where the Company is not the surviving corporation, or sell, transfer or otherwise dispose of all or substantially all of its property, assets or business to another corporation and, pursuant to the terms of such reorganization, reclassification, merger, consolidation or disposition of assets, shares of common stock of the successor or acquiring corporation, or any cash, shares of stock or other securities or property of any nature whatsoever (including warrants or other subscription or purchase rights) in addition to or in lieu of common stock of the successor or acquiring corporation ("Other Property"), are to be received by or distributed to the holders of common stock of the Company, then the Holder shall have the right thereafter to receive, upon exercise of this Warrant, the number of shares of common stock of the successor or acquiring corporation or of the Company, if it is the surviving corporation, and Other Property receivable upon or as a result of such reorganization, reclassification, merger, consolidation or disposition of assets by a Holder of the number of shares of common stock for which this Warrant is exercisable immediately prior to such event. In case of any such reorganization, reclassification, merger, consolidation or disposition of assets, the successor or acquiring corporation (if other than the Company) shall expressly assume the due and punctual observance and performance of each and every covenant and condition of this Warrant to be performed and observed by the Company and all the obligations and liabilities hereunder, subject to such modifications as may be deemed appropriate (as determined in good faith by resolution of the Board of Directors of the Company) in order to provide for adjustments of Warrant Shares for which this Warrant is exercisable which shall be as nearly equivalent as practicable to the adjustments provided for in this paragraph 10. For purposes of this paragraph 10, "common stock of the successor or acquiring corporation" shall include stock of such corporation of any class which is not preferred as to dividends or assets over any other class of stock of such corporation and which is not subject to redemption and shall also include any evidences of indebtedness, shares of stock or other securities which are convertible into or exchangeable for any such stock, either immediately or upon the arrival of a specified date or the happening of a specified event and any warrants or other rights to subscribe for or purchase any such stock. The foregoing provisions of this paragraph 10 shall similarly apply to successive reorganizations, reclassifications, mergers, consolidations or disposition of assets.

11. Voluntary Adjustment by the Company. The Company may at any time during the term of this Warrant reduce the then current Exercise Price to any amount and for any period of time deemed appropriate by the Board of Directors of the Company, but not below the par value of the common stock.

12. Notice of Adjustment. Whenever the number of Warrant Shares or number or kind of securities or other property purchasable upon the exercise of this Warrant or the Exercise Price is adjusted, as herein provided, the Company shall give notice thereof to the Holder, which notice shall state the number of Warrant Shares (and other securities or property) purchasable upon the exercise of this Warrant and the Exercise Price of such Warrant Shares (and other securities or property) after such adjustment, setting forth a brief statement of the facts requiring such adjustment and setting forth the computation by which such adjustment was made.

13. Authorized Shares. The Company covenants that during the period this Warrant is outstanding, it will reserve from its authorized and unissued common stock a sufficient number of shares to provide for the issuance of the Warrant Shares upon the exercise of any purchase rights under this Warrant. The Company further covenants that its issuance of this Warrant shall constitute full authority to its officers who are charged with the duty of executing stock certificates to execute and issue the necessary certificates for the Warrant Shares upon the exercise of the purchase rights under this Warrant. The Company will take all such reasonable action as may be necessary to assure that such Warrant Shares may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of the Trading Market upon which the common stock may be listed.

14. Miscellaneous.

14.1 Jurisdiction/Venue. All questions concerning the construction, validity, enforcement and interpretation of this Warrant shall be governed by and construed and enforced in accordance with the internal laws of the State of Delaware, without regard to the principles of conflicts of law thereof. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the state or federal court of Delaware, for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is improper or inconvenient venue for such proceeding.

14.2 Restrictions. The Holder acknowledges that the Company has no obligation to register Warrant Shares with the Securities and Exchange Commission or any state securities agency, and the Warrant Shares acquired upon the exercise of this Warrant, if not registered, will have restrictions upon resale imposed by state and federal securities laws.

