

PERMA FIX ENVIRONMENTAL SERVICES INC  
Form 10-K  
April 15, 2014

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

FORM 10-K

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15 (d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 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. 1-11596

PERMA-FIX ENVIRONMENTAL SERVICES, INC.  
(Exact name of registrant as specified in its charter)

Delaware

State or other jurisdiction of incorporation or  
organization

58-1954497

(IRS Employer  
Identification Number)

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

30350  
(Zip Code)

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

Securities registered pursuant to Section 12(b) of the Act:

Title of each class

Name of each exchange on which  
registered

Common Stock, \$.001 Par Value

NASDAQ Capital Markets

Indicate by check mark if the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.  
Yes ☐ No ☒

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.  
Yes ☐ No ☒

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 ☐

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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 if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained to the best of the Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

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 Act).

Yes ☐ No ☒

The aggregate market value of the Registrant's voting and non-voting common equity held by nonaffiliates of the Registrant computed by reference to the closing sale price of such stock as reported by NASDAQ as of the last business day of the most recently completed second fiscal quarter (June 30, 2013), was approximately \$18,613,733. For the purposes of this calculation, all executive officers and directors of the Registrant (as indicated in Item 12) are deemed to be affiliates. As of October 15, 2013, the Registrant's outstanding voting and non-voting common equity was subject to a 1-for-5 reverse stock split. As of the effective date of the reverse stock split, the aggregate market value (as computed by reference to the closing sales price as reported by NASDAQ on the effective date of such reverse stock split) of the Registrant's voting and non-voting common equity held by non-affiliates was approximately \$34,541,837. Such determination should not be deemed an admission that such directors or officers, are, in fact, affiliates of the Registrant. The Company's Common Stock is listed on the NASDAQ Capital Markets.

As of March 17, 2014, there were 11,419,650 shares of the registrant's Common Stock, \$.001 par value, outstanding.

Documents incorporated by reference: None

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PART I

ITEM 1. BUSINESS

Company Overview and Principal Products and Services

Perma-Fix Environmental Services, Inc. (the Company, which may be referred to as we, us, or our), a Delaware corporation incorporated in December of 1990, is an environmental and technology know-how company, which provides:

- o Treatment, storage, processing and disposal of mixed waste (which is waste that contains both low-level radioactive and hazardous waste), non-nuclear hazardous waste, nuclear low level, and higher activity radioactive wastes;
- o Research and development (“R&D”) activities to identify, develop and implement innovative waste processing techniques for problematic waste streams;

- o On-site waste management services to commercial and government customers;

Technical services which includes: (a) health physics and radiological control technician services; (b) safety and industrial hygiene services; (c) staff augmentation services providing consulting, engineering, project management, waste management, environmental, and decontamination and decommissioning field personal, technical personnel, and management and services to commercial and government customers; and (d) consulting engineering services 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;

Nuclear services which includes: (a) technology-based services including engineering, decontamination and decommissioning (“D&D”), specialty services and construction, logistics, transportation, processing and disposal and (b) remediation of nuclear licensed and federal facilities and the remediation cleanup of nuclear legacy sites; and o Instrumentation and measurement technologies.

We have grown through acquisitions and internal growth. Our goal is to continue focus on the efficient operation of our facilities and on-site activities, continue to evaluate strategic acquisitions, and to continue the R&D of innovative technologies to expand company service offering and to treat nuclear waste, mixed waste, and industrial waste. The Company is focusing on expansion into both commercial and international markets to help offset the uncertainties of government spending in the USA, which a significant portion of the Company’s revenue is derived from. This includes new services, new customers and increased market share in our current markets.

Our business includes services provided by our two segments, Treatment and Services, as described below.

We service research institutions, commercial companies, public utilities, and governmental agencies nationwide, including the U.S. Department of Energy (“DOE”) and U.S. Department of Defense (“DOD”). The distribution channels for our services are through direct sales to customers or via intermediaries.

Our executive offices are located at 8302 Dunwoody Place, Suite 250, Atlanta, Georgia 30350.

Segment Information and Foreign and Domestic Operations and Export Sales

The Company has two reportable segments. In accordance with Financial Accounting Standards Board (“FASB”) Accounting Standards Codification (“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 and assess its performance; and
- for which discrete financial information is available.



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TREATMENT SEGMENT reporting includes:

nuclear, low-level radioactive, mixed, hazardous and non-hazardous waste treatment, processing and disposal services primarily through four uniquely licensed (Nuclear Regulatory Commission or state equivalent) and permitted (Environmental Protection Agency ("EPA") or state equivalent) treatment and storage facilities held by the following subsidiaries: Perma-Fix of Florida, Inc. ("PFF"), Diversified Scientific Services, Inc., ("DSSI"), Perma-Fix Northwest Richland, Inc. ("PFNWR"), and East Tennessee Materials & Energy Corporation ("M&EC"). The presence of nuclear and low-level radioactive constituents within the waste streams processed by this segment creates different and unique operational, processing and permitting/licensing requirements; and R&D activities to identify, develop and implement innovative waste processing techniques for problematic waste streams.

For 2013, the Treatment Segment accounted for \$35,540,000 or 47.8% of total revenue from continuing operations, as compared to \$45,882,000 or 36.0% of total revenue from continuing operations for 2012. See " – Dependence Upon a Single or Few Customers" and "Financial Statements and Supplementary Data" for further details and a discussion as to our Segments' contracts with the federal government or with others as a subcontractor to the federal government.

SERVICES SEGMENT reporting includes:

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

For 2013, the Services Segment accounted for \$38,873,000 or 52.2% of total revenue from continuing operations, as compared to \$81,627,000 or 64.0% of total revenue from continuing operations for 2012. See " – Dependence Upon a Single or Few Customers" and "Financial Statements and Supplementary Data" for further details and a discussion as to our Segments' contracts with the federal government or with others as a subcontractor to the federal government.





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Our segments exclude the Corporate and Business Center (formerly known as our Operations Headquarters), which do not generate revenue. Our discontinued operations encompass the following: 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; 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 in 2011 and prior; and Perma-Fix of Michigan, Inc. (“PFMI”) and Perma-Fix of Memphis, Inc. (“PFM”), two previously closed locations, approved as discontinued operations by our Board of Directors effective October 4, 2004, and March 12, 1998, respectively.

On August 14, 2013, our PFSG facility incurred fire damage which has left it non-operational at this time. Certain equipment and portions of the building structures were damaged. We carry general liability, pollution, property and business interruption, and workers compensation insurance with a maximum deductible of approximately \$300,000 (consisting of \$100,000 deductible for each workers compensation, pollution, and property insurance policy). We are continuing to work with our insurance company in receiving insurance recoveries related to this fire. We are currently evaluating options regarding the future operation of this facility as we undergo the rebuilding process on the part of the facility damaged by the fire. We continue to market our PFSG facility for sale.

## Foreign Operations

Our operations includes Perma-Fix UK Limited (within our Services Segment), located in Blaydon On Tyne, England. Revenue generated from this operation was approximately \$144,000 or 0.2% and \$158,000 or 0.1% of our consolidated revenue from continuing operations during 2013 and 2012, respectively.

Our consolidated revenue from continuing operations for 2013 and 2012 included approximately \$4,409,000 or 5.9% and \$2,433,000 or 1.9%, respectively, from an external customer located in Canada.

## Importance of Patents, Trademarks and Proprietary Technology

We do not believe we are dependent on any particular trademark in order to operate our business or any significant segment thereof. We have received registration to May 2022 and December 2020, for the service marks “Perma-Fix Environmental Services” and “Perma-Fix”, respectively. In addition, we have received registration for six service marks for our Safety & Ecology Holdings Corporation and its subsidiaries (collectively known as “Safety and Ecology Corporation” or “SEC”) to periods ranging from 2014 to 2018.

We are dependent on our permits and licenses discussed below in order to operate our businesses (See “-Permits and Licenses”).

We are active in the R&D of technologies that allow us to address certain of our customers' environmental needs. To date, our R&D efforts have resulted in the granting of twelve active patents and the filing of several applications for which patents are pending. These twelve active patents have remaining lives ranging from approximately six to fourteen years. We have filed a patent application in connection with our new technology to produce Technetium-99 (“Tc 99m”) for certain types of medical applications and have formed a new subsidiary to develop and market this new technology.

Our flagship technology, the Perma-Fix Process, is a proprietary, cost effective, treatment technology that converts hazardous waste into non-hazardous material. We have also developed the Perma-Fix II process, a multi-step treatment process that converts hazardous organic components into non-hazardous material. The Perma-Fix II process is particularly important to our mixed waste strategy. The Perma-Fix II process is designed to remove certain types of organic hazardous constituents from soils or other solids and sludges (“Solids”) through a water-based system. Until development of this Perma-Fix II process, we were not aware of a relatively simple and inexpensive process that would remove the organic hazardous constituents from Solids without elaborate and expensive equipment or expensive treating agents. Due to the organic hazardous constituents involved, the disposal options for such materials

are limited, resulting in high disposal cost when there is a disposal option available. By reducing the organic hazardous waste constituents in the Solids to a level where the Solids meet Land Disposal Requirements, the generator's disposal options for such waste are substantially increased, allowing the generator to dispose of such waste at substantially less cost. We began commercial use of the Perma-Fix II process in 2000. However, changes to current environmental laws and regulations could limit the use of the Perma-Fix II process or the disposal options available to the generator. See “—Permits and Licenses” and “—Research and Development.”

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Permits and Licenses

Waste management service companies are subject to extensive, evolving and increasingly stringent federal, state, and local environmental laws and regulations. Such federal, state and local environmental laws and regulations govern our activities regarding the treatment, storage, processing, disposal and transportation of hazardous, non-hazardous and radioactive wastes, and require us to obtain and maintain permits, licenses and/or approvals in order to conduct certain of our waste activities. Failure to obtain and maintain our permits or approvals would have a material adverse effect on us, our operations, and financial condition. The permits and licenses have terms ranging from one to ten years, and provided that we maintain a reasonable level of compliance, renew with minimal effort, and cost. Historically, there have been no compelling challenges to the permit and license renewals. We believe that these permit and license requirements represent a potential barrier to entry for possible competitors.

PFF, located in Gainesville, Florida, operates its hazardous, mixed and low-level radioactive waste activities under a RCRA (“Resource Conservation and Recovery Act”) Part B permit, Toxic Substances Control Act (“TSCA”) authorization, Restricted RX Drug Distributor-Destruction license, and a radioactive materials license issued by the State of Florida.

DSSI, located in Kingston, Tennessee, conducts mixed and low-level radioactive waste storage and treatment activities under RCRA Part B permits and a radioactive materials license issued by the State of Tennessee Department of Environment and Conservation. Co-regulated TSCA Polychlorinated Biphenyl (“PCB”) wastes are also managed for PCB destruction under the U.S. Environmental Protection Agency (“EPA”) Approval effective June 2008.

M&EC, located in Oak Ridge, Tennessee, performs hazardous, low-level radioactive and mixed waste storage and treatment operations under a RCRA Part B permit and a radioactive materials license issued by the State of Tennessee Department of Environment and Conservation. Co-regulated TSCA PCB wastes are also managed under EPA Approvals applicable to site-specific treatment units.

PFNWR, located in Richland, Washington, operates a low-level radioactive waste processing facility as well as a mixed waste processing facility. Radioactive material processing is authorized under radioactive materials licenses issued by the State of Washington and mixed waste processing is additionally authorized under a RCRA Part B permit with TSCA authorization issued jointly by the State of Washington and the EPA.

The combination of a RCRA Part B hazardous waste permit, TSCA authorization, and a radioactive materials license, as held by PFF, DSSI M&EC, and PFNWR are very difficult to obtain for a single facility and make these facilities unique.

PFSG (discontinued operations) operates a hazardous waste treatment and storage facility under various permits, including a RCRA Part B permit, issued by the State of Georgia. On August 14, 2013, our PFSG facility incurred fire damage which has left it non-operational at this time. A certain storage and processing area of the facility affected by the fire is currently undergoing RCRA closure and is planned to be reconstructed and repermited. We are permitted to commence operations in another certain processing and storage area of the facility upon the Company’s decision to recommence operations.

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## Backlog

The Treatment Segment of our Company maintains a backlog of stored waste, which represents waste that has not been processed. The backlog is principally a result of the timing and complexity of the waste being brought into the facilities and the selling price per container. As of December 31, 2013, our Treatment Segment had a backlog of approximately \$7,695,000, as compared to approximately \$8,668,000 as of December 31, 2012. Additionally, the time it takes to process waste from the time it arrives may increase due to the types and complexities of the waste we are currently receiving. We typically process our backlog during periods of low waste receipts, which historically has been in the first or fourth quarter.

## Dependence Upon a Single or Few 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 CH Plateau Remediation Company ("CHPRC") as discussed below) to the federal government, representing approximately \$47,557,000 or 63.9% of our total revenue from continuing operations during 2013, as compared to \$101,533,000 or 79.6% of our total revenue from continuing operations during 2012.

The following customer accounted for 10% or more of the total revenues generated from continuing operations for twelve months ended December 31, 2013 and 2012:

|          |      | Total        | % of    |   |
|----------|------|--------------|---------|---|
| Customer | Year | Revenue      | Total   |   |
|          |      |              | Revenue |   |
| CHPRC    | 2013 | \$19,922,000 | 26.8    | % |
|          | 2012 | \$24,652,000 | 19.3    | % |

Revenue generated from CHPRC includes revenue generated from the CHPRC subcontract at our Services Segment and various waste processing contracts at our Treatment Segment. The CHPRC subcontract was a cost plus award fee subcontract awarded to us during the second quarter of 2008 to participate in the cleanup of the central portion of the Hanford Site located in the state of Washington. This subcontract expired on September 30, 2013. See further discussion as to the effect on us of the ending of this subcontract under "Management's Discussion and Analysis of Financial Conditions and Results of Operations – Review."

## Competitive Conditions

The Treatment Segment's largest competitor is EnergySolutions that operates treatment and disposal facilities in Oak Ridge, TN and Clive, UT. Waste Control Specialists ("WCS"), which has newly licensed disposal capabilities in Andrews, TX, has recently emerged as a competitor in the treatment market and is gaining market share. Perma-Fix now has two options for disposal of treated nuclear waste and thus mitigates the prior risk of EnergySolutions providing the only outlet for disposal. The Treatment Segment treats and disposes of DOE generated wastes largely at DOE owned sites. Smaller competitors are also present in the market place; however, they do not present a significant challenge at this time. Our Treatment Segment currently solicits business primarily on a North American basis with both government and commercial clients; however, we are focusing on emerging international markets for future additional work.

The permitting and licensing requirements, and the cost to obtain such permits, are barriers to the entry of hazardous waste and radioactive and mixed waste activities as presently operated by our waste treatment subsidiaries. If the permit requirements for hazardous waste treatment, storage, and disposal (“TSD”) activities and/or the licensing requirements for the handling of low level radioactive matters are eliminated or if such licenses or permits were made less rigorous to obtain, such would allow companies to enter into these markets and provide greater competition.

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Our Services Segment is engaged in highly competitive businesses in which a number of our government contracts and some of our commercial contracts are awarded through competitive bidding processes. The extent of such competition varies according to the industries and markets in which our customers operate as well as the geographic areas in which we operate. The degree and type of competition we face is also often influenced by the type of projects for which our Services Segment competes, especially projects subject to the governmental bid process. In November 2013, Perma-Fix regained the ability to certify and bid government contracts as a small business, which allows us to bid for prime contracts for small businesses that are set aside for procurements. Large businesses are more willing to team with small businesses and thus this recent change in size status will be an advantage for future work. There are a number of qualified small businesses in our market that will provide intense competition that may provide a challenge to our ability to maintain strong growth rates and acceptable profit margins. For international business there are additional competitors, many from within the country the work is to be performed, making winning work in foreign countries more challenging. If our Services Segment is unable to meet these competitive challenges, it could lose market share and experience an overall reduction in its profits.

## Certain Environmental Expenditures and Potential Environmental Liabilities

### Environmental Liabilities

We have four remediation projects, which are currently in progress at certain of our discontinued facilities (PFD, PFM, PFSG, and PFMI). These remediation projects principally entail the removal/remediation of contaminated soil and, in most cases, the remediation of surrounding ground water. All of the remedial clean-up projects were an issue for that facility for years prior to our acquisition of the facility and were recognized pursuant to a business combination and recorded as part of the purchase price allocation to assets acquired and liabilities assumed. Three of the facilities (PFD, PFM, and PFSG) are RCRA permitted facilities, and as a result, the remediation activities are closely reviewed and monitored by the applicable state regulators. We recognized our best estimate of such environmental liabilities upon the acquisition of our facilities, as part of the acquisition cost.

At December 31, 2013, we had total accrued environmental remediation liabilities of \$1,031,000, of which \$649,000 is recorded as a current liability, which reflects a decrease of \$583,000 from the December 31, 2012 balance of \$1,614,000. The net decrease represents payments of approximately \$50,000 on remediation projects at the four locations and a reduction in reserve of approximately \$533,000 at PFSG based on reassessment of the remediation reserve.

No insurance or third party recovery was taken into account in determining our cost estimates or reserves, nor do our cost estimates or reserves reflect any discount for present value purposes.

The nature of our business exposes us to significant cost to comply with governmental environmental laws, rules and regulations and risk of liability for damages. Such potential liability could involve, for example, claims for cleanup costs, personal injury or damage to the environment in cases where we are held responsible for the release of hazardous materials; claims of employees, customers or third parties for personal injury or property damage occurring in the course of our operations; and claims alleging negligence or professional errors or omissions in the planning or performance of our services. In addition, we could be deemed a responsible party for the costs of required cleanup of any property, which may be contaminated by hazardous substances generated or transported by us to a site we selected, including properties owned or leased by us. We could also be subject to fines and civil penalties in connection with violations of regulatory requirements.

## Research and Development

Innovation and technical know-how by our operations is very important to the success of our business. Our goal is to discover, develop and bring to market innovative ways to process waste that address unmet environmental needs. We conduct research internally, and also through collaborations with other third parties. The majority of our research activities are performed as we receive new and unique waste to treat. We feel that our investments in research have been rewarded by the discovery of the Perma-Fix Process and the Perma-Fix II process. Our competitors also devote

resources to research and development and many such competitors have greater resources at their disposal than we do. We have estimated that during 2013 and 2012, we spent approximately \$1,764,000 and \$1,823,000, respectively, in Company-sponsored research and development activities.

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### Number of Employees

In our service-driven business, our employees are vital to our success. We believe we have good relationships with our employees. As of December 31, 2013, we employed approximately 300 employees. We have no union employees at any of our Segments.

### Governmental Regulation

Environmental companies and their customers are subject to extensive and evolving environmental laws and regulations by a number of national, state and local environmental, safety and health agencies, the principal of which being the EPA. These laws and regulations largely contribute to the demand for our services. Although our customers remain responsible by law for their environmental problems, we must also comply with the requirements of those laws applicable to our services. We cannot predict the extent to which our operations may be affected by future enforcement policies as applied to existing laws or by the enactment of new environmental laws and regulations. Moreover, any predictions regarding possible liability are further complicated by the fact that under current environmental laws we could be jointly and severally liable for certain activities of third parties over whom we have little or no control. Although we believe that we are currently in substantial compliance with applicable laws and regulations, we could be subject to fines, penalties or other liabilities or could be adversely affected by existing or subsequently enacted laws or regulations. The principal environmental laws affecting our customers and us are briefly discussed below.

#### The Resource Conservation and Recovery Act of 1976, as amended (“RCRA”)

RCRA and its associated regulations establish a strict and comprehensive permitting and regulatory program applicable to hazardous waste. The EPA has promulgated regulations under RCRA for new and existing treatment, storage and disposal facilities including incinerators, storage and treatment tanks, storage containers, storage and treatment surface impoundments, waste piles and landfills. Every facility that treats, stores or disposes of hazardous waste must obtain a RCRA permit or must obtain interim status from the EPA, or a state agency, which has been authorized by the EPA to administer its program, and must comply with certain operating, financial responsibility and closure requirements.

#### The Comprehensive Environmental Response, Compensation and Liability Act of 1980 (“CERCLA,” also referred to as the “Superfund Act”)

CERCLA governs the cleanup of sites at which hazardous substances are located or at which hazardous substances have been released or are threatened to be released into the environment. CERCLA authorizes the EPA to compel responsible parties to clean up sites and provides for punitive damages for noncompliance. CERCLA imposes joint and several liabilities for the costs of clean up and damages to natural resources.

### Health and Safety Regulations

The operation of our environmental activities is subject to the requirements of the Occupational Safety and Health Act (“OSHA”) and comparable state laws. Regulations promulgated under OSHA by the Department of Labor require employers of persons in the transportation and environmental industries, including independent contractors, to implement hazard communications, work practices and personnel protection programs in order to protect employees from equipment safety hazards and exposure to hazardous chemicals.

### Atomic Energy Act

The Atomic Energy Act of 1954 governs the safe handling and use of Source, Special Nuclear and Byproduct materials in the U.S. and its territories. This act authorized the Atomic Energy Commission (now the Nuclear Regulatory Commission “USNRC”) to enter into “Agreements with States to carry out those regulatory functions in those respective states except for Nuclear Power Plants and federal facilities like the VA hospitals and the DOE operations.” The State of Florida (with the USNRC oversight), Office of Radiation Control, regulates the radiological program of the PFF facility, and the State of Tennessee (with the USNRC oversight), Tennessee Department of Radiological Health, regulates the radiological program of the DSSI and M&EC facilities. The State of Washington (with the



USNRC oversight) Department of Health, regulates the radiological operations of the PFNWR facility.

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### Other Laws

Our activities are subject to other federal environmental protection and similar laws, including, without limitation, the Clean Water Act, the Clean Air Act, the Hazardous Materials Transportation Act and the Toxic Substances Control Act. Many states have also adopted laws for the protection of the environment which may affect us, including laws governing the generation, handling, transportation and disposition of hazardous substances and laws governing the investigation and cleanup of, and liability for, contaminated sites. Some of these state provisions are broader and more stringent than existing federal law and regulations. Our failure to conform our services to the requirements of any of these other applicable federal or state laws could subject us to substantial liabilities which could have a material adverse effect on us, our operations and financial condition. In addition to various federal, state and local environmental regulations, our hazardous waste transportation activities are regulated by the U.S. Department of Transportation, the Interstate Commerce Commission and transportation regulatory bodies in the states in which we operate. We cannot predict the extent to which we may be affected by any law or rule that may be enacted or enforced in the future, or any new or different interpretations of existing laws or rules.

### ITEM 1A. RISK FACTORS

The following are certain risk factors that could affect our business, financial performance, and results of operations. These risk factors should be considered in connection with evaluating the forward-looking statements contained in this Form 10-K, as the forward-looking statements are based on current expectations, and actual results and conditions could differ materially from the current expectations. Investing in our securities involves a high degree of risk, and before making an investment decision, you should carefully consider these risk factors as well as other information we include or incorporate by reference in the other reports we file with the Securities and Exchange Commission (the “Commission”).

#### Risks Relating to our Operations

Failure to maintain our financial assurance coverage that we are required to have in order to operate our permitted treatment, storage and disposal facilities could have a material adverse effect on us.

American International Group (“AIG”) provides our finite risk insurance policies which provide financial assurance to the applicable states for our permitted facilities in the event of unforeseen closure of those facilities. We are required to provide and to maintain financial assurance that guarantees to the state that in the event of closure, our permitted facilities will be closed in accordance with the regulations. Our initial policy provides a maximum of \$39,000,000 of financial assurance coverage. We also maintain a financial assurance policy for our PFNWR facility, which provides a maximum coverage of \$8,200,000. In the event that we are unable to obtain or maintain our financial assurance coverage for any reason, this could materially impact our operations and our permits which we are required to have in order to operate our treatment, storage, and disposal facilities

If we cannot maintain adequate insurance coverage, we will be unable to continue certain operations.

Our business exposes us to various risks, including claims for causing damage to property and injuries to persons that may involve allegations of negligence or professional errors or omissions in the performance of our services. Such claims could be substantial. We believe that our insurance coverage is presently adequate and similar to, or greater than, the coverage maintained by other companies in the industry of our size. If we are unable to obtain adequate or required insurance coverage in the future, or if our insurance is not available at affordable rates, we would violate our permit conditions and other requirements of the environmental laws, rules, and regulations under which we operate. Such violations would render us unable to continue certain of our operations. These events would have a material adverse effect on our financial condition.

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The inability to maintain existing government contracts or win new government contracts over an extended period could have a material adverse effect on our operations and adversely affect our future revenues.

A material amount of our segments' revenues are generated through various U.S. government contracts or subcontracts involving the U.S. government. Our revenues from governmental contracts and subcontracts relating to governmental facilities within our segments were approximately \$47,557,000 or 63.9% and \$101,533,000 or 79.6%, of our consolidated operating revenues from continuing operations for 2013 and 2012, respectively. Most of our government contracts or our subcontracts granted under government contracts are awarded through a regulated competitive bidding process. Some government contracts are awarded to multiple competitors, which increase overall competition and pricing pressure and may require us to make sustained post-award efforts to realize revenues under these government contracts. All contracts with, or subcontracts involving, the federal government are terminable, or subject to renegotiation, by the applicable governmental agency on 30 days notice, at the option of the governmental agency. If we fail to maintain or replace these relationships, or if a material contract is terminated or renegotiated in a manner that is materially adverse to us, our revenues and future operations could be materially adversely affected.

Our existing and future customers may reduce or halt their spending on nuclear services with outside vendors, including us.

A variety of factors may cause our existing or future customers (including the federal government) to reduce or halt their spending on nuclear services from outside vendors, including us. These factors include, but are not limited to:

- accidents, terrorism, natural disasters or other incidents occurring at nuclear facilities or involving shipments of nuclear materials;
- failure of the federal government to approve necessary budgets, or to reduce the amount of the budget necessary, to fund remediation of DOE and DOD sites;
- civic opposition to or changes in government policies regarding nuclear operations; or
- a reduction in demand for nuclear generating capacity; or
- failure to perform under existing contracts, directly or indirectly, with the federal government.

These events could result in or cause the federal government to terminate or cancel its existing contracts involving us to treat, store or dispose of contaminated waste and/or to perform remediation projects, at one or more of the federal sites since all contracts with, or subcontracts involving, the federal government are terminable upon or subject to renegotiation at the option of the government on 30 days notice. These events also could adversely affect us to the extent that they result in the reduction or elimination of contractual requirements, lower demand for nuclear services, burdensome regulation, disruptions of shipments or production, increased operational costs or difficulties or increased liability for actual or threatened property damage or personal injury.

Economic downturns and/or reductions in government funding could have a material negative impact on our businesses.

Demand for our services has been, and we expect that demand will continue to be, subject to significant fluctuations due to a variety of factors beyond our control, including economic conditions, reductions in the budget for spending to remediate federal sites due to numerous reasons, including, without limitation, the substantial deficits that the federal government has and is continuing to incur. During economic downturns and large budget deficits that the federal government and many states are experiencing, the ability of private and government entities to spend on nuclear services may decline significantly. Our operations depend, in large part, upon governmental funding, particularly funding levels at the DOE. Significant reductions in the level of governmental funding (for example, the annual budget of the DOE) or specifically mandated levels for different programs that are important to our business could have a material adverse impact on our business, financial position, results of operations and cash flows.

The loss of one or a few customers could have an adverse effect on us.

One or a few governmental customers or governmental related customers have in the past, and may in the future, account for a significant portion of our revenue in any one year or over a period of several consecutive years. Because

customers generally contract with us for specific projects, we may lose these significant customers from year to year as their projects with us are completed. Our inability to replace the business with other projects could have an adverse effect on our business and results of operations.

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As a government contractor, we are subject to extensive government regulation, and our failure to comply with applicable regulations could subject us to penalties that may restrict our ability to conduct our business.

Our governmental contracts, which are primarily with the DOE or subcontracts relating to DOE sites, are a significant part of our business. Allowable costs under U.S. government contracts are subject to audit by the U.S. government. If these audits result in determinations that costs claimed as reimbursable are not allowed costs or were not allocated in accordance with applicable regulations, we could be required to reimburse the U.S. government for amounts previously received.

Governmental contracts or subcontracts involving governmental facilities are often subject to specific procurement regulations, contract provisions and a variety of other requirements relating to the formation, administration, performance and accounting of these contracts. Many of these contracts include express or implied certifications of compliance with applicable regulations and contractual provisions. If we fail to comply with any regulations, requirements or statutes, our existing governmental contracts or subcontracts involving governmental facilities could be terminated or we could be suspended from government contracting or subcontracting. If one or more of our governmental contracts or subcontracts are terminated for any reason, or if we are suspended or debarred from government work, we could suffer a significant reduction in expected revenues and profits. Furthermore, as a result of our governmental contracts or subcontracts involving governmental facilities, claims for civil or criminal fraud may be brought by the government or violations of these regulations, requirements or statutes.

We are a holding company and depend, in large part, on receiving funds from our subsidiaries to fund our indebtedness.

Because we are a holding company and operations are conducted through our subsidiaries, our ability to meet our obligations depends, in large part, on the operating performance and cash flows of our subsidiaries.

Our auditors have expressed doubt about our ability to continue as a going concern.

Our financial statements have been prepared assuming that we will continue as a going concern. During the years ended December 31, 2013 and 2012, the Company incurred net losses of \$36,039,000 and \$3,179,000, respectively, and net cash used in operating activities was \$2,716,000 and \$3,409,000, respectively. Our net loss for 2013 included approximately \$27,856,000 in goodwill impairment charges recorded for three of our four reporting units and a charge to tax expense of approximately \$4,760,000 (\$3,596,000 for our continuing operations and \$1,164,000 for our discontinued operations) to provide a full valuation allowance on our net deferred tax assets. As of December 31, 2013, we have a deficit in working capital of \$2,958,000, an accumulated deficit of \$55,078,000 and cash on hand of \$333,000. We did not meet the minimum quarterly fixed charge coverage ratio requirement under our credit facility for the first and fourth quarters of 2013; however, we obtained a waiver from our lender for each of these quarters for the non-compliance (See "Breach of financial covenants in existing credit facility could result in a default, triggering repayment of outstanding debt under the credit facility" in this "Risk Factors" section for further potential risk factor related to our financial covenants). Revenues for our fiscal years 2013 and 2012 were below our expectations and internal forecasts as a result, in large part, of the government sequestration, federal governmental clients operating under reduced budgets, the government shutdown of approximately 16 days in October 2013, ending of contracts, and general adverse economic conditions. The reduction in our revenue has resulted in our inability to attain profitable operations and have generated negative operating cash flow from operations. These factors raise substantial doubt about our ability to continue as a going concern. As a result, our independent registered public accounting firm has included an explanatory paragraph regarding our ability to continue as a going concern in their report on our consolidated financial statements for the year ended December 31, 2013. We obtained a waiver from our lender waiving the requirement that the Company's consolidated financial statements for the year ended December 31, 2013, be issued without a going concern qualification. Our ability to continue our operations depends on our ability to generate profitable operations or complete equity or debt financings to increase our capital. There are no assurances that we will be able to increase our revenue and cash flow to a level which supports profitable operations and provides sufficient funds to pay our obligations.

Loss of certain key personnel could have a material adverse effect on us.

Our success depends on the contributions of our key management, environmental and engineering personnel, especially Dr. Louis F. Centofanti, Chairman, President, and Chief Executive Officer. The loss of Dr. Centofanti could have a material adverse effect on our operations, revenues, prospects, and our ability to raise additional funds. Our future success depends on our ability to retain and expand our staff of qualified personnel, including environmental specialists and technicians, sales personnel, and engineers. Without qualified personnel, we may incur delays in rendering our services or be unable to render certain services. We cannot be certain that we will be successful in our efforts to attract and retain qualified personnel as their availability is limited due to the demand for hazardous waste management services and the highly competitive nature of the hazardous waste management industry. We do not maintain key person insurance on any of our employees, officers, or directors.

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Changes in environmental regulations and enforcement policies could subject us to additional liability and adversely affect our ability to continue certain operations.

We cannot predict the extent to which our operations may be affected by future governmental enforcement policies as applied to existing laws, by changes to current environmental laws and regulations, or by the enactment of new environmental laws and regulations. Any predictions regarding possible liability under such laws are complicated further by current environmental laws which provide that we could be liable, jointly and severally, for certain activities of third parties over whom we have limited or no control.

Our Treatment Segment has limited end disposal sites to utilize to dispose of its waste which could significantly impact our results of operations.

Our Treatment Segment has limited options available for disposal of its waste. Currently, there are only two disposal sites for our low level radioactive waste we receive from non-governmental sites. If either of these disposal sites ceases to accept waste or closes for any reason or refuses to accept the waste of our Treatment Segment, for any reason, we would be limited to only the one remaining site to dispose of our nuclear waste. With only one end disposal site to dispose of our waste, we could be subject to significantly increased costs which could negatively impact our results of operations.

Our businesses subject us to substantial potential environmental liability.