14.3 Notices. Any notice, request or other document required or permitted to be given or delivered to the Holder by the Company shall be delivered in accordance with the notice provisions of the Purchase Agreement.

14.4 Limitation of Liability. No provision of this Warrant, in the absence of any affirmative action by Holder to exercise this Warrant or purchase Warrant Shares, and no enumeration herein of the rights or privileges of Holder, shall give rise to any liability of Holder for the purchase price of any common stock or as a stockholder of the Company, whether such liability is asserted by the Company or by creditors of the Company.

14.5 Successors and Assigns. Subject to applicable securities laws, this Warrant and the rights and obligations evidenced hereby shall inure to the benefit of and be binding upon the successors of the Company and the successors and permitted assigns of Holder. The provisions of this Warrant are intended to be for the benefit of all Holders from time to time of this Warrant and shall be enforceable by any such Holder or holder of Warrant Shares.

14.6 Amendment. This Warrant may be modified or amended or the provisions hereof waived with the written consent of the Company and the Holder.

14.7 Severability. Wherever possible, each provision of this Warrant shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Warrant shall be prohibited by or invalid under applicable law, such provision shall be ineffective to the extent of such prohibition or invalidity, without invalidating the remainder of such provisions or the remaining provisions of this Warrant.

14.8 Headings. The headings used in this Warrant are for the convenience of reference only and shall not, for any purpose, be deemed a part of this Warrant.

[SIGNATURES APPEAR ON NEXT PAGE]

IN WITNESS WHEREOF, the Company has caused this Warrant to be executed by its officer thereunto duly authorized.

Dated: August 2, 2013

PERMA-FIX ENVIRONMENTAL SERVICES, INC.

By: /s/Ben Naccarato
Name: B Naccarato
Title: CFO

("PESI)

/s/William Lampson
WILLIAM N. LAMPSON, an individual

(the "Holder")

NOTICE OF EXERCISE

To: Perma-Fix Environmental Services, Inc.

(1) The undersigned hereby elects to purchase _____ Warrant Shares of the Company pursuant to the terms of the attached Warrant (only if exercised in full), and tenders herewith payment of the exercise price in full, together with all applicable transfer taxes, if any. Payment shall take the form of in lawful money of the United States.

(2) Please issue a certificate or certificates representing said Warrant Shares in the name of the undersigned or in such other name as is specified below:

_____

(3) The Warrant Shares shall be delivered to the following:

_____

_____

_____

(4) Accredited Investor. The undersigned is an "accredited investor" as defined in Regulation D under the Securities Act of 1933, as amended.

[PURCHASER]

By: _____
Name:
Title:

Dated: _____

ASSIGNMENT FORM

(To assign the foregoing warrant, execute
this form and supply required information.
Do not use this form to exercise the warrant.)

FOR VALUE RECEIVED, the foregoing Warrant and all rights evidenced thereby are hereby assigned to

_____ whose address is

_____.

_____

Dated: _____, _____

Holder's Signature: _____

Holder's Address: _____

_____

Signature Guaranteed: _____

NOTE: The signature to this Assignment Form must correspond with the name as it appears on the face of the Warrant, without alteration or enlargement or any change whatsoever, and must be guaranteed by a bank or trust company. Officers of corporations and those acting in a fiduciary or other representative capacity should file proper evidence of authority to assign the foregoing Warrant.

EXHIBIT "C"

NEITHER THIS SECURITY NOR THE SECURITIES INTO WHICH THIS SECURITY IS EXERCISABLE HAVE BEEN REGISTERED WITH THE SECURITIES AND EXCHANGE COMMISSION OR THE SECURITIES COMMISSION OF ANY STATE IN RELIANCE UPON AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"), AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD EXCEPT PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE ACT OR PURSUANT TO AN AVAILABLE EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND IN ACCORDANCE WITH APPLICABLE STATE SECURITIES LAWS AS EVIDENCED BY A LEGAL OPINION OF COUNSEL TO THE TRANSFEROR REASONABLY ACCEPTABLE TO THE COMPANY TO SUCH EFFECT, THE SUBSTANCE OF WHICH SHALL BE REASONABLY ACCEPTABLE TO THE COMPANY.

COMMON STOCK PURCHASE WARRANT

To Purchase 175,000 Shares
of Common Stock of

PERMA-FIX ENVIRONMENTAL SERVICES, INC.

THIS COMMON STOCK PURCHASE WARRANT (the "Warrant") CERTIFIES that, for value received, ROBERT FERGUSON, an individual (the "Holder"), is entitled, upon the terms and subject to the limitations on exercise and the conditions hereinafter set forth, at any time on or after six months from the date of issuance of this Warrant (the "Initial Exercise Date") and on or prior to the third anniversary of the date of this Warrant (the "Termination Date") but not thereafter, to subscribe for and purchase from Perma-Fix Environmental Services, Inc., a Delaware corporation (the "Company"), up to 175,000 shares (the "Warrant Shares") of common stock, par value $0.001 per share, of the Company. The purchase price of one share of common stock (the "Exercise Price") under this Warrant is "market" price on the day of close (currently $0.50 per share)**, s**ubject to adjustment hereunder. The Exercise Price and the number of Warrant Shares for which the Warrant is exercisable shall be subject to adjustment as provided herein. **This Warrant shall be subject to, and the capitalized terms used and not otherwise defined herein shall have the meanings set forth in, that certain Loan and Securities Purchase Agreement (the "Loan Agreement"), dated August 2, 2013, between, the Company, the Holder and William N. Lampson, an individual.**

1. Title to Warrant. Prior to the Termination Date and subject to compliance with applicable laws and paragraph 7 of this Warrant, this Warrant and all rights hereunder are transferable, in whole or in part, at the office or agency of the Company by the Holder in person or by duly authorized attorney, upon surrender of this Warrant together with the Assignment Form annexed hereto properly endorsed; provided, however, that the assignee is an accredited investor, as such term is defined in Rule 501 promulgated under the Securities Act of 1933, as amended (the Securities Act"). The transferee shall sign an investment letter in form and substance reasonably satisfactory to the Company.

2. Authorization of Shares. The Company covenants that all Warrant Shares which may be issued upon the exercise of the purchase rights represented by this Warrant will, upon exercise of the purchase rights represented by this Warrant, be duly authorized, validly issued, fully paid and nonassessable and free from all taxes, liens and charges in respect of the issue thereof (other than taxes in respect of any transfer occurring contemporaneously with such issue).

3. Exercise of Warrant.

3.1 Procedure. Exercise of the purchase rights represented by this Warrant may be made at any time or times on or after the Initial Exercise Date and on or before the Termination Date by satisfying each of the following:

(a) delivery to the Company of a duly executed facsimile copy of the Notice of Exercise Form attached hereto;

(b) surrender of this Warrant to the Company and receipt by the Company of this Warrant within 10 days of the date the Notice of Exercise is delivered to the Company;

(c) receipt by the Company of payment of the aggregate Exercise Price of the shares to be purchased, with such payment made by wire transfer or cashier's check drawn on a United States bank;

(d) receipt by the Company of such written investment representations and warranties by the Holder as the Company may reasonably request in accordance with paragraph 7 of the Loan Agreement.

This Warrant will be deemed to have been exercised (the "Exercise Date") on the later of (x) the date the Notice of Exercise is delivered to the Company by facsimile copy, (y) the date this Warrant is received by the Company, and (z) the date the Exercise Price is received by the Company.