Our business of rendering services in connection with management of waste, including certain types of hazardous waste, low-level radioactive waste, and mixed waste (waste containing both hazardous and low-level radioactive waste), subjects us to risks of liability for damages. Such liability could involve, without limitation:

- claims for clean-up costs, personal injury or damage to the environment in cases in which we are held responsible for the release of hazardous or radioactive materials; and
- claims of employees, customers, or third parties for personal injury or property damage occurring in the course of our operations; and
- claims alleging negligence or professional errors or omissions in the planning or performance of our services.

Our operations are subject to numerous environmental laws and regulations. We have in the past, and could in the future, be subject to substantial fines, penalties, and sanctions for violations of environmental laws and substantial expenditures as a responsible party for the cost of remediating any property which may be contaminated by hazardous substances generated by us and disposed at such property, or transported by us to a site selected by us, including properties we own or lease.

As our operations expand, we may be subject to increased litigation, which could have a negative impact on our future financial results.

Our operations are highly regulated and we are subject to numerous laws and regulations regarding procedures for waste treatment, storage, recycling, transportation, and disposal activities, all of which may provide the basis for litigation against us. In recent years, the waste treatment industry has experienced a significant increase in so-called “toxic-tort” litigation as those injured by contamination seek to recover for personal injuries or property damage. We believe that, as our operations and activities expand, there will be a similar increase in the potential for litigation alleging that we have violated environmental laws or regulations or are responsible for contamination or pollution caused by our normal operations, negligence or other misconduct, or for accidents, which occur in the course of our business activities. Such litigation, if significant and not adequately insured against, could adversely affect our financial condition and our ability to fund our operations. Protracted litigation would likely cause us to spend significant amounts of our time, effort, and money. This could prevent our management from focusing on our operations and expansion.

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Our operations are subject to seasonal factors, which cause our revenues to fluctuate.

We have historically experienced reduced revenues and losses during the first and fourth quarters of our fiscal years due to a seasonal slowdown in operations from poor weather conditions, overall reduced activities during these periods resulting from holiday periods, and finalization of government budgets during the fourth quarter of each year. During our second and third fiscal quarters there has historically been an increase in revenues and operating profits. If we do not continue to have increased revenues and profitability during the second and third fiscal quarters, this could have a material adverse effect on our results of operations and liquidity.

If environmental regulation or enforcement is relaxed, the demand for our services will decrease.

The demand for our services is substantially dependent upon the public's concern with, and the continuation and proliferation of, the laws and regulations governing the treatment, storage, recycling, and disposal of hazardous, non-hazardous, and low-level radioactive waste. A decrease in the level of public concern, the repeal or modification of these laws, or any significant relaxation of regulations relating to the treatment, storage, recycling, and disposal of hazardous waste and low-level radioactive waste would significantly reduce the demand for our services and could have a material adverse effect on our operations and financial condition. We are not aware of any current federal or state government or agency efforts in which a moratorium or limitation has been, or will be, placed upon the creation of new hazardous or radioactive waste regulations that would have a material adverse effect on us; however, no assurance can be made that such a moratorium or limitation will not be implemented in the future.

We and our customers operate in a politically sensitive environment, and the public perception of nuclear power and radioactive materials can affect our customers and us.

We and our customers operate in a politically sensitive environment. Opposition by third parties to particular projects can limit the handling and disposal of radioactive materials. Adverse public reaction to developments in the disposal of radioactive materials, including any high profile incident involving the discharge of radioactive materials, could directly affect our customers and indirectly affect our business. Adverse public reaction also could lead to increased regulation or outright prohibition, limitations on the activities of our customers, more onerous operating requirements or other conditions that could have a material adverse impact on our customers' and our business.

We may be exposed to certain regulatory and financial risks related to 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.

We may not be successful in winning new business mandates from our government and commercial customers or international customers.

We must be successful in winning mandates from our government, commercial customers and international customers to replace revenues from projects that we have completed or that are nearing completion and to increase our revenues. Our business and operating results can be adversely affected by the size and timing of a single material contract.



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The elimination or any modification of the Price-Anderson Acts indemnification authority could have adverse consequences for our business.

The Atomic Energy Act of 1954, as amended, or the AEA, comprehensively regulates the manufacture, use, and storage of radioactive materials. The Price-Anderson Act supports the nuclear services industry by offering broad indemnification to DOE contractors for liabilities arising out of nuclear incidents at DOE nuclear facilities. That indemnification protects DOE prime contractor, but also similar companies that work under contract or subcontract for a DOE prime contract or transporting radioactive material to or from a site. The indemnification authority of the DOE under the Price-Anderson Act was extended through 2025 by the Energy Policy Act of 2005.

Under certain conditions, the Price-Anderson Act's indemnification provisions may not apply to our processing of radioactive waste at governmental facilities, and do not apply to liabilities that we might incur while performing services as a contractor for the DOE and the nuclear energy industry. If an incident or evacuation is not covered under Price-Anderson Act indemnification, we could be held liable for damages, regardless of fault, which could have an adverse effect on our results of operations and financial condition. If such indemnification authority is not applicable in the future, our business could be adversely affected if the owners and operators of new facilities fail to retain our services in the absence of commercial adequate insurance and indemnification.

We are engaged in highly competitive businesses and typically must bid against other competitors to obtain major contracts.

We are engaged in highly competitive business in which most of our government contracts and some of our commercial contracts are awarded through competitive bidding processes. We compete with national and regional firms with nuclear services practices, as well as small or local contractors. Some of our competitors have greater financial and other resources than we do, which can give them a competitive advantage. In addition, even if we are qualified to work on a new government contract, we might not be awarded the contract because of existing government policies designed to protect certain types of businesses and underrepresented minority contractors. Although the Company has regained the ability to certify and bid government contract as a small business, there are a number of qualified small businesses in our market that will provide intense competition. Competition places downward pressure on our contract prices and profit margins. Intense competition is expected to continue for nuclear service contracts. If we are unable to meet these competitive challenges, we could lose market share and experience an overall reduction in our profits.

Our failure to maintain our safety record could have an adverse effect on our business.

Our safety record is critical to our reputation. In addition, many of our government and commercial customers require that we maintain certain specified safety record guidelines to be eligible to bid for contracts with these customers. Furthermore, contract terms may provide for automatic termination in the event that our safety record fails to adhere to agreed-upon guidelines during performance of the contract. As a result, our failure to maintain our safety record could have a material adverse effect on our business, financial condition and results of operations.

We may be unable to utilize loss carryforwards in the future.

We have approximately \$9,715,000 and \$53,035,000 in net operating loss carryforwards which will expire in various amounts starting in 2021 if not used against future federal and state income tax liabilities, respectively. Our net loss carryforwards are subject to various limitations. Our ability to use the net loss carryforwards depends on whether we are able to generate sufficient income in the future years. Further, our net loss carryforwards have not been audited or approved by the Internal Revenue Service.

If our goodwill, permit, or other intangible assets become further impaired, we may be required to record additional significant charge to earnings.

Under accounting principles generally accepted in the United States ("U.S. GAAP"), we review our intangible assets for impairment when events or changes in circumstances indicate the carrying value may not be recoverable. Goodwill and permits are tested for impairment at least annually. Factors that may be considered a change in circumstances,

indicating that the carrying value of our goodwill, permit or other intangible assets may not be recoverable, include a decline in stock price and market capitalization, reduced future cash flow estimates, and slower growth rates in our industry. During 2013, we recorded a total of \$27,856,000 in goodwill impairment charges, which represented the total goodwill for three of our four reporting units. We may be required, in the future, to record additional impairment charges in our financial statements, in which any impairment of our goodwill, permit, or other intangible assets is determined, negatively impacting our results of operations.

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We bear the risk of cost overruns in fixed-price contracts. We may experience reduced profits or, in some cases, losses under these contracts if costs increase above our estimates.

A percentage of our revenues are earned under contracts that are fixed-price in nature. Fixed-price contracts expose us to a number of risks not inherent in cost-reimbursable contracts. Under fixed price and guaranteed maximum-price contracts, contract prices are established in part on cost and scheduling estimates which are based on a number of assumptions, including assumptions about future economic conditions, prices and availability of labor, equipment and materials, and other exigencies. If these estimates prove inaccurate, or if circumstances change such as unanticipated technical problems, difficulties in obtaining permits or approvals, changes in local laws or labor conditions, weather delays, cost of raw materials or our suppliers' or subcontractors' inability to perform, cost overruns may occur and we could experience reduced profits or, in some cases, a loss for that project. Errors or ambiguities as to contract specifications can also lead to cost-overruns.

Adequate bonding is necessary for us to win certain types of new work.

We are often required to provide performance bonds or other financial assurances to customers under fixed-price contracts, primarily within our Services Segment. These surety instruments indemnify the customer if we fail to perform our obligations under the contract. If a bond is required for a particular project and we are unable to obtain it due to insufficient liquidity or other reasons, we may not be able to pursue that project. We currently have a bonding facility but, the issuance of bonds under that facility is at the surety's sole discretion. Moreover, due to events that affect the insurance and bonding markets generally, bonding may be more difficult to obtain in the future or may only be available at significant additional cost. There can be no assurance that bonds will continue to be available to us on reasonable terms. Our inability to obtain adequate bonding and, as a result, to bid on new work could have a material adverse effect on our business, financial condition and results of operations.

Failure to maintain effective internal control over financial reporting or failure to remediate a material weakness in internal control over financial reporting could have a material adverse effect on our business, operating results, and stock price.

Maintaining effective internal control over financial reporting is necessary for us to produce reliable financial reports and is important in helping to prevent financial fraud. If we are unable to maintain adequate internal controls, our business and operating results could be harmed. We are required to satisfy the requirements of Section 404 of Sarbanes Oxley and the related rules of the Commission, which require, among other things, our management to assess annually the effectiveness of our internal control over financial reporting. In connection with the restatement to our consolidated financial statements in our 2012 Form 10-K/A – Amendment No. 1, filed with the Commission on December 12, 2013, management, including our Chief Executive Officer, and Chief Financial Officer, reassessed the effectiveness of our internal control over financial reporting as of December 31, 2012 and concluded that the Company did not maintain adequate control of its accounting for deferred tax accounts in preparation of its provision for income taxes. As result of the restatement, we also concluded that a material weakness in internal control over financial reporting existed as of September 30, 2013. Although the Company has remediated this material weakness and based on our assessment, have concluded that our disclosure controls and procedures and internal controls over financial reporting were effective as of December 31, 2013, failure to remediate any future deficiencies or to implement required new or improved controls, or difficulties encountered in their implementation, could cause us to fail to meet our reporting obligations or result in material misstatement in our financial statements.

## Risks Relating to our Intellectual Property

If we cannot maintain our governmental permits or cannot obtain required permits, we may not be able to continue or expand our operations.

We are a nuclear services and waste management company. Our business is subject to extensive, evolving, and increasingly stringent federal, state, and local environmental laws and regulations. Such federal, state, and local environmental laws and regulations govern our activities regarding the treatment, storage, recycling, disposal, and transportation of hazardous and non-hazardous waste and low-level radioactive waste. We must obtain and maintain

permits or licenses to conduct these activities in compliance with such laws and regulations. Failure to obtain and maintain the required permits or licenses would have a material adverse effect on our operations and financial condition. If any of our facilities are unable to maintain currently held permits or licenses or obtain any additional permits or licenses which may be required to conduct its operations, we may not be able to continue those operations at these facilities, which could have a material adverse effect on us.

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We believe our proprietary technology is important to us.

We believe that it is important that we maintain our proprietary technologies. There can be no assurance that the steps taken by us to protect our proprietary technologies will be adequate to prevent misappropriation of these technologies by third parties. Misappropriation of our proprietary technology could have an adverse effect on our operations and financial condition. Changes to current environmental laws and regulations also could limit the use of our proprietary technology.

## Risks Relating to our Financial Position and Need for Financing

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

Our credit facility with our bank contains financial covenants. A breach of any of these covenants could result in a default under our credit facility triggering our lender to immediately require the repayment of all outstanding debt under our credit facility and terminate all commitments to extend further credit. Our fixed charge coverage ratio fell below the minimum quarterly requirement under our credit facility in the first and fourth quarters of 2013; however, we have obtained a waiver for the non-compliance from our lender for each of these quarters. Our lender has waived the quarterly fixed charge coverage testing requirement for the first quarter of 2014. In addition, our lender has amended the methodology in calculating the fixed charge coverage ratio in each of the subsequent quarters of 2014 and changed the minimum quarterly fixed charge coverage ratio requirement of 1:25 to 1:00 to 1:15 to 1:00 for each of the subsequent quarters of 2014. As a result of these revisions, we expect to meet our quarterly fixed charge coverage ratio requirement in each of the second to fourth quarters of 2014. If we fail to meet the minimum quarterly fixed charge coverage ratio requirement in any of the quarters as discussed above for 2014 and our lender does not waive the non-compliance or further revise our covenant so that we are in compliance, our lender could accelerate the repayment of borrowings under our credit facility. In the event that our lender accelerates the payment of our borrowings, we may not have sufficient liquidity to repay our debt under our credit facility and other indebtedness.

Our amount of debt could adversely affect our operations.

At December 31, 2013, our aggregate consolidated debt was approximately \$14,283,000 (includes debt discount of \$223,000). Our Amended and Restated Revolving Credit, Term Loan and Security Agreement, dated October 31, 2011, as amended, ("Amended Loan Agreement") provides for an aggregate commitment of \$34,000,000, consisting of a \$18,000,000 revolving line of credit and a term loan of \$16,000,000. Effective April 14, 2014, our revolving line of credit was reduced to \$12,000,000. The maximum we can borrow under the revolving part of the Credit Facility is based on a percentage of the amount of our eligible receivables outstanding at any one time. As of December 31, 2013, we had no borrowings under the revolving part of our Credit Facility and borrowing availability of up to an additional \$6,642,000 based on our outstanding eligible receivables. A lack of positive operating results could have material adverse consequences on our ability to operate our business. Our ability to make principal and interest payments, or to refinance indebtedness, will depend on both our and our subsidiaries' future operating performance and cash flow. Prevailing economic conditions, interest rate levels, and financial, competitive, business, and other factors affect us. Many of these factors are beyond our control.

Our substantial level of indebtedness could limit our financial and operating activities, and adversely affect our ability to incur additional debt to fund future needs.

We currently have a substantial amount of indebtedness. As a result, this level of indebtedness could, among other things:

- require us to dedicate a substantial portion of our cash flow to the payment of principal and interest, thereby reducing the funds available for operations and future business opportunities;
- make it more difficult for us to satisfy our obligations;
- limit our ability to borrow additional money if needed for other purposes, including working capital, capital expenditures, debt service requirements, acquisitions and general corporate or other purposes, on satisfactory terms or

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limit our ability to adjust to changing economic, business and competitive conditions;

place us at a competitive disadvantage with competitors who may have less indebtedness or greater access to financing;

make us more vulnerable to an increase in interest rates, a downturn in our operating performance or a decline in general economic conditions; and

make us more susceptible to changes in credit ratings, which could impact our ability to obtain financing in the future and increase the cost of such financing.

Any of the foregoing could adversely impact our operating results, financial condition, and liquidity. Our financial statements have been prepared assuming that we will continue as a going concern. Our ability to continue our operations depends on our ability to generate profitable operations or complete equity or debt financings to increase our capital.

Risks Relating to our Common Stock

Issuance of substantial amounts of our Common Stock could depress our stock price.

Any sales of substantial amounts of our Common Stock in the public market could cause an adverse effect on the market price of our Common Stock and could impair our ability to raise capital through the sale of additional equity securities. The issuance of our Common Stock will result in the dilution in the percentage membership interest of our stockholders and the dilution in ownership value. Given effect of the reverse stock split, as of December 31, 2013, we had 11,398,931 shares of Common Stock outstanding (which excludes 7,642 treasury shares).

In addition, given the effect of the reverse stock split, as of December 31, 2013, we had outstanding options to purchase 362,800 shares of Common Stock at exercise prices from \$2.79 to \$14.75 per share and two outstanding warrants to purchase up to an aggregate 70,000 shares of Common Stock at exercise price of \$2.23 per share. Further, our preferred share rights plan, if triggered, could result in the issuance of a substantial amount of our Common Stock. The existence of this quantity of rights to purchase our Common Stock under the preferred share rights plan could result in a significant dilution in the percentage ownership interest of our stockholders and the dilution in ownership value. Future sales of the shares issuable could also depress the market price of our Common Stock.

We do not intend to pay dividends on our Common Stock in the foreseeable future.

Since our inception, we have not paid cash dividends on our Common Stock, and we do not anticipate paying any cash dividends in the foreseeable future. Our Credit Facility prohibits us from paying cash dividends on our Common Stock.

The price of our Common Stock may fluctuate significantly, which may make it difficult for our stockholders to resell our Common Stock when a stockholder wants or at prices a stockholder finds attractive.