3.2 Issuance of Warrant Shares. Certificates representing the shares of common stock purchased hereunder will be delivered to the Holder within 10 Trading Days following the Exercise Date ("Warrant Share Delivery Date"). The Warrant Shares shall be deemed to have been issued, and Holder or any other person so designated to be named therein shall be deemed to have become a holder of record of such shares for all purposes, as of the date the Exercise Date. If the Company fails to deliver to the Holder a certificate or certificates representing the Warrant Shares pursuant to this paragraph 3.2 within 20 Trading Days following the Warrant Share Delivery Date, then the Holder will have the right to rescind such exercise. If this Warrant shall have been exercised in part, the Company shall, at the time of delivery of the certificate or certificates representing Warrant Shares, deliver to Holder a new Warrant evidencing the rights of Holder to purchase the unpurchased Warrant Shares called for by this Warrant, which new Warrant shall in all other respects be identical with this Warrant.

3.3 Charges, Taxes and Expenses. Issuance of certificates for Warrant Shares shall be made without charge to the Holder for any issue or transfer tax or other incidental expense in respect of the issuance of such certificate, all of which taxes and expenses shall be paid by the Company, and such certificates shall be issued in the name of the Holder or in such name or names as may be directed by the Holder; provided, however, that if certificates for Warrant Shares are to be issued in a name other than the name of the Holder, this Warrant when surrendered for exercise shall be accompanied by the Assignment Form attached hereto duly executed by the Holder; and the Company may require, as a condition thereto, the payment of a sum sufficient to reimburse it for any transfer tax incidental thereto.

4. No Fractional Shares or Scrip. No fractional shares or scrip representing fractional shares shall be issued upon the exercise of this Warrant. As to any fraction of a share which Holder would otherwise be entitled to purchase upon such exercise, the Company shall pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Exercise Price.

5. Transfer, Division and Combination.

5.1 Transfer. Subject to compliance with any applicable securities laws and the conditions set forth in paragraphs 1 and 5.4 hereof and to the provisions of paragraph 7.7 of the Loan Agreement, this Warrant and all rights hereunder are transferable, in whole or in part, upon surrender of this Warrant at the principal office of the Company, together with a written assignment of this Warrant substantially in the form attached hereto duly executed by the Holder or its agent or attorney and funds sufficient to pay any transfer taxes payable upon the making of such transfer. Promptly following such surrender and, if required, such payment, the Company shall execute and deliver a new Warrant or Warrants in the name of the assignee or assignees and in the denomination or denominations specified in such instrument of assignment, and shall issue to the assignor a new Warrant evidencing the portion of this Warrant not so assigned, and this Warrant shall promptly be cancelled. A Warrant, if properly assigned, may be exercised by a new holder for the purchase of Warrant Shares without having a new Warrant issued.

5.2 Division; Combination. This Warrant may be divided or combined with other Warrants upon presentation hereof at the aforesaid office of the Company, together with a written notice specifying the names and denominations in which new Warrants are to be issued, signed by the Holder or its agent or attorney. Subject to compliance with paragraph 5.1, as to any transfer which may be involved in such division or combination, the Company shall execute and deliver a new Warrant or Warrants in exchange for the Warrant or Warrants to be divided or combined in accordance with such notice.

5.3 Issuance; Records. The Company shall prepare, issue and deliver at its own expense (other than transfer taxes) the new Warrant or Warrants under this paragraph 5. The Company agrees to maintain, at its aforesaid office, books for the registration and the registration of transfer of the Warrants.

5.4 Securities Laws Compliance. If, at the time of the surrender of this Warrant in connection with any transfer of this Warrant, the transfer of this Warrant shall not be registered pursuant to an effective registration statement under the Securities Act and under applicable state securities or blue sky laws, the Company may require, as a condition of allowing such transfer, that

(a) the Holder or transferee of this Warrant, as the case may be, furnish to the Company a written opinion of counsel (which opinion shall be in form, substance and scope customary for opinions of counsel in comparable transactions) to the effect that such transfer may be made without registration under the Securities Act and under applicable state securities or blue sky laws;

(b) the holder or transferee execute and deliver to the Company an investment letter in form and substance acceptable to the Company; and

(c) the transferee be an "accredited investor" as defined in Rule 501 promulgated under the Securities Act or a qualified institutional buyer as defined in Rule 144A under the Securities Act.