The price of our Common Stock on the Nasdaq Capital Markets constantly changes. We expect that the market price of our Common Stock will continue to fluctuate. This may make it difficult for our stockholders to resell the Common Stock when a stockholder wants or at prices a stockholder finds attractive.

Future issuance of our Common Stock could adversely affect the price of our Common Stock, our ability to raise funds in new stock offerings and could dilute the percentage ownership of our common stockholders.

Future sales of substantial amounts of our Common Stock or equity-related securities in the public market, or the perception that such sales or conversions could occur, could adversely affect prevailing trading prices of our Common Stock and could dilute the value of Common Stock held by our existing stockholders. No prediction can be made as to the effect, if any, that future sales of shares of Common Stock or the availability of shares of Common Stock for future sale will have on the trading price of our Common Stock. Such future sales or conversions could also significantly reduce the percentage ownership of our common stockholders.





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Delaware law, certain of our charter provisions, our stock option plans, outstanding warrants and our Preferred Stock may inhibit a change of control under circumstances that could give you an opportunity to realize a premium over prevailing market prices.

We are a Delaware corporation governed, in part, by the provisions of Section 203 of the General Corporation Law of Delaware, an anti-takeover law. In general, Section 203 prohibits a Delaware public corporation from engaging in a “business combination” with an “interested stockholder” for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner. As a result of Section 203, potential acquirers may be discouraged from attempting to effect acquisition transactions with us, thereby possibly depriving our security holders of certain opportunities to sell, or otherwise dispose of, such securities at above-market prices pursuant to such transactions. Further, certain of our option plans provide for the immediate acceleration of, and removal of restrictions from, options and other awards under such plans upon a “change of control” (as defined in the respective plans). Such provisions may also have the result of discouraging acquisition of us.

We have authorized and unissued 63,160,627 (which excludes shares issuable under outstanding options to purchase 362,800 shares of our Common Stock and two warrants to purchase 70,000 shares of our Common Stock) shares of Common Stock and 2,000,000 shares of Preferred Stock as of December 31, 2013 (which includes 600,000 shares of our Preferred Stock reserved for issuance under our preferred share rights plan). These unissued shares could be used by our management to make it more difficult, and thereby discourage an attempt to acquire control of us.

Our Preferred Share Rights Plan may adversely affect our stockholders.

In May 2008, we adopted a preferred share rights plan (the “Rights Plan”), designed to ensure that all of our stockholders receive fair and equal treatment in the event of a proposed takeover or abusive tender offer. However, the Rights Plan may also have the effect of deterring, delaying, or preventing a change in control that might otherwise be in the best interests of our stockholders.

In general, under the terms of the Rights Plan, subject to certain limited exceptions, if a person or group acquires 20% or more of our Common Stock or a tender offer or exchange offer for 20% or more of our Common Stock is announced or commenced, our other stockholders may receive upon exercise of the rights (the “Rights”) issued under the Rights Plan the number of shares of our Common Stock or of one-one hundredths of a share of our Series A Junior Participating Preferred Stock, par value \$.001 per share, having a value equal to two times the purchase price of the Right. In addition, if we are acquired in a merger or other business combination transaction in which we are not the survivor or more than 50% of our assets or earning power is sold or transferred, then each holder of a Right (other than the acquirer) will thereafter have the right to receive, upon exercise, common stock of the acquiring company having a value equal to two times the purchase price of the Right. The initial purchase price of each Right was \$13, subject to adjustment and adjustment for the reverse stock split.

The Rights will cause substantial dilution to a person or group that attempts to acquire us on terms not approved by our board of directors. The Rights may be redeemed by us at \$0.001 per Right at any time before any person or group acquires 20% or more of our outstanding common stock. The rights should not interfere with any merger or other business combination approved by our board of directors. The Rights expire on May 2, 2018.

Our Common Stock could be delisted from NASDAQ Stock Market LLC (“NASDAQ”) if we do not satisfy continued listing requirements of NASDAQ.

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”). During October 2013, we had a 1-for-5 reverse stock split as to our outstanding Common Stock and Common Stock subject to existing and outstanding option and warrants that resulted in the price of our Common Stock exceeding the Minimum Bid Price Rule, allowing us to regain compliance with the NASDAQ’S Minimum Bid

Price Rule. If we are unable to continue compliance with the Minimum Bid Price Rule, the NASDAQ could again take action to delist our Common Stock from the NASDAQ, which could have an adverse effect on the liquidity and share price of our Common Stock. Any impact on our ability to raise equity capital could adversely affect our ability to execute our long-term business strategy, including any efforts to use equity capital to reduce our indebtedness or fund our operations.

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## ITEM 1B. UNRESOLVED STAFF COMMENTS

Not Applicable.

## ITEM 2. PROPERTIES

Our principal executive office is in Atlanta, Georgia. Our Business Center is located in Knoxville, Tennessee. Our Treatment Segment facilities are located in Gainesville, Florida; Kingston, Tennessee; Oak Ridge, Tennessee, and Richland, Washington. Our Services Segment operates subsidiaries located in Ellisville, Missouri; Knoxville, Tennessee; and Blaydon On Tyne, England, of which we lease all of the properties. We have a facility located in Valdosta, Georgia, which is included within our discontinued operations. On August 14, 2013, our Valdosta, Georgia facility incurred fire damage which has left it non-operational at this time, but is undergoing the rebuilding process. We also maintain properties in Brownstown, Michigan and Memphis, Tennessee, which are all non-operational and are included within our discontinued operations.

Three of our facilities are subject to mortgages as granted to our senior lender (Kingston, Tennessee; Gainesville, Florida; and Richland, Washington).

The Company currently leases properties in the following locations:

| Location  | Square Footage | Expiration of Lease |
|---|----------------|---------------------|
| Knoxville, TN (Safety and Ecology Corporation or "SEC") | 20,850         | May 31, 2018        |
| Knoxville, TN (SEC)                                     | 11,000         | September 30, 2014  |
| Blaydon On Tyne, England (Perma-Fix UK Limited)         | 1,000          | Monthly             |
| Pittsburgh, PA (SEC)                                    | 640            | Monthly             |
| Newport, KY (SEC)                                       | 1,566          | Monthly             |
| Oak Ridge, TN (M&EC)                                    | 150,000        | February 28, 2018   |
| Ellisville, MO (SYA)                                    | 12,000         | May 31, 2016        |
| Atlanta, GA (Corporate)                                 | 7,672          | May 31, 2015        |

We believe that the above facilities currently provide adequate capacity for our operations and that additional facilities are readily available in the regions in which we operate, which could support and supplement our existing facilities.

## ITEM 3. LEGAL PROCEEDINGS

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. Presently, under the supervision of the Court, PFNWR and Philo have agreed to temporarily

suspend formal legal proceedings and, instead, to work together to process, package, transport from the facility, and dispose of the nonconforming waste. PFNWR anticipates that these activities will be completed in 2014. This matter is currently set to proceed to trial on November 3, 2014 to adjudicate any issues that remain.

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## ITEM 4 MINE SAFETY DISCLOSURE

Not Applicable.

## ITEM 4A. EXECUTIVE OFFICERS OF THE REGISTRANT

The following table sets forth, as of the date hereof, information concerning our executive officers:

| <u>NAME</u>               | <u>AGE</u> | <u>POSITION</u>  |
|---------------------------|------------|--|
| Dr. Louis F. Centofanti   | 70         | Chairman of the Board, President and Chief Executive Officer   |
| Mr. Ben Naccarato         | 51         | Chief Financial Officer, Vice President, and Secretary   |
| Mr. Robert Schreiber, Jr. | 63         | President of Schreiber, Yonley & Associates ("SYA"), a subsidiary of the Company, and Principal Engineer |
| Mr. John Lash             | 51         | Chief Operating Officer  |

## Dr. Louis F. Centofanti

Dr. Centofanti has served as Board Chairman since joining the Company in February 1991. Dr. Centofanti also served as Company President and Chief Executive Officer (February 1991 to September 1995) and again in March 1996 was elected Company President and Chief Executive Officer. From 1985 until joining the Company, Dr. Centofanti served as Senior Vice President of USPCI, Inc., a large hazardous waste management company, where he was responsible for managing the treatment, reclamation and technical groups within USPCI. In 1981 he founded PPM, Inc. (later sold to USPCI), a hazardous waste management company specializing in treating PCB contaminated oils. From 1978 to 1981, Dr. Centofanti served as Regional Administrator of the U.S. Department of Energy for the southeastern region of the United States. Dr. Centofanti has a Ph.D. and a M.S. in Chemistry from the University of Michigan, and a B.S. in Chemistry from Youngstown State University.

## Mr. Ben Naccarato

Mr. Naccarato has served as the Chief Financial Officer since February 26, 2009. Mr. Naccarato joined the Company in September 2004 and served as Vice President, Finance of the Company's Industrial Segment until May 2006, when he was named Vice President, Corporate Controller/Treasurer. Prior to joining the Company in September 2004, Mr. Naccarato was the Chief Financial Officer of Culp Petroleum Company, Inc., a privately held company in the fuel distribution and used waste oil industry from December 2002 to September 2004. Mr. Naccarato is a graduate of University of Toronto having received a Bachelor of Commerce and Finance Degree and is a Certified Management Accountant.

## Mr. Robert Schreiber, Jr.

Mr. Schreiber has served as President of SYA since the Company acquired the environmental engineering firm in 1992. Mr. Schreiber co-founded the predecessor of SYA, Lafser & Schreiber in 1985, and held several executive roles in the firm until our acquisition of SYA. From 1978 to 1985, Mr. Schreiber was the Director of Air programs and all environmental programs for the Missouri Department of Natural Resources. Mr. Schreiber provides technical expertise in wide range of areas including the cement industry, environmental regulations and air pollution control. Mr. Schreiber has a B.S. in Chemical Engineering from the University of Missouri – Columbia.

## Mr. John Lash

On April 13, 2014, the Company's Board of Directors approved the appointment by the company on March 20, 2014 of Mr. John Lash as the Chief Operating Officer. Mr. Lash previously served as Senior Vice President of Operations of the Company's Treatment Segment for over ten years. Mr. Lash has over 20 years of experience in the nuclear industry, with specific experience in managing remedial activities, as well as decontamination and disposal of radioactive materials from commercial and government operating facilities. As Senior Vice President of Operations,

Mr. Lash was responsible for all treatment and remediation activities. Prior to joining Perma-Fix in 2001, Mr. Lash served as Broad Spectrum Manager for Waste Control Specialists in Dallas, TX where his responsibilities included contract management of DOE nationwide procurement for mixed waste treatment services, business development activities, and technology development. Prior to that, he worked for ten years at Chem-Nuclear Systems where he held various managerial positions including manager of the Chem-Nuclear Consolidation Facility. Mr. Lash received his education and qualification from the U.S. Navy Nuclear Power Program, where he served for 8 years prior to working in the commercial and nuclear industry.

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## Resignation of Chief Operating Officer

On March 20, 2014, the Company accepted the resignation of Mr. James A. Blankenhorn, as Vice President and Chief Operating Officer of the Company. The resignation was effective March 28, 2014. Mr. Blankenhorn's resignation was not due to a disagreement with the Company.

## Certain Relationships

There are no family relationships between any of our executive officers.

## PART II

## ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

Our Common Stock is traded on the NASDAQ Capital Markets ("NASDAQ") under the symbol "PESI". The following table sets forth the high and low market trade prices quoted for the Common Stock during the periods shown. The source of such quotations and information is the NASDAQ online trading history reports. The trade prices noted below have been adjusted for the 1-for-5 reverse stock split.

|                                      | 2013   |        | 2012   |        |
|--------------------------------------|--------|--------|--------|--------|
|                                      | Low    | High   | Low    | High   |
| Common Stock 1 <sup>st</sup> Quarter | \$3.14 | \$5.25 | \$7.32 | \$9.50 |
| 2 <sup>nd</sup> Quarter              | 1.80   | 4.30   | 5.30   | 8.40   |
| 3 <sup>rd</sup> Quarter              | 1.96   | 4.00   | 4.25   | 5.95   |
| 4 <sup>th</sup> Quarter              | 2.85   | 4.28   | 3.40   | 5.35   |

As of March 13, 2014, there were approximately 236 stockholders of record of our Common Stock, including brokerage firms and/or clearing houses holding shares of our Common Stock for their clientele (with each brokerage house and/or clearing house being considered as one holder). However, the total number of beneficial stockholders as of March 13, 2014, was approximately 3,259.

Since our inception, we have not paid any cash dividends on our Common Stock and have no dividend policy. Our Amended Loan Agreement prohibits us from paying any cash dividends on our Common Stock without prior approval from the lender. We do not anticipate paying cash dividends on our outstanding Common Stock in the foreseeable future.

No sales of unregistered securities occurred during 2013. There were no purchases made by us or on behalf of us or any of our affiliated members of shares of our Common Stock during 2013.

We have adopted a preferred share rights plan, which is designed to protect us against certain creeping acquisitions, open market purchases, and certain mergers and other combinations with acquiring companies. See "Item 1A. - Risk Factors – Our Preferred Share Rights Plan" as to further discussion relating to the terms of our preferred share rights plan.

## Reverse Stock Split

The Company effected a reverse stock split at a ratio of 1-for-5 of the Company's Common Stock, effective as of 12:01 a.m. on October 15, 2013. As a result of the reverse stock split, each five shares of the outstanding Common Stock and shares held in treasury were combined into one share of Common Stock without any change to the par value per share. Further, the number of shares of Common Stock issuable upon exercise of outstanding stock options and warrants as of October 15, 2013, and the exercise price thereof, were also adjusted as a result of the reverse stock split. The reverse stock split did not affect the number of authorized shares of Common Stock which remained at 75,000,000. No fractional shares of Common Stock will be issued as a result of the reverse stock split. Instead,

stockholders who otherwise would be entitled to receive a fractional share of Common Stock as a consequence of the reverse stock split will be entitled to receive cash in lieu of all such fractional shares.



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The primary reason for implementing this reverse stock split was to increase the market price per share of our Common Stock in order to regain compliance with the NASDAQ's continued listing criteria related to Minimum Bid Price Rule. On October 29, 2013, we received a letter from the NASDAQ Stock Market indicating that we had regained compliance with the minimum bid price requirement under NASDAQ Listing Rule 5550(a)(2) for continued listing on the NASDAQ Capital Market. The Company's Common Stock continues to be listed on the NASDAQ Capital Market.

## ITEM 6. SELECTED FINANCIAL DATA

Not required under Regulation S-K for smaller reporting companies.

## ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Certain statements contained within this "Management's Discussion and Analysis of Financial Condition and Results of Operations" 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"). See "Special Note regarding Forward-Looking Statements" contained in this report.

Management's discussion and analysis is based, among other things, upon our audited consolidated financial statements and includes our accounts and the accounts of our wholly-owned subsidiaries, after elimination of all significant intercompany balances and transactions.

The following discussion and analysis should be read in conjunction with our consolidated financial statements and the notes thereto included in Item 8 of this report.

### Reverse Stock Split

The Company has effected a reverse stock split at a ratio of 1-for-5 of the Company's Common Stock, effective as of 12:01 a.m. on October 15, 2013. As a result of this reverse stock split, all references in this Management's Discussion and Analysis of Financial Condition and Results of Operations, as to the number of shares outstanding, per share amounts, and outstanding stock option and warrant data of the Company's Common Stock have been restated to reflect the effect of the stock split for all periods presented.

### Review

This year was a challenging year for the Company. Revenues for fiscal year 2013 were below our expectations and internal forecasts as a result, in large part, of the government sequestration, federal and state governmental clients operating under reduced budgets, including short term budget Continuing Resolutions ("CR"), the government shutdown of approximately 16 days in October 2013, ending of contracts, and general adverse economic conditions.

Revenue decreased \$53,096,000 or 41.6% to \$74,413,000 for the twelve months ended December 31, 2013 from \$127,509,000 for the corresponding period of 2012. We saw a revenue decrease of approximately \$42,754,000 or 52.4% within our Services Segment primarily 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. In addition, effective September 30, 2013, the CH Plateau Remediation Company ("CHPRC") subcontract (under the nuclear services area), which became effective June 19, 2008, expired. This subcontract was awarded to our East Tennessee Materials & Energy Corporation ("M&EC") subsidiary in connection with CH2M Hill Plateau Remediation Company's ("CH2M Hill") prime contract with the DOE, relating to waste management and facility operations at the DOE's Hanford, Washington site. The CHPRC subcontract provided for a base contract period from October 1, 2008 through September 30, 2013, with an option of renewal for an additional five years. Revenue

generated under this subcontract was approximately \$17,150,000 and \$23,462,000 for the nine months ended September 30, 2013 and twelve months ended December 31, 2012, respectively. Revenue from our Treatment Segment was lower by \$10,342,000 or 22.5% primarily due to lower waste volume from government clients. Gross profit decreased \$5,988,000 or 37.9%, primarily due to reduced revenue. Selling, General, and Administrative (SG&A) expenses decreased \$4,014,000 or 21.8% for the twelve months ended December 31, 2013 as compared to the corresponding period of 2012. We had a net loss of \$36,039,000 for fiscal year 2013 as compared to a net loss of \$3,179,000 for the corresponding period of 2012. Our net loss for 2013 included approximately \$27,856,000 in goodwill impairment charges recorded for three of our four reporting units and a charge to tax expense of approximately \$4,760,000 (\$3,596,000 for our continuing operations and \$1,164,000 for our discontinued operations) to provide a full valuation allowance on our net deferred tax assets.

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We had a working capital deficit of \$2,958,000 at December 31, 2013, as compared to a working capital of \$2,652,000 at December 31, 2012, a decrease of \$5,610,000.

**Business Environment, Outlook and Liquidity**

During the years ended December 31, 2013 and 2012, the Company incurred net losses of \$36,039,000 and \$3,179,000, respectively, and net cash used in operating activities was \$2,716,000 and \$3,409,000, respectively. Our net loss for 2013 included approximately \$27,856,000 in goodwill impairment charges recorded for three of our four reporting units and a charge to tax expense of approximately \$4,760,000 (\$3,596,000 for our continuing operations and \$1,164,000 for our discontinued operations) to provide a full valuation allowance on our net deferred tax assets. As of December 31, 2013, we have a deficit in working capital of \$2,958,000, an accumulated deficit of \$55,078,000 and cash on hand of \$333,000. Revenues for fiscal years 2013 and 2012 were \$74,413,000 and \$127,509,000, respectively, and were below our expectations and internal forecasts as a result, in large part, of the government sequestration, federal governmental clients operating under reduced budgets, the government shutdown of approximately 16 days in October 2013, ending of contracts, and general adverse economic conditions. Our revenue during the year ended December 31, 2013 was insufficient to attain profitable operations and generated negative operating cash flow from operations. We did not meet the minimum quarterly fixed charge coverage ratio requirement under our credit facility for the first and fourth quarters of 2013; however, we obtained a waiver from our lender for each of these quarters for the non-compliance. Our lender also has waived the fixed charge coverage ratio testing requirement for the first quarter of 2014 and amended the methodology and the quarterly minimum ratio requirement to be used in calculating our quarterly fixed charge ratio for the subsequent quarters of 2014 (See "Liquidity and Capital Resources - Financing Activities" in this Management's Discussion and Analysis of Financial Conditions and Results of Operations" for further information of these waivers and this amendment and other matters).

The Company's cash flow requirements during 2013 have been financed by cash on hand, operations, our credit facility, and debt financing. The Company is continually reviewing operating costs and is committed to further reducing operating costs to bring them in line with revenue levels.

Our ability to achieve and maintain profitability is dependent upon our ability to successfully raise additional capital and develop our business plans that will generate profitable revenues. The Company continues to explore all sources of increasing revenue. If the Company is unable in the near term to raise capital on commercially reasonable terms or increase revenue, it may not have sufficient cash to sustain its operations for the next twelve months. As a result, the Company may be forced to further reduce or even curtail its operations. These factors raise substantial doubt about the Company's ability to continue as a going concern. As a result, our independent registered public accounting firm has included an explanatory paragraph regarding our ability to continue as a going concern in their report on our consolidated financial statements for the year ended December 31, 2013. We have obtained a waiver from our lender waiving the requirement that our consolidated financial statements for the year ended December 31, 2013, be issued without a going concern qualification (see "Liquidity and Capital Resources - Financing Activities for further information of this waiver). The accompanying financial statements do not include any adjustments that might be necessary if the Company is unable to continue as a going concern.

The Company continues to focus on expansion into both commercial and international markets to help offset the uncertainties of government spending in the USA. 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. In January 2014, the fiscal year 2014 Omnibus spending bill was approved by Congress and the President. This budget, the first approved in several years, restores federal government funding cuts instituted in 2013 from sequestration and allows for new spending on projects that was not allowed under CR. The 2014 budget provides approximately \$5.83 billion for the DOE's Office of Environmental Management ("EM"), which is an effective increase in funding availability of \$300,000,000 to \$600,000,000. The increase in funding allows government agencies to spend on discretionary clean-up and waste treatment projects that represents over half of Perma-Fix's business base. Although no assurances can be given, we believe these factors provide potential increased revenues and

generate positive cash flows in 2014.

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## Results of Operations

The reporting of financial results and pertinent discussions are tailored to our two reportable segments: The Treatment Segment (“Treatment”) and the Services Segment (“Services”):

Below are the results of continuing operations for our years ended December 31, 2013 and 2012 (amounts in thousands):

| <u>(Consolidated)</u>                        | 2013       | %             | 2012          | %             |
|--|------------|---------------|---------------|---------------|
| Net revenues                                 | \$74,413   | 100.0         | \$127,509     | 100.0         |
| Cost of goods sold                           | 64,597     | 86.8          | 111,705       | 87.6          |
| Gross Profit                                 | 9,816      | 13.2          | 15,804        | 12.4          |
| Selling, general and administrative          | 14,376     | 19.3          | 18,390        | 14.4          |
| Impairment of goodwill                       | 27,856     | 37.4          | $\frac{3}{4}$ | $\frac{3}{4}$ |
| Research and development                     | 1,764      | 2.4           | 1,823         | 1.4           |
| Loss on disposal of property and equipment   | 49         | $\frac{3}{4}$ | 15            | $\frac{3}{4}$ |
| Loss from operations                         | (34,229)   | (45.9 )       | (4,424 )      | (3.4 )        |
| Interest income                              | 35         | $\frac{3}{4}$ | 41            | $\frac{3}{4}$ |
| Interest expense                             | (762 )     | (1.0 )        | (818 )        | (.6 )         |
| Interest expense – financing fees            | (132 )     | (.2 )         | (107 )        | (.1 )         |
| Other  | (8 )       | $\frac{3}{4}$ | 8             | $\frac{3}{4}$ |
| Loss from continuing operations before taxes | (35,096)   | (47.1 )       | (5,300 )      | (4.1 )        |
| Income tax benefit                           | (625 )     | (.8 )         | (2,151 )      | (1.6 )        |
| Loss from continuing operations              | \$(34,471) | (46.3 )       | \$(3,149 )    | (2.5 )        |

Summary - Years Ended December 31, 2013 and 2012

## Net Revenue

Consolidated revenues from continuing operations decreased \$53,096,000 for the year ended December 31, 2013, compared to the year ended December 31, 2012, as follows:

| (In thousands)          | 2013     | %<br>Revenue | 2012      | %<br>Revenue | Change     | %<br>Change |
|-------------------------|----------|--------------|-----------|--------------|------------|-------------|
| <u>Treatment</u>        |          |              |           |              |            |             |
| Government waste        | \$20,188 | 27.1         | \$30,501  | 23.9         | \$(10,313) | (33.8 )     |
| Hazardous/non-hazardous | 4,439    | 6.0          | 3,230     | 2.6          | 1,209      | 37.4        |
| Other nuclear waste     | 10,913   | 14.7         | 12,151    | 9.5          | (1,238 )   | (10.2 )     |
| Total                   | 35,540   | 47.8         | 45,882    | 36.0         | (10,342)   | (22.5 )     |
| <u>Services</u>         |          |              |           |              |            |             |
| Nuclear                 | 32,067   | 43.1         | 62,043    | 48.6         | (29,976)   | (48.3 )     |
| Technical               | 6,806    | 9.1          | 19,584    | 15.4         | (12,778)   | (65.2 )     |
| Total                   | 38,873   | 52.2         | 81,627    | 64.0         | (42,754)   | (52.4 )     |
| Total                   | \$74,413 | 100.0        | \$127,509 | 100.0        | \$(53,096) | (41.6 )     |

## Net Revenue

Treatment Segment revenue decreased \$10,342,000 or 22.5% for the twelve months ended December 31, 2013 over the same period in 2012. The decrease was primarily due to lower revenue from government clients of approximately

\$10,313,000 or 33.8%, resulting from lower waste volume. Revenue from hazardous and non-hazardous waste was up \$1,209,000 or 37.4%, primarily due to higher remediation projects. Other nuclear waste revenue decreased approximately \$1,238,000 or 10.2%, primarily due to lower waste volume. Services Segment revenue decreased \$42,754,000 or 52.4% in the twelve months ended December 31, 2013 from the corresponding period of 2012, primarily as a result of the completion/near completion of certain large contracts with the DOE and the completion of the CHPRC subcontract effective September 30, 2013, within the nuclear services area. In addition, the decrease in revenue was also attributed to the completion of a large contract in the technical services area in the third quarter of 2012. 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.

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## Cost of Goods Sold

Cost of goods sold decreased \$47,108,000 for the year ended December 31, 2013, as compared to the year ended December 31, 2012, as follows:

| (In thousands) | 2013     | %<br>Revenue | 2012      | %<br>Revenue | Change     |
|----------------|----------|--------------|-----------|--------------|------------|
| Treatment      | \$29,966 | 84.3         | \$36,614  | 79.8         | \$(6,648 ) |
| Services       | 34,631   | 89.1         | 75,091    | 92.0         | (40,460)   |
| Total          | \$64,597 | 86.8         | \$111,705 | 87.6         | \$(47,108) |

Cost of goods sold for the Treatment Segment decreased \$6,648,000 or 18.2%, 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/healthcare related expenses (\$2,600,000) 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 lower costs discussed above were partially offset by approximately \$113,000 increase in severance expense. In addition, our costs for the twelve months ended December 31, 2013 included \$188,000 of penalty recorded in final settlement on July 16, 2013 by our PFNWR subsidiary with the U.S. Environmental Protection Agency, regarding certain alleged violations that our PFNWR subsidiaries had improperly stored certain mixed waste. Treatment cost of goods sold included a reduction of approximately \$1,007,000 in depreciation expense and an increase of approximately \$559,000 in closure expense due to adjustments to our asset retirement obligations for our M&EC, DSSI, PFF, and PFNWR facilities. The adjustment was made principally to record the obligation using appropriate discount rates. The closure obligations were previously based on undiscounted values. The associated assets were also adjusted to reflect this change. Services Segment cost of goods sold decreased \$40,460,000 or 53.9% 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 (\$22,000,000) resulting from reduced revenue and a reduction in workforce which occurred in February 2013. In addition, we incurred significantly lower outside services/subcontract costs (\$14,000,000). Included within cost of goods sold is depreciation and amortization expense of \$3,486,000 and \$5,146,000 for the twelve months ended December 31, 2013, and 2012, respectively.

## Gross Profit

Gross profit for the year ended December 31, 2013, was \$5,988,000 lower than 2012, as follows:

| (In thousands) | 2013    | %<br>Revenue | 2012     | %<br>Revenue | Change    |
|----------------|---------|--------------|----------|--------------|-----------|
| Treatment      | \$5,574 | 15.7         | \$9,268  | 20.2         | \$(3,694) |
| Services       | 4,242   | 10.9         | 6,536    | 8.0          | (2,294)   |
| Total          | \$9,816 | 13.2         | \$15,804 | 12.4         | \$(5,988) |

The Treatment Segment gross profit decreased \$3,694,000 or 39.9% and gross margin decreased to 15.7% from 20.2% primarily due to decreased revenue from lower waste volume and the impact of our fixed costs. We continue to streamline our cost structure as evidenced in the significant reduction in salaries and payroll/healthcare related costs as noted in our discussion above. In the Services Segment, gross profit decreased \$2,294,000 or 35.1% due to reduced revenue as discussed in the revenue section above; however, the increase in margin was attributed to our continued efforts in reducing our costs.

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## Selling, General and Administrative

Selling, general and administrative (“SG&A”) expenses decreased \$4,014,000 for the year ended December 31, 2013, as compared to the corresponding period for 2012, as follows:

| (In thousands) | 2013     | %<br>Revenue | 2012     | %<br>Revenue | Change    |
|----------------|----------|--------------|----------|--------------|-----------|
| Administrative | \$5,215  | ¾            | \$6,536  | ¾            | \$(1,321) |
| Treatment      | 4,253    | 12.0         | 4,051    | 8.8          | 202       |
| Services       | 4,908    | 12.6         | 7,803    | 9.6          | (2,895)   |
| Total          | \$14,376 | 19.3         | \$18,390 | 14.4         | \$(4,014) |

The decrease in administrative SG&A was primarily the result of lower outside services expenses resulting from fewer corporate legal, consulting and business matters (\$540,000), lower payroll and healthcare costs (\$486,000), lower travel expenses 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 payroll related expenses and higher allocations. With the completion of the CHPRC subcontract effective September 30, 2013, the Treatment and Services segments are each allocated a higher share of the Business Center overhead costs. The higher Treatment SG&A cost was also attributed to higher bad debt expense (\$43,000). Services SG&A was lower in most categories. We incurred lower salaries and payroll related expenses (\$1,400,000) resulting from reduced headcount due to completion of integration of administrative functions and the completion of the CHPRC subcontract effective September 30, 2013, lower travel expenses (\$114,000), lower outside services (\$100,000) from reduced consulting and subcontract matters, and lower general expenses (\$600,000). Bad debt expense was significantly lower (\$450,000) primarily resulting from collection of accounts receivable previously reserved in our allowance for doubtful account for a certain fixed price contract. The lower cost was partially offset by higher legal expenses incurred in settlement and collection of the accounts receivable mentioned above and other legal matters. Included in SG&A expenses is depreciation and amortization expense of \$425,000 and \$305,000 for the twelve months ended December 31, 2013 and 2012, respectively.

## Research and Development

Research and development costs decreased \$59,000 for the year ended December 31, 2013, 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 of new technologies to increase company offerings and technological enhancement of new potential waste treatment processes. The decrease was primarily due to lower payroll costs. Included in research and development expense is depreciation expense of \$215,000 and \$19,000 for the twelve months ended December 31, 2013 and 2012, respectively.

## Goodwill Impairment

During the second quarter of 2013, we determined that the estimated fair value of our CHPRC reporting unit was less than the net book value indicating that its allocated goodwill was impaired; accordingly, we recorded a goodwill impairment charge of \$1,149,000, which represented the total goodwill for our CHPRC reporting unit – our operations under the CHPRC subcontract. During the second quarter of 2013, our M&EC subsidiary was notified by CH2M Hill that the CHPRC subcontract, which expired on September 30, 2013, would not be renewed.

The Company performed its annual goodwill testing as of October 1, for its remaining three reporting units: (1) Schreiber, Yonley & Associates (“SYA”) reporting unit - our SYA subsidiary operations; (2) Safety and Ecology (“SEC”) reporting unit - our SEC operations; and (3) Treatment reporting unit – our treatment operations. We elected to bypass the qualitative assessment aspect of this test in determining whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount as we identified indicators of potential impairment (market capitalization in relation to net book value, negative industry and economic trends, and lower than anticipated results



of operations). In determining the estimated fair values of the reporting units, the Company generally employed a discounted cash flows analysis ("DCF") and, in certain cases, used a combination of a DCF analysis and a market-based approach. As noted in the "Critical Accounting Estimates" in this section, determining estimated fair values requires the application of significant judgment. As a result of the financial downturn suffered by the Company in 2013, and uncertainties with regards to federal government spending, determining the fair value of the Company's reporting units was even more judgmental than it has been in the past. These factors reduced the Company's visibility into long-term trends and dampened the Company's expectations of future business performance. Consequently, estimates of future cash flows used in the fourth quarter 2013 DCF analyses were moderated, in some cases significantly, relative to the estimates used in the fourth quarter of 2012. The discount rates utilized in these DCF analyses reflect market-based estimates of the risks associated with the projected cash flows of individual reporting units. The discount rates utilized in the DCF analyses were increased to reflect increased risk due to current economic volatility to a range of 21% to 35% in 2013 from 15% in 2012. In addition, the terminal growth rates used in the DCF analyses were decreased to 3% in 2013 from 4% in 2012. The results of the DCF analyses were corroborated with other value indicators where available, such as comparable company earnings multiples and research analyst estimates. The results of this Step 1 process indicated that there was a potential impairment of goodwill in the Treatment and SEC reporting units, as the book values of the reporting units exceeded their respective estimated fair values. As a result, the Company performed step 2 of the impairment analysis for the two reporting units discussed above. In step 2, the implied fair value is compared to the carrying amount of the goodwill. If the implied fair value of goodwill is less than the carrying value of goodwill, we would recognize an impairment loss equal to the difference. The implied fair value is calculated by assigning the fair value of the reporting unit (as determined in step 1) to all of its assets and liabilities (including unrecognized intangible assets) and any excess in fair value that is not assigned to the asset and liabilities is the implied fair value of goodwill. Based on the result of the step 2 analysis, we determined that the goodwill for each of our Treatment and SEC reporting units was fully impaired, and therefore, we recorded a goodwill impairment loss of \$13,691,000 and \$13,016,000, for our Treatment and SEC reporting unit, respectively.