6. No Rights as Shareholder until Exercise. This Warrant does not entitle the Holder to any voting rights or other rights as a shareholder of the Company prior to the exercise hereof. The Warrant Shares shall be deemed to have been issued, and Holder or any other person so designated to be named therein shall be deemed to have become a holder of record of such shares for all purposes, as of the close of business on the date the Exercise and all taxes required to be paid by the Holder, if any, pursuant to paragraph 3.3 prior to the issuance of such shares, have been paid.

7. Loss, Theft, Destruction or Mutilation of Warrant. The Company covenants that upon receipt by the Company of evidence reasonably satisfactory to it of the loss, theft, destruction or mutilation of this Warrant or any stock certificate relating to the Warrant Shares, and in case of loss, theft, or destruction of indemnity or security reasonably satisfactory to it (which, in the case of the Warrant, shall not include the posting of any bond), and upon surrender and cancellation of such Warrant or stock certificate, if mutilated, the Company will make and deliver a new Warrant or stock certificate of like tenor and dated as of such cancellation, in lieu of such Warrant or stock certificate.

8. Saturdays, Sundays, Holidays, etc. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall be a Saturday, Sunday or a legal holiday, then such action may be taken or such right may be exercised on the next succeeding day not a Saturday, Sunday or legal holiday.

9. Adjustments of Exercise Price and Warrant Shares. The number and kind of securities purchasable upon the exercise of this Warrant and the Exercise Price shall be subject to adjustment from time to time upon the happening of any of the following. If the Company:

(a) pays a dividend in shares of common stock or make a distribution in shares of common stock to holders of its outstanding common stock,

(b) subdivides its outstanding shares of common stock into a greater number of shares,

(c) combines its outstanding shares of common stock into a smaller number of shares of common stock, or

(d) issues any shares of its capital stock in a reclassification of the common stock,

then the number of Warrant Shares purchasable upon exercise of this Warrant immediately prior thereto shall be adjusted so that the Holder shall be entitled to receive the kind and number of Warrant Shares or other securities of the Company which it would have owned or have been entitled to receive had such Warrant been exercised in advance thereof. Upon each such adjustment of the kind and number of Warrant Shares or other securities of the Company which are purchasable hereunder, the Holder shall thereafter be entitled to purchase the number of Warrant Shares or other securities resulting from such adjustment at an Exercise Price per Warrant Share or other security obtained by multiplying the Exercise Price in effect immediately prior to such adjustment by the number of Warrant Shares purchasable pursuant hereto immediately prior to such adjustment and dividing by the number of Warrant Shares or other securities of the Company that are purchasable pursuant hereto immediately after such adjustment. An adjustment made pursuant to this paragraph shall become effective immediately after the effective date of such event retroactive to the record date, if any, for such event.