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The impairment charges are 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 decreased \$56,000 for the year ended December 31, 2013, as compared to the corresponding period of 2012.

| (In thousands) | 2013  | 2012  | Change   | %      |
|----------------|-------|-------|----------|--------|
| PNC interest   | \$605 | \$616 | \$ (11 ) | (1.8 ) |
| Other          | 157   | 202   | (45 )    | (22.3) |
| Total          | \$762 | \$818 | \$ (56 ) | (6.8 ) |

The decrease in interest expense was primarily due to reducing 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 Timios National Corporation (“TNC” and formerly known as Homeland Capital Security Corporation) from the acquisition of Safety and Ecology Holdings Corporation and its subsidiaries (collectively known as Safety and Ecology Corporation or “SEC”) on October 31, 2011 and a reducing loan balance of the \$1,322,000 earn-out note dated September 28, 2010, which was paid in full in September 2013. The lower interest expense was partially offset by higher interest expense resulting from a \$3,000,000 loan the Company entered into with Messrs. Ferguson and Lampson on August 2, 2013. In addition, our interest expense for 2013 included approximately \$65,000 in loss on debt modification (recorded in accordance with ASC 470-50, “Debt – Modification and Extinguishment”) which we incurred as a result of an amendment that we entered into with our lender on August 2, 2013, which amended certain provisions of our amended loan agreement.”See “Liquidity and Capital Resources – Financing Activities” below for further details of these notes and the August 2, 2013 amendment.

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## Interest Expense- Financing Fees

Interest expense-financing fees increased approximately \$25,000 for the twelve months ended December 31, 2013, as compared to the corresponding period of 2012. The increase was primarily due to the debt discount amortized as financing fees in connection with the issuance of our Common Stock and two purchase Warrants as consideration for the Company receiving a \$3,000,000 loan from Messrs. Ferguson and Lampson on August 2, 2013 as discussed above.

## Income Taxes

We had income tax benefits of \$625,000 and \$2,151,000 for continuing operations for the years ended December 31, 2013 and 2012, respectively. The Company's effective tax rates were approximately 8.7% and 39.3% for the twelve months ended December 31, 2013 and 2012, respectively. The lower tax rate for 2013 was primarily the result of the Company providing a full valuation allowance on its deferred tax assets. We have treated the total goodwill impairment loss of approximately \$27,856,000 recorded in 2013 for our CHPRC, Treatment, and SEC reporting units as a discrete item and have not included the impact of the impairment in our estimated effective tax rates for 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, 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.

On August 14, 2013, our PFSG facility incurred fire damage which has left it non-operational. Certain equipment and portions of the building structures were damaged. We carry general liability, pollution, property and business interruption, and workers compensation insurance with a maximum deductible of approximately \$300,000 (consisting of \$100,000 deductible for each workers compensation, pollution, and property insurance policy), which was accrued and included within our "loss from discontinued operations." As of December 31, 2013, we have recorded \$130,000 for impairment of fixed assets related to the fire, and has incurred approximately \$6,729,000 of other costs related to the fire. As of December 31, 2013, approximately \$3,664,000 in insurance proceed reimbursements have been paid by our insurers, of which \$1,750,000 was paid to us, with the remaining paid directly to the vendor performing the clean-up of the facility. We have recorded a receivable of approximately \$2,995,000 as we have determined that the receipt of reimbursement of these expenses from our insurer is probable in accordance with its insurance policies.

The table below details the nature of expense as well as insurance receivables and insurance recoveries related to the fire:

|  |             |
|--|-------------|
| Clean up costs                                 | \$6,293,000 |
| Impairment of fixed assets                     | 130,000     |
| Incremental payroll costs                      | 244,000     |
| Other incremental costs                        | 192,000     |
| Total incurred costs through December 31, 2013 | \$6,859,000 |
| Insurance recovery receivable                  | \$2,995,000 |
| Insurance recoveries already received          | \$3,664,000 |

The insurance receivable recorded is net of \$200,000 of deductible on our property and pollution insurance policies and the insurance recoveries already received. The receivables and the related payables in connection with this claim are included within our current assets and current liabilities related to discontinued operations in our consolidated balance sheet.

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Subsequent to December 31, 2013, our insurers paid approximately \$3,510,000 of insurance recoveries, of which approximately \$2,000,000 was paid to us, with the remaining paid directly to the vendor working on the clean-up of the facility. We continue to gather information related to insurance claims on this fire.

We are currently evaluating options regarding the future operation of this facility as we undergo the rebuilding process on the part of the facility damaged by the fire. As required by ASC 360, based on our internal financial valuations, we concluded that no tangible asset impairments existed for PFSG as of December 31, 2013, other than the write-off of the equipment damaged in the fire as discussed above. No intangible assets exist at PFSG.

Our discontinued operations had net revenue of \$1,789,000 for the twelve months ended December 31, 2013, as compared to \$2,204,000 for the corresponding period of 2012. We had net losses of \$1,568,000 and \$30,000 for our discontinued operations for the twelve months ended December 31, 2013 and 2012, respectively. Our net loss for 2013 included a charge to income tax expense of approximately \$1,164,000 to provide a full valuation allowance on our net deferred tax assets.

Assets related to discontinued operations totaled \$4,481,000 and \$2,113,000 as of December 31, 2013, and December 31, 2012, respectively, and liabilities related to discontinued operations totaled \$4,596,000 and \$3,341,000 as of December 31, 2013, and December 31, 2012, respectively.

### Liquidity and Capital Resources

During the twelve months ended December 31, 2013 and for the year ended December 31, 2012, the Company incurred net losses of \$36,039,000 and \$3,179,000, respectively. Our net loss for 2013 included approximately \$27,856,000 in goodwill impairment charges recorded for three of our four reporting units and a charge to tax expense of approximately \$4,760,000 (\$3,596,000 for our continuing operations and \$1,164,000 for our discontinued operations) to provide a full valuation allowance on our net deferred tax assets. Revenues for fiscal years 2013 and 2012, were \$74,413,000 and \$127,509,000, respectively, and were below our expectations and internal forecasts as a result, in large part, of the government sequestration, federal and state governmental clients operating under reduced budgets, the government shutdown of approximately 16 days in October 2013, ending of contracts, and general adverse economic conditions. Our revenue during twelve months ended December 31, 2013 was insufficient to attain profitable operations and generated negative operating cash flow from operations.

The Company's cash flow requirements during 2013 have been financed by cash on hand, operations, our credit facility, and debt financing. The Company is continually reviewing operating costs and is committed to further reducing operating costs to bring them in line with revenue levels.

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.

Our ability to achieve and maintain profitability is dependent upon our ability to successfully raise additional capital and develop our business plans that will generate profitable revenues. The Company continues to explore all sources of increasing revenue. If the Company is unable in the near term to raise capital on commercially reasonable terms or increase revenue, it may not have sufficient cash to sustain its operations for the next twelve months. As a result, the Company may be forced to further reduce or even curtail its operations. These factors raise substantial doubt about the Company's ability to continue as a going concern. As a result, our independent registered public accounting firm has included an explanatory paragraph regarding our ability to continue as a going concern in their report on our consolidated financial statements for the year ended December 31, 2013 (see "Financing Activities" in this section for a discussion as to the waiver issued by lender waiving the requirement that our consolidated financial statements for

the year ended December 31, 2013, be issued without a going concern qualification). The accompanying financial statements do not include any adjustments that might be necessary if the Company is unable to continue as a going concern.

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At December 31, 2013, we had cash of \$333,000. The following table reflects the cash flow activities during the twelve months of 2013:

| (In thousands)  | 2013      |
|---|-----------|
| Cash used in operating activities of continuing operations        | \$(1,696) |
| Cash used in operating activities of discontinued operations      | (1,020)   |
| Cash used in investing activities of continuing operations        | (1,487)   |
| Cash provided by financing activities of continuing operations    | 204       |
| Principal repayment of long-term debt for discontinued operations | (36 )     |
| Decrease in cash  | \$(4,035) |

As of December 31, 2013, we were in a positive cash position. We attempt to move all excess cash into a Money Market Sweep account in order to maximize the interest earned. When we are in a net borrowing position, we attempt to move all excess cash balances immediately to the revolving credit, 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 December 31, 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 \$8,106,000 at December 31, 2013, a decrease of \$3,289,000 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 December 31, 2013, unbilled receivables totaled \$5,219,000, a decrease of \$3,448,000 from the December 31, 2012 balance of \$8,667,000. Treatment unbilled receivables decreased \$949,000 from \$5,147,000 as of December 31, 2012 to \$4,198,000 as of December 31, 2013. Services Segment unbilled receivables (which are all current) decreased \$2,499,000 from a balance of \$3,520,000 as of December 31, 2012 to \$1,021,000 as of December 31, 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 December 31, 2013 was \$4,917,000, a decrease of \$3,613,000 from the balance of \$8,530,000 as of December 31, 2012. The long term portion as of December 31, 2013 was \$302,000, an increase of \$165,000 from the balance of \$137,000 as of December 31, 2012.

Disposal/transportation accrual as of December 31, 2013, totaled \$1,385,000, a decrease of \$909,000 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 2013, we shipped more waste for disposal which is reflected in a lower inventory on-site at year end 2013 as compared to year end 2012.

We had a working capital deficit of \$2,958,000 (which included working capital of our discontinued operations) as of December 31, 2013, as compared to a working capital of \$2,652,000 as of December 31, 2012. Our working capital was negatively impacted primarily by the decreases in our trade and unbilled receivables and cash from operations resulting from reduced revenue. See further discussion of our liquidity in "Business Environment, Outlook and Liquidity" in this "Management's Discussion and Analysis of Financial Condition and Results of Operations."





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### Investing Activities

During 2013, our purchase of capital equipment totaled approximately \$944,000. These expenditures were primarily for improvements to our Segments. These capital expenditures were funded by the cash provided by operating activities. We have budgeted approximately \$600,000 for 2014 capital expenditures for our Segments to maintain operations and regulatory compliance requirements. Certain of these budgeted projects may either be delayed until later in the year or deferred altogether. We have traditionally incurred actual capital spending totals for a given year less than the initial budget amount. We plan to fund our capital expenditures from cash from operations and/or financing. The initiation and timing of projects are also determined by financing alternatives or funds available for such capital projects.

### Financing Activities

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 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 a result of this amendment, we recorded approximately \$65,000 in loss on debt modification (included in our interest expense) in accordance with ASC 470-50, “Debt – Modification and Extinguishment.” As of December 31, 2013, the excess availability under our revolving credit was approximately \$6,642,000, 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.

As discussed above, our fixed charge coverage ratio non-compliance for the first quarter of 2013 was waived by PNC. We met our fixed charge coverage ratio in the second and third quarters of 2013. We did not meet our minimum fixed charge coverage ratio for the fourth quarter of 2013. On April 14, 2014, we entered into an Amendment to our Amended Loan Agreement whereby our lender waived our non-compliance for failing to meet the minimum fixed charge coverage ratio in the fourth quarter of 2013 as discussed above. This Amendment also waived the quarterly fixed charge coverage testing requirement for the first quarter of 2014, revises the methodology in calculating the fixed charge coverage ratio in each of the subsequent quarters of 2014 and changes the minimum

quarterly fixed charge coverage ratio requirement of 1:25 to 1:00 to 1:15 to 1:00 for each of the subsequent quarters of 2014. As a result of this Amendment, we expect to meet our quarterly fixed charge coverage ratio requirement in each of the second to fourth quarters of 2014. If we fail to meet the minimum quarterly fixed charge coverage ratio requirement in any of the quarters noted above in 2014 and PNC does not waive the non-compliance or further revise our covenant so that we are in compliance, PNC could accelerate the repayment of borrowings under our credit facility. In the event that PNC accelerates the payment of our borrowings, we may not have sufficient liquidity to repay our debt under our credit facility and other indebtedness. 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 December 31, 2013:

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| (Dollars in thousands)              | Quarterly Requirement | 1st Quarter Actual | 2nd Quarter Actual | 3rd Quarter Actual | 4th Quarter Actual |
|-------------------------------------|-----------------------|--------------------|--------------------|--------------------|--------------------|
| Senior Credit Facility              |                       |                    |                    |                    |                    |
| Fixed charge coverage ratio         | 1.25:1                | 0.63:1             | 2.21:1             | 1.30:1             | 0.53:1             |
| Minimum tangible adjusted net worth | \$30,000              | \$55,349           | \$55,106           | \$51,537           | \$46,971           |

In addition to the waivers and revisions discussed above, our lender also waived the requirement that our consolidated financial statements for the year ended December 31, 2013, be issued without a going concern qualification, a violation, if any, of our purchase of 80% of CEE Opportunity Partners Poland S.A. on April 4, 2014 (or "Polish subsidiary") a subsidiary in Poland and the formation of Perma-Fix Medical Corporation ("PFMedical" which was incorporated in January 2014), neither of which shall be a credit party under our Amended Loan Agreement. We intend to license PFMedical to produce and market the new technology relating to technetium-99 ("Tc-99m") that we have developed.

This Amendment also reduced, our Revolving Credit facility from \$18,000,000 to \$12,000,000. As a condition of this Amendment, we agreed to pay PNC a fee of \$30,000.

On February 12, 2013, the Company entered into an unsecured promissory note ("New Note") with TNC 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 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 PFWN) 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. We made the final note payment in September 2013.

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 PFWN prior to our acquisition of PFWN and PFNWR and are also stockholders of the Company, having received shares of our Common Stock in connection with the acquisition of PFWN 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 were 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 35,000 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 \$2.23. The Warrants are exercisable six months from August 2, 2013 and expire on August 2, 2016. We estimated the fair value of the Warrants to be approximately \$59,000 using the Black-Scholes option pricing model with the following assumptions: 55.54% volatility, risk free interest rate of .59%, an expected life of three years and no dividends. As further consideration for the Loan, the Company issued an aggregate 90,000 shares of the Company's Common Stock, with each Lender receiving 45,000 shares. The 90,000 shares of Common Stock and 70,000 Common Stock purchase warrants were 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. We determined the fair value of the 90,000 shares of Common Stock to be approximately \$200,000 which was based on the closing price of the stock of \$2.23 per share on August 2, 2013. The fair value of the Warrants and Common Stock and the related closing fees incurred from the transaction (approximately \$13,000) were recorded as a debt discount, which is being amortized over the term of the loan as interest expense – financing fees. The number of shares of Common Stock issued to the Lenders has been adjusted to reflect the reverse stock split. The number of shares subject to the Warrants and the exercise price under the Warrants were also adjusted to reflect the reverse stock split.

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We intend to have the Polish subsidiary, or its successor, subject to market and other conditions, to offer up to \$3,000,000 of its Common Stock for sale in a private placement to non-U.S. persons outside the United States pursuant to Regulation S under the Securities Act of 1933, as amended (“the Securities Act”). The Polish subsidiary intends to use the proceeds, if any, of this private placement, to produce and market the technology relating to Tc-99m which we licensed to PFMedical and for general working capital needs. The Company may also offer, subject to market and other conditions and final approval of our Board of Directors, up to \$3,000,000 in aggregate amount of our Common Stock for sale in a private placement to non-U.S. persons outside the United States pursuant to Regulation S under the Securities Act. If the Company completes such an offering of its Common Stock, we intend to use the proceeds, if any, of this private placement for working capital purposes. This paragraph is neither an offer to sell nor a solicitation of an offer to buy our Common Stock or the Polish subsidiary’s Common Stock or any other securities and shall not constitute an offer, solicitation or sale in any jurisdiction in which such offer, solicitation or sale is unlawful. Neither our Common Stock nor the Polish subsidiary’s Common Stock have been registered under the Securities Act or any state securities laws and may not be offered or sold in the United States absent registration or applicable exemption from registration from the registration requirements under the Securities Act and applicable state securities laws. Our Common Stock and the Polish subsidiary’s Common Stock are expected to be offered and sold only to non-U.S. persons outside the United States pursuant to Regulation S under the Securities Act.

In summary, our financial results for fiscal year 2013 were below our expectations and were negatively impacted as a result, in large part, due to the government sequestration, federal and state governmental clients operating under reduced budgets, including short term budget Continuing Resolutions, the government shutdown of approximately 16 days in October 2013, ending of contracts, and general adverse economic conditions. However, 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. Although there are no assurances, we believe that our cash flows from operations and our available liquidity from the amended and restated line of credit are sufficient to service the Company’s current obligations.

### Off Balance Sheet Arrangements

We have a number of routine operating leases, primarily related to office space rental, office equipment rental and equipment rental for contract projects as of December 31, 2013, which total approximately \$2,830,000, payable as follows: \$809,000 in 2014; \$728,000 in 2015; \$590,000 in 2016; \$529,000 in 2017; with the remaining \$174,000 in 2018.

From time to time, we are required to post standby letters of credit and various bonds to support contractual obligations to customers and other obligations. As of December 31, 2013, the total amount of these bonds and letters of credit outstanding was approximately \$1,453,000, of which the majority of the amount relates to various bonds. Our Treatment Segment facilities operate under licenses and permits that require financial assurance for closure and post-closure costs. We provide for these requirements through financial assurance policies. As of December 31, 2013, the closure and post-closure requirements for our facilities were approximately \$46,361,000. We have recorded approximately \$21,307,000 in a sinking fund related to these policies in other long term assets within our balance sheets.

### Critical Accounting Policies

In preparing the consolidated financial statements in conformity with generally accepted accounting principles in the United States of America, management makes estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements, as well as, the reported amounts of revenues and expenses during the reporting period. We believe the following critical accounting policies affect the more significant estimates used in preparation of the consolidated financial statements:

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**Revenue Recognition Estimates.** We utilize a performance based methodology for purposes of revenue recognition in our Treatment Segment. As we accept more complex waste streams in this segment, the treatment of those waste streams become more complicated and time consuming. We have continued to enhance our waste tracking capabilities and systems, which has enabled us to better match the revenue earned to the processing phases achieved using a proportional performance method. The major processing phases are receipt, treatment/processing and shipment/final disposition. Upon receiving various wastes we recognize a certain percentage (ranging from 9.0% to 33%) of revenue as we incur costs for transportation, analytical and labor associated with the receipt of mixed waste. As the waste is processed, shipped and disposed of we recognize the remaining revenue and the associated costs of transportation and burial. We review and evaluate our revenue recognition estimates and policies on an annual basis.

For our Services Segment, revenues on services are performed under time and material, fixed price, and cost-reimbursement contracts. Revenues and costs associated with fixed price contracts are recognized using the percentage of completion (efforts expended) method. We estimate our percentage of completion based on attainment of project milestones. Revenues and costs associated with time and material contracts are recognized as revenue when earned and costs are incurred.

Under cost-reimbursement contracts, we are reimbursed for costs incurred plus a certain percentage markup for indirect costs, in accordance with contract provision. Costs incurred in excess of contract funding may be renegotiated for reimbursement. We also earn a fee based on the approved costs to complete the contract. We recognize this fee using the proportion of costs incurred to total estimated contract costs.

Contract costs include all direct labor, material and other non-labor costs and those indirect costs related to contract support, such as depreciation, fringe benefits, overhead labor, supplies, tools, repairs and equipment rental. Provisions for estimated losses on uncompleted contracts are made in the period in which such losses are determined. Changes in job performance, job conditions and estimated profitability, including those arising from contract penalty provisions and final contract settlements, may result in revisions to costs and income and are recognized in the period in which the revisions are determined.

Consulting revenues are recognized as services are rendered. The services provided are based on billable hours and revenues are recognized in relation to incurred labor and consulting costs. Out of pocket costs reimbursed by customers are also included in revenues.

The liability, "billings in excess of costs and estimated earnings", represents billings in excess of revenues recognized and accrued costs to jobs.

**Allowance for Doubtful Accounts.** The carrying amount of accounts receivable is reduced by an allowance for doubtful accounts, which is a valuation allowance that reflects management's best estimate of the amounts that are uncollectible. We regularly review all accounts receivable balances that exceed 60 days from the invoice date and, based on an assessment of current credit worthiness, estimate the portion, if any, of the balances that are uncollectible. Specific accounts that are deemed to be uncollectible are reserved at 100% of their outstanding balance. The remaining balances aged over 60 days have a percentage applied by aging category (5% for balances 61-90 days, 20% for balances 91-120 days and 40% for balances over 120 days aged), based on a historical valuation, that allows us to calculate the total reserve required. This allowance was approximately 2.6% of revenue for 2013 and 19.5%, of accounts receivable as of December 31, 2013. Additionally, this allowance was approximately 2.0% of revenue for 2012 and 18.0% of accounts receivable as of December 31, 2012.

**Intangible Assets.** Intangible assets relating to acquired businesses consist primarily of the cost of purchased businesses in excess of the estimated fair value of net identifiable assets acquired, or goodwill, and the recognized value of the permits required to operate the business. We continually reevaluate the propriety of the carrying amount of goodwill and permits to determine whether current events and circumstances warrant adjustments to the carrying

value. We test each Reporting Unit's goodwill and permits, separately, for impairment, annually as of October 1 and also if an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying amount.

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In estimating the fair value of the reporting units, the Company makes estimates and judgments about its future cash flows using an income approach. The income approach, specifically a discounted cash flow analysis, includes assumptions for, among others, forecasted revenue, gross margin, operating income, working capital cash flow, perpetual growth rates and long-term discount rates (reflects a weighted average cost of capital rate), all of which require significant judgment by management. The sum of the fair values of the Company's reporting units are also compared to its external market capitalization to determine the appropriateness of its assumptions. These assumptions take into account the current environment and industry trends (with significant focus on government spending trends) and their impact on the Company's business.

We have three reporting units as of October 1, 2013: (1) SYA reporting unit - our SYA subsidiary operations; (2) SEC reporting unit - our SEC operations; and (3) Treatment reporting unit – our treatment operations (See “Goodwill Impairment” above for impairment losses recorded in 2013).

Intangible assets that have definite useful lives are amortized using the straight-line method over the estimated useful lives. We amortize intangible asset of customer relationships using an accelerated method. Intangible assets with definite useful lives are also tested for impairment whenever events or changes in circumstances indicate that the asset's carrying value may not be recoverable.

## Property and Equipment

Property and equipment expenditures are capitalized and depreciated using the straight-line method over the estimated useful lives of the assets for financial statement purposes, while accelerated depreciation methods are principally used for income tax purposes. Generally, annual depreciation rates range from ten to forty years for buildings (including improvements and asset retirement costs) and three to seven years for office furniture and equipment, vehicles, and decontamination and processing equipment. Leasehold improvements are capitalized and amortized over the lesser of the term of the lease or the life of the asset. Maintenance and repairs are charged directly to expense as incurred. The cost and accumulated depreciation of assets sold or retired are removed from the respective accounts, and any gain or loss from sale or retirement is recognized in the accompanying consolidated statements of operations. Renewals and improvement, which extend the useful lives of the assets, are capitalized.

Accrued Closure Costs and Asset Retirement Obligations (“ARO”). Accrued closure costs represent our estimated environmental liability to clean up our facilities as required by our permits, in the event of closure. Accounting Standards Codification (“ASC”) 410, “Asset Retirement and Environmental Obligations” requires that the discounted fair value of a liability for an ARO be recognized in the period in which it is incurred with the associated ARO capitalized as part of the carrying cost of the asset. The recognition of an ARO requires that management make numerous estimates, assumptions and judgments regarding such factors as estimated probabilities, timing of settlements, material and service costs, current technology, laws and regulations, and credit adjusted risk-free rate to be used. This estimate is inflated, using an inflation rate, to the expected time at which the closure will occur, and then discounted back, using a credit adjusted risk free rate, to the present value. AROs are included within buildings as part of property and equipment and are depreciated over the estimated useful life of the property. In periods subsequent to initial measurement of the ARO, the Company must recognize period-to-period changes in the liability resulting from the passage of time and revisions to either the timing or the amount of the original estimate of undiscounted cash flow. Increases in the ARO liability due to passage of time impact net income as accretion expense. Changes in the estimated future cash flows costs underlying the obligations (resulting from changes or expansion at the facilities) require adjustment to the ARO liability calculated in the aforementioned method, and are capitalized and charged as depreciation expense, in accordance with the Company's depreciation policy.

Accrued Environmental Liabilities. We have four remediation projects currently in progress. The current and long-term accrual amounts for the projects are our best estimates based on proposed or approved processes for clean-up. The circumstances that could affect the outcome range from new technologies that are being developed every day to reduce our overall costs, to increased contamination levels that could arise as we complete remediation



which could increase our costs, neither of which we anticipate at this time. In addition, significant changes in regulations could adversely or favorably affect our costs to remediate existing sites or potential future sites, which cannot be reasonably quantified. The environmental liabilities of PFM, PFMI, and PFD remain the financial obligations of the Company. The environmental liabilities of PFSG are classified as held for sale within our discontinued operations.

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**Disposal/Transportation Costs.** We accrue for waste disposal based upon a physical count of the waste at each facility at the end of each accounting period. Current market prices for transportation and disposal costs are applied to the end of period waste inventories to calculate the disposal accrual. Costs are calculated using current costs for disposal, but economic trends could materially affect our actual costs for disposal. As there are limited disposal sites available to us, a change in the number of available sites or an increase or decrease in demand for the existing disposal areas could significantly affect the actual disposal costs either positively or negatively.

**Stock-Based Compensation.** We account for stock-based compensation in accordance with ASC 718, “Compensation – Stock 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 uses the Black-Scholes option-pricing model to determine the fair-value of stock-based awards which requires subjective assumptions. 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. In addition, judgment is also required in estimating the amount of stock-based awards that are expected to be forfeited.

**Income Taxes.** The provision for income tax is determined in accordance with ASC 740, “Income Taxes.” As part of the process of preparing our consolidated financial statements, we are required to estimate our income taxes in each of the jurisdictions in which we operate. We record this amount as a provision or benefit for taxes. This process involves estimating our actual current tax exposure, including assessing the risks associated with tax audits, and assessing temporary differences resulting from different treatment of items for tax and accounting purposes. These differences result in deferred tax assets and liabilities. We assess the likelihood that our deferred tax assets will be recovered from future taxable income and, to the extent that we believe recovery is not likely, we establish a valuation allowance. As of December 31, 2013, we had net deferred tax assets of approximately \$8,182,000 (which excludes a deferred tax liability relating to goodwill and indefinite lived intangible assets), which were primarily related to federal and state net operating loss (“NOL”) carryforwards, impairment charges, and closure costs. As of December 31, 2013 and 2012, we concluded that it was more likely than not that \$8,182,000 and \$5,729,000 of our deferred income tax assets would not be realized, and as such, a full valuation allowance was applied against those deferred income tax assets. Our net operating losses are subject to audit by the Internal Revenue Services, and, as a result, the amounts could be reduced.

## **Known Trends and Uncertainties**

### **Economic Conditions:**

The DOE and U.S. Department of Defense (“DOD”) represent major customers for our Treatment Segment and Services Segment. Federal clients have operated under reduced budgets due to CR and sequestration which have negatively impacted the amount of waste shipped to our treatment facilities and remediation of contaminated federal sites. In addition, our government contracts and subcontracts relating to activities at governmental sites are generally subject to termination or renegotiation on 30 days notice at the government’s option. Significant reductions in the level of governmental funding could have a material adverse impact on our business, financial position, results of operations and cash flows. See discussion as to budgeted amounts of the 2014 Omnibus spending bill approved by Congress and the President discussed previously in this “Management’s Discussion and Analysis – Business Environment, Outlook and Liquidity.”

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## 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. “Presently, under the supervision of the Court, PFNWR and Philo have agreed to temporarily suspend formal legal proceedings and, instead, to work together to process, package, transport from the facility, and dispose of the nonconforming waste. PFNWR anticipates that these activities will be completed in 2014. This matter is currently set to proceed to trial on November 3, 2014 to adjudicate any issues that remain.

**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 CH Plateau Remediation Company (“CHPRC”) as discussed below) to the federal government, representing approximately \$47,557,000 or 63.9% of our total revenue from continuing operations during 2013, as compared to \$101,533,000 or 79.6% of our total revenue from continuing operations during 2012.

The following customer accounted for 10% or more of the total revenues generated from continuing operations for twelve months ended December 31, 2013 and 2012:

| Customer | Year | Total<br>Revenue | % of<br>Total<br>Revenue |   |
|----------|------|------------------|--------------------------|---|
| CHPRC    | 2013 | \$19,922,000     | 26.8                     | % |
|          | 2012 | \$24,652,000     | 19.3                     | % |

Revenue generated from CHPRC includes revenue generated from the CHPRC subcontract at our Services Segment and various waste processing contracts at our Treatment Segment. The CHPRC subcontract was a cost plus award fee subcontract awarded to us during the second quarter of 2008 to participate in the cleanup of the central portion of the Hanford Site located in the state of Washington. This subcontract expired on September 30, 2013.

**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 American International Group, Inc. (“AIG”) 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.

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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.

Environmental Contingencies

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

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

Our 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 December 31, 2013, we had total accrued environmental remediation liabilities of \$1,031,000, of which \$649,000 is recorded as a current liability, which reflects a decrease of \$583,000 from the December 31, 2012 balance of \$1,614,000. The net decrease represents payments of approximately \$50,000 on remediation projects and a reduction in reserve of approximately \$533,000 at PFSG based on reassessment of the remediation reserve. The December 31, 2013 current and long-term accrued environmental balance is recorded as follows (in thousands):

|                 | Current<br>Accrual | Long-term<br>Accrual | Total   |
|-----------------|--------------------|----------------------|---------|
| PFD             | \$ 11              | \$ 58                | \$69    |
| PFM             | 34                 | 11                   | 45      |
| PFSG            | 604                | 236                  | 840     |
| PFMI            | -                  | 77                   | 77      |
| Total Liability | \$ 649             | \$ 382               | \$1,031 |

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Related Party Transactions

Mr. Robert Schreiber, Jr.

During March 2011, we entered into a lease with Lawrence Properties LLC, a company jointly owned by Robert Schreiber, Jr., the President of Schreiber, Yonley and Associates, and Mr. Schreiber's spouse. Mr. Schreiber is a member of our executive management team. The lease is for a term of five years starting June 1, 2011. Under the lease, we pay monthly rent of approximately \$11,400, which we believe is lower than costs charged by unrelated third party landlords. Additional rent will be assessed for any increases over the new lease commencement year for property taxes or assessments and property and casualty insurance premiums.

Mr. David Centofanti

Mr. David Centofanti serves as our Director of Information Services. For such services, he received total compensation in 2013 of approximately \$163,000. Mr. David Centofanti is the son of our Chief Executive Officer and Chairman of our Board, Dr. Louis F. Centofanti. We believe the compensation received by Mr. Centofanti for his technical expertise which he provides to the Company is competitive and comparable to compensation we would have to pay to an unaffiliated third party with the same technical expertise.

Christopher Leichtweis

The Company is obligated to make lease payments of approximately \$29,000 per month through June 2018, pursuant to a Lease Agreement, dated June 1, 2008 (the "Lease"), between Leichtweis Enterprises, LLC, as lessor, and Safety and Ecology Holdings Corporation ("SEHC"), as lessee. Leichtweis Enterprises, LLC, is owned by Mr. Christopher Leichtweis ("Leichtweis"), who was a Senior Vice President of the Company and President of SEC, prior to his voluntary termination and retirement from the Company effective May 24, 2013. The Lease covers SEC's principal offices in Knoxville, Tennessee.

Under an agreement of indemnity ("Indemnification Agreement"), SEC, Leichtweis and his spouse ("Leichtweis Parties"), jointly and severally, agreed to indemnify the individual surety with respect to contingent liabilities that may be incurred by the individual surety under certain of SEC's bonded projects. In addition, SEC agreed to indemnify Leichtweis Parties against judgments, penalties, fines, and expense associated with those SEC performance bonds that Leichtweis Parties have agreed to indemnify in the event SEC cannot perform, which has an aggregate bonded amount of approximately \$10,900,000 (which has been released/expired). The Indemnification Agreement provided by SEC to the Leichtweis Parties also provides for compensating the Leichtweis Parties at a rate of 0.75% of the value of bonds (60% having been paid previously and the balance at substantial completion of the contract). On February 14, 2013, the Company entered into a Settlement and Release Agreement and Amendment to Employment Agreement (the "Leichtweis Settlement"), in final settlement of certain claims made by us against Leichtweis in connection with the certain claims asserted by the Company against TNC subsequent to our acquisition of SEC on October 31, 2011. The Leichtweis Settlement terminated our obligation to pay the Leichtweis Parties a fee under the Indemnification Agreement.