10. Reorganization, Reclassification, Merger, Consolidation or Disposition of Assets. If the Company shall reorganize its capital, reclassify its capital stock, consolidate or merge with or into another corporation (where the Company is not the surviving corporation, or sell, transfer or otherwise dispose of all or substantially all of its property, assets or business to another corporation and, pursuant to the terms of such reorganization, reclassification, merger, consolidation or disposition of assets, shares of common stock of the successor or acquiring corporation, or any cash, shares of stock or other securities or property of any nature whatsoever (including warrants or other subscription or purchase rights) in addition to or in lieu of common stock of the successor or acquiring corporation ("Other Property"), are to be received by or distributed to the holders of common stock of the Company, then the Holder shall have the right thereafter to receive, upon exercise of this Warrant, the number of shares of common stock of the successor or acquiring corporation or of the Company, if it is the surviving corporation, and Other Property receivable upon or as a result of such reorganization, reclassification, merger, consolidation or disposition of assets by a Holder of the number of shares of common stock for which this Warrant is exercisable immediately prior to such event. In case of any such reorganization, reclassification, merger, consolidation or disposition of assets, the successor or acquiring corporation (if other than the Company) shall expressly assume the due and punctual observance and performance of each and every covenant and condition of this Warrant to be performed and observed by the Company and all the obligations and liabilities hereunder, subject to such modifications as may be deemed appropriate (as determined in good faith by resolution of the Board of Directors of the Company) in order to provide for adjustments of Warrant Shares for which this Warrant is exercisable which shall be as nearly equivalent as practicable to the adjustments provided for in this paragraph 10. For purposes of this paragraph 10, "common stock of the successor or acquiring corporation" shall include stock of such corporation of any class which is not preferred as to dividends or assets over any other class of stock of such corporation and which is not subject to redemption and shall also include any evidences of indebtedness, shares of stock or other securities which are convertible into or exchangeable for any such stock, either immediately or upon the arrival of a specified date or the happening of a specified event and any warrants or other rights to subscribe for or purchase any such stock. The foregoing provisions of this paragraph 10 shall similarly apply to successive reorganizations, reclassifications, mergers, consolidations or disposition of assets.

11. Voluntary Adjustment by the Company. The Company may at any time during the term of this Warrant reduce the then current Exercise Price to any amount and for any period of time deemed appropriate by the Board of Directors of the Company, but not below the par value of the common stock.

12. Notice of Adjustment. Whenever the number of Warrant Shares or number or kind of securities or other property purchasable upon the exercise of this Warrant or the Exercise Price is adjusted, as herein provided, the Company shall give notice thereof to the Holder, which notice shall state the number of Warrant Shares (and other securities or property) purchasable upon the exercise of this Warrant and the Exercise Price of such Warrant Shares (and other securities or property) after such adjustment, setting forth a brief statement of the facts requiring such adjustment and setting forth the computation by which such adjustment was made.

13. Authorized Shares. The Company covenants that during the period this Warrant is outstanding, it will reserve from its authorized and unissued common stock a sufficient number of shares to provide for the issuance of the Warrant Shares upon the exercise of any purchase rights under this Warrant. The Company further covenants that its issuance of this Warrant shall constitute full authority to its officers who are charged with the duty of executing stock certificates to execute and issue the necessary certificates for the Warrant Shares upon the exercise of the purchase rights under this Warrant. The Company will take all such reasonable action as may be necessary to assure that such Warrant Shares may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of the Trading Market upon which the common stock may be listed.

14. Miscellaneous.

14.1 Jurisdiction/Venue. All questions concerning the construction, validity, enforcement and interpretation of this Warrant shall be governed by and construed and enforced in accordance with the internal laws of the State of Delaware, without regard to the principles of conflicts of law thereof. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the state or federal court of Delaware, for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is improper or inconvenient venue for such proceeding.

14.2 Restrictions. The Holder acknowledges that the Company has no obligation to register Warrant Shares with the Securities and Exchange Commission or any state securities agency, and the Warrant Shares acquired upon the exercise of this Warrant, if not registered, will have restrictions upon resale imposed by state and federal securities laws.

14.3 Notices. Any notice, request or other document required or permitted to be given or delivered to the Holder by the Company shall be delivered in accordance with the notice provisions of the Loan Agreement.

14.4 Limitation of Liability. No provision of this Warrant, in the absence of any affirmative action by Holder to exercise this Warrant or purchase Warrant Shares, and no enumeration herein of the rights or privileges of Holder, shall give rise to any liability of Holder for the purchase price of any common stock or as a stockholder of the Company, whether such liability is asserted by the Company or by creditors of the Company.

14.5 Successors and Assigns. Subject to applicable securities laws, this Warrant and the rights and obligations evidenced hereby shall inure to the benefit of and be binding upon the successors of the Company and the successors and permitted assigns of Holder. The provisions of this Warrant are intended to be for the benefit of all Holders from time to time of this Warrant and shall be enforceable by any such Holder or holder of Warrant Shares.

14.6 Amendment. This Warrant may be modified or amended or the provisions hereof waived with the written consent of the Company and the Holder.

14.7 Severability. Wherever possible, each provision of this Warrant shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Warrant shall be prohibited by or invalid under applicable law, such provision shall be ineffective to the extent of such prohibition or invalidity, without invalidating the remainder of such provisions or the remaining provisions of this Warrant.

14.8 Headings. The headings used in this Warrant are for the convenience of reference only and shall not, for any purpose, be deemed a part of this Warrant.

[SIGNATURES APPEAR ON NEXT PAGE]

IN WITNESS WHEREOF, the Company has caused this Warrant to be executed by its officer thereunto duly authorized.

Dated: August 2, 2013

PERMA-FIX ENVIRONMENTAL SERVICES, INC.

By: /s/Ben Naccarato
Name: B Naccarato
Title: CFO

("PESI)

/s/Robert Ferguson
ROBERT FERGUSON , an individual

(the "Holder")

NOTICE OF EXERCISE

To: Perma-Fix Environmental Services, Inc.

(1) The undersigned hereby elects to purchase _____ Warrant Shares of the Company pursuant to the terms of the attached Warrant (only if exercised in full), and tenders herewith payment of the exercise price in full, together with all applicable transfer taxes, if any. Payment shall take the form of in lawful money of the United States.

(2) Please issue a certificate or certificates representing said Warrant Shares in the name of the undersigned or in such other name as is specified below:

_____

(3) The Warrant Shares shall be delivered to the following:

_____

_____

_____

(4) Accredited Investor. The undersigned is an "accredited investor" as defined in Regulation D under the Securities Act of 1933, as amended.

[PURCHASER]

By: _____
Name:
Title:

Dated: _____

ASSIGNMENT FORM

(To assign the foregoing warrant, execute
this form and supply required information.
Do not use this form to exercise the warrant.)

FOR VALUE RECEIVED, the foregoing Warrant and all rights evidenced thereby are hereby assigned to

_____ whose address is

_____.

_____

Dated: _____, _____

Holder's Signature: _____

Holder's Address: _____

_____

Signature Guaranteed: _____

NOTE: The signature to this Assignment Form must correspond with the name as it appears on the face of the Warrant, without alteration or enlargement or any change whatsoever, and must be guaranteed by a bank or trust company. Officers of corporations and those acting in a fiduciary or other representative capacity should file proper evidence of authority to assign the foregoing Warrant.

EXHIBIT 31.1

CERTIFICATIONS

I, Louis F. Centofanti, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Perma-Fix Environmental Services, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of the internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 8, 2013

/s/ Louis F. Centofanti

Louis F. Centofanti
Chairman of the Board
Chief Executive Officer

EXHIBIT 31.2

CERTIFICATIONS

I, Ben Naccarato, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Perma-Fix Environmental Services, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of the internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 8, 2013

/s/ Ben Naccarato

Ben Naccarato
Vice President and
Chief Financial Officer

EXHIBIT 32.1

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

In connection with the Quarterly Report of Perma-Fix Environmental Services, Inc. ("PESI") on Form 10-Q for the quarter ended June 30, 2013, as filed with the Securities and Exchange Commission on the date hereof (the "Form 10-Q"), I, Dr. Louis F. Centofanti, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that:

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

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

Dated: August 8, 2013

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

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

EXHIBIT 32.2

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

In connection with the Annual Report of Perma-Fix Environmental Services, Inc. ("PESI") on Form 10-Q for the quarter ended June 30, 2013, as filed with the Securities and Exchange Commission on the date hereof (the "Form 10-Q"), I, Ben Naccarato, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that:

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

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

Dated: August 8, 2013

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

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