Employment Agreements

We have an employment agreement with each of Dr. Centofanti (our President and Chief Executive Officer or "CEO"), Ben Naccarato (our Chief Financial Officer or "CFO"), and James Blankenhorn (our Chief Operating Officer or "COO"). Each employment agreement provides for annual base salaries, bonuses, and other benefits commonly found in such agreements. In addition, each employment agreement provides that in the event of termination of such officer without cause or termination by the officer for good reason (as such terms are defined in the employment agreement), the terminated officer shall receive payments of an amount equal to benefits that have accrued as of the termination but not yet paid, plus an amount equal to one year's base salary at the time of termination. In addition, the employment agreements provide that in the event of a change in control (as defined in the employment agreements), all outstanding stock options to purchase our Common Stock granted to, and held by, the officer covered by the employment agreement to be immediately vested and exercisable. On March 20, 2014, the Company accepted the resignation of Mr. James A. Blankenhorn, as Vice President and COO of the Company. The resignation was effective March 28,

2014. When Mr. Blankenhorn's resignation as the COO became effective, his employment agreement also terminated.

The Company also had an employment agreement with Christopher Leichtweis (the "Leichtweis Employment Agreement"), containing substantially the terms described above with respect to the employment agreements of Messrs. Centofanti, Naccarato and Blankenhorn. On May 14, 2013, the Company entered into a Separation and Release Agreement ("Agreement") with Mr. Leichtweis, which terminated Mr. Leichtweis' employment with the Company and his position as an officer of the Company effective May 24, 2013, and voided the Leichtweis Employment Agreement (except for the "Confidentiality of Trade Secrets and Business Information ("Section 7") clause). Leichtweis' termination was not "for cause" by the Company nor "for good reason" by Mr. Leichtweis (as defined in the Leichtweis Employment Agreement). Mr. Leichtweis was paid only his accrued salary, vacation and any benefits under the employee's benefit plan, upon his separation date of May 24, 2013. In connection with the Agreement, the Company also entered into a Consulting Services Agreement ("Consulting Agreement") with Leichtweis, dated May 24, 2013 and terminating 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, 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.

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ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Not required under Regulation S-K for smaller reporting companies.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

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;
- significant reductions in the level of government funding could have a material adverse impact on our business, financial position, results of operations and cash flows;
- expect to meet our quarterly financial covenants in 2014;
- ability to successfully raise additional capital and develop business plan that will generate profitable revenues;
- ability to improve operations and liquidity;
- ability to close and remediate certain contaminated sites for projected amounts over the projected periods;
- permit and license requirements represent a potential barrier to entry for possible competitors;
- failure to obtain and maintain our permit or approvals would have a material adverse effect on us, our operations, and financial condition;
- 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;
- expansion into both commercial and international markets to help offset the uncertainties of government spending in the USA;
- 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 2014 through our operations and lease financing;
- continue focus on efficient operations of facilities and on-site activities, continue to evaluating strategic acquisition, and to continue the R&D of innovative technologies to expand company service offering and to treat nuclear waste, mixed waste, and industrial waste;
- 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;



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·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;

·as our operations and activities expand, there could be an increase in potential litigation;

·ability to continue under existing contracts that we have with the federal government (directly or indirectly as a subcontractor);

·we believe the 2014 Omnibus spending bill will provide potential increased revenues and generate positive cash flow in 2014;

·process our backlog during periods of low waste receipts, which historically has been in the first or fourth quarter;

·future enforcement policies as applied to existing laws or by the enactment of new environmental laws and regulations;

·although we believe that we are currently in substantial compliance with applicable laws and regulations, we could be subject to fines, penalties or other liabilities or could be adversely affected by existing or subsequently enacted laws or regulations;

·despite our aggressive compliance and auditing procedure for disposal of wastes, we could further be notified, in the future, that we are a PRP 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;

·inability to maintain and obtain required permits and approvals to conduct operations;

·public not accepting our new technology;

·inability to develop new and existing technologies in the conduct of operations;

·inability to maintain and obtain closure and operating insurance requirements;

·inability to retain or renew certain required permits;

·discovery of additional contamination or expanded contamination at any of the sites or facilities leased or owned by us or our subsidiaries which would result in a material increase in remediation expenditures;

·delays at our third party disposal site can extend collection of our receivables greater than twelve months;

·refusal of third party disposal sites to accept our waste;

·changes in federal, state and local laws and regulations, especially environmental laws and regulations, or in interpretation of such;

·requirements to obtain permits for TSD activities or licensing requirements to handle low level radioactive materials are limited or lessened;

·potential increases in equipment, maintenance, operating or labor costs;

·management retention and development;

·financial valuation of intangible assets is substantially more/less than expected;

·the requirement to use internally generated funds for purposes not presently anticipated;

·inability to continue to be profitable on an annualized basis;

·inability of the Company to maintain the listing of its Common Stock on the NASDAQ;

·terminations of contracts with federal agencies or subcontracts involving federal agencies, or reduction in amount of waste delivered to the Company under the contracts or subcontracts;

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- renegotiation of contracts involving the federal government;
- federal government's inability or failure to provide necessary funding to remediate contaminated federal sites;
- disposal expense accrual could prove to be inadequate in the event the waste requires re-treatment;
- inability to raise capital on commercially reasonable terms;
- inability to increase profitable revenue;
- lender refuses to waive non-compliance or revises our covenant so that we are in compliance; and
- Risk factors contained in Item 1A of this report.

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ITEM 8. FINANCIAL STATEMENTS AND  
SUPPLEMENTARY DATA

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Financial Statement Schedules

In accordance with the rules of Regulation S-X, schedules are not submitted because (a) they are not applicable to or required by the Company, or (b) the information required to be set forth therein is included in the consolidated financial statements or notes thereto.

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Report of Independent Registered Public Accounting Firm

Board of Directors and Stockholders  
Perma-Fix Environmental Services, Inc.  
Atlanta, Georgia

We have audited the accompanying consolidated balance sheets of Perma-Fix Environmental Services, Inc. and subsidiaries as of December 31, 2013 and 2012 and the related consolidated statements of operations, comprehensive loss, stockholders' equity, and cash flows for the years then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Perma-Fix Environmental Services, Inc. and subsidiaries at December 31, 2013 and 2012, and the results of its operations and its cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America.

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the consolidated financial statements, the Company has suffered declining revenues, recurring losses from operations and has a net working capital deficiency that raise substantial doubt about its ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 1. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

/s/BDO USA, LLP

Atlanta, Georgia

April 15, 2014  
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## PERMA-FIX ENVIRONMENTAL SERVICES, INC.

## CONSOLIDATED BALANCE SHEETS

As of December 31,

| (Amounts in Thousands, Except for Share and per Share Amounts)                                   | 2013          | 2012      |
|--|---------------|-----------|
| <b>ASSETS</b>  |               |           |
| Current assets:  |               |           |
| Cash   | \$333         | \$4,368   |
| Restricted cash  | 35            | 35        |
| Accounts receivable, net of allowance for doubtful accounts of \$1,932 and \$2,507, respectively | 8,106         | 11,395    |
| Unbilled receivables - current   | 4,917         | 8,530     |
| Retainage receivable   | 135           | 312       |
| Inventories  | 520           | 473       |
| Prepaid and other assets   | 2,949         | 3,282     |
| Deferred tax assets - current  | $\frac{3}{4}$ | 1,316     |
| Current assets related to discontinued operations  | 3,114         | 499       |
| Total current assets   | 20,109        | 30,210    |
| Property and equipment:  |               |           |
| Buildings and land   | 19,486        | 26,297    |
| Equipment  | 35,279        | 34,657    |
| Vehicles   | 610           | 661       |
| Leasehold improvements   | 11,625        | 11,625    |
| Office furniture and equipment   | 2,046         | 2,116     |
| Construction-in-progress   | 630           | 334       |
|  | 69,676        | 75,690    |
| Less accumulated depreciation and amortization   | (43,616)      | (40,376)  |
| Net property and equipment   | 26,060        | 35,314    |
| Property and equipment related to discontinued operations  | 1,367         | 1,614     |
| Intangibles and other long term assets:  |               |           |
| Permits  | 16,744        | 16,799    |
| Goodwill   | 1,330         | 29,186    |
| Other intangible assets - net  | 2,980         | 3,610     |
| Unbilled receivables – non-current   | 302           | 137       |
| Finite risk sinking fund   | 21,307        | 21,272    |
| Other assets   | 1,401         | 1,549     |
| Total assets   | \$91,600      | \$139,691 |

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

IndexPERMA-FIX ENVIRONMENTAL SERVICES, INC.  
CONSOLIDATED BALANCE SHEETS, CONTINUED

As of December 31,

| (Amounts in Thousands, Except for Share and per Share Amounts)  | 2013          | 2012          |
|---|---------------|---------------|
| <b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>   |               |               |
| Current liabilities:  |               |               |
| Accounts payable  | \$5,462       | \$8,657       |
| Accrued expenses  | 4,933         | 6,672         |
| Disposal/transportation accrual   | 1,385         | 2,294         |
| Unearned revenue  | 4,149         | 3,695         |
| Billings in excess of costs and estimated earnings  | 268           | 1,934         |
| Current liabilities related to discontinued operations  | 3,994         | 1,512         |
| Current portion of long-term debt   | 2,876         | 2,794         |
| Total current liabilities   | 23,067        | 27,558        |
| Accrued closure costs   | 5,222         | 11,349        |
| Other long-term liabilities   | 739           | 674           |
| Deferred tax liabilities  | 1,012         | 1,340         |
| Long-term liabilities related to discontinued operations  | 602           | 1,829         |
| Long-term debt, less current portion  | 11,372        | 11,402        |
| Total long-term liabilities   | 18,947        | 26,594        |
| Total liabilities   | 42,014        | 54,152        |
| Commitments and Contingencies   |               |               |
| Series B Preferred Stock of subsidiary, \$1.00 par value; 1,467,396 shares authorized, 1,284,730 shares issued and outstanding, liquidation value \$1.00 per share plus accrued and unpaid dividends of \$738 and \$674, respectively | 1,285         | 1,285         |
| Stockholders' Equity:   |               |               |
| Preferred Stock, \$.001 par value; 2,000,000 shares authorized, no shares issued and outstanding  | $\frac{3}{4}$ | $\frac{3}{4}$ |
| Common Stock, \$.001 par value; 75,000,000 shares authorized, 11,406,573 and 11,247,642 shares issued, respectively; 11,398,931 and 11,240,000 shares outstanding, respectively   | 11            | 11            |
| Additional paid-in capital  | 103,454       | 102,864       |
| Accumulated deficit   | (55,078 )     | (19,103 )     |
| Accumulated other comprehensive income (loss)   | 2             | (2 )          |
| Less Common Stock in treasury, at cost; 7,642 shares  | (88 )         | (88 )         |
| Total Perma-Fix Environmental Services, Inc. stockholders' equity   | 48,301        | 83,682        |
| Non-controlling interest  | $\frac{3}{4}$ | 572           |
| Total stockholders' equity  | 48,301        | 84,254        |
| Total liabilities and stockholders' equity  | \$91,600      | \$139,691     |

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

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PERMA-FIX ENVIRONMENTAL SERVICES, INC.  
CONSOLIDATED STATEMENTS OF OPERATIONS  
For the years ended December 31,

| (Amounts in Thousands, Except for per Share Amounts)   | 2013       | 2012       |
|--|------------|------------|
| Net revenues   | \$74,413   | \$127,509  |
| Cost of goods sold   | 64,597     | 111,705    |
| Gross profit   | 9,816      | 15,804     |
| Selling, general and administrative expenses   | 14,376     | 18,390     |
| Research and development   | 1,764      | 1,823      |
| Impairment of goodwill   | 27,856     | —          |
| Loss on disposal of property and equipment   | 49         | 15         |
| Loss from operations   | (34,229)   | (4,424 )   |
| Other income (expense):  |            |            |
| Interest income  | 35         | 41         |
| Interest expense   | (762 )     | (818 )     |
| Interest expense – financing fees  | (132 )     | (107 )     |
| Other  | (8 )       | 8          |
| Loss from continuing operations before income taxes  | (35,096)   | (5,300 )   |
| Income tax benefit   | (625 )     | (2,151 )   |
| Loss from continuing operations  | (34,471)   | (3,149 )   |
| Loss from discontinued operations, net of taxes  | (1,568 )   | (30 )      |
| Net loss   | (36,039)   | (3,179 )   |
| Less: net (loss) income attributable to non-controlling interest   | (64 )      | 180        |
| Net loss attributable to Perma-Fix Environmental Services, Inc. common stockholders                                | \$(35,975) | \$(3,359 ) |
| Net loss per common share attributable to Perma-Fix Environmental Services, Inc. stockholders - basic and diluted: |            |            |
| Continuing operations  | \$(3.04 )  | \$(.30 )   |
| Discontinued operations  | \$(.14 )   | \$—        |
| Net loss per common share  | \$(3.18 )  | \$(.30 )   |
| Number of common shares used in computing net loss per share:  |            |            |
| Basic  | 11,319     | 11,225     |
| Diluted  | 11,319     | 11,225     |

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

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PERMA-FIX ENVIRONMENTAL SERVICES, INC.

CONSOLIDATED STATEMENT OF COMPREHENSIVE LOSS

For the years ended December 31,

| (Amounts in Thousands)  | 2013       | 2012      |
|---|------------|-----------|
| Net loss  | \$(36,039) | \$(3,179) |
| Other comprehensive income:   |            |           |
| Foreign currency translation gain   | 4          | 1         |
| Total other comprehensive income  | 4          | 1         |
| Comprehensive loss  | (36,035)   | (3,178)   |
| Comprehensive (loss) income attributable to non-controlling interest                          | (64 )      | 180       |
| Comprehensive loss attributable to Perma-Fix Environmental Services, Inc. common stockholders | \$(35,971) | \$(3,358) |

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

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## PERMA-FIX ENVIRONMENTAL SERVICES, INC

## CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

For the years ended December 31,

(Amounts in Thousands, Except for Share Amounts)

|  | Common Stock  |               | Additional<br>Paid-In<br>Capital | Common Stock           |               | Accumulated<br>Other<br>Comprehensive<br>(Loss)<br>Income | Non-controlling<br>Interest in<br>Subsidiary |  | Total<br>Stockholders'<br>Equity |
|--|---------------|---------------|----------------------------------|------------------------|---------------|---|--|--|----------------------------------|
|  | Shares        | Amount        |                                  | Held<br>In<br>Treasury |               |   | Accumulated<br>Deficit                       |  |                                  |
| Balance at December 31, 2011             | 11,213,587    | \$11          | \$102,456                        | \$ (88 )               | \$ (3 )       | \$ 392  | \$ (15,744 )                                 |  | \$ 87,024                        |
| Net income (loss)                        | $\frac{3}{4}$ | $\frac{3}{4}$ | $\frac{3}{4}$                    | $\frac{3}{4}$          | $\frac{3}{4}$ | 180   | (3,359 )                                     |  | (3,179 )                         |
| Foreign currency translation             | $\frac{3}{4}$ | $\frac{3}{4}$ | $\frac{3}{4}$                    | $\frac{3}{4}$          | 1             | $\frac{3}{4}$   | $\frac{3}{4}$                                |  | 1                                |
| Issuance of Common Stock for services    | 34,055        | $\frac{3}{4}$ | 217                              | $\frac{3}{4}$          | $\frac{3}{4}$ | $\frac{3}{4}$   | $\frac{3}{4}$                                |  | 217                              |
| Stock-Based Compensation                 | $\frac{3}{4}$ | $\frac{3}{4}$ | 191                              | $\frac{3}{4}$          | $\frac{3}{4}$ | $\frac{3}{4}$   | $\frac{3}{4}$                                |  | 191                              |
| Balance at December 31, 2012             | 11,247,642    | \$11          | \$102,864                        | \$ (88 )               | \$ (2 )       | \$ 572  | \$ (19,103 )                                 |  | \$ 84,254                        |
| Net loss                                 | $\frac{3}{4}$ | $\frac{3}{4}$ | $\frac{3}{4}$                    | $\frac{3}{4}$          | $\frac{3}{4}$ | (64 )   | (35,975 )                                    |  | (36,039 )                        |
| Foreign currency translation             | $\frac{3}{4}$ | $\frac{3}{4}$ | $\frac{3}{4}$                    | $\frac{3}{4}$          | 4             | $\frac{3}{4}$   | $\frac{3}{4}$                                |  | 4                                |
| Distribution to non-controlling interest | $\frac{3}{4}$ | $\frac{3}{4}$ | $\frac{3}{4}$                    | $\frac{3}{4}$          | $\frac{3}{4}$ | (490 )  | $\frac{3}{4}$                                |  | (490 )                           |
| Redemption of non-controlling interest   | $\frac{3}{4}$ | $\frac{3}{4}$ | $\frac{3}{4}$                    | $\frac{3}{4}$          | $\frac{3}{4}$ | (18 )   | $\frac{3}{4}$                                |  | (18 )                            |
| Issuance of Common Stock for services    | 69,041        | $\frac{3}{4}$ | 206                              | $\frac{3}{4}$          | $\frac{3}{4}$ | $\frac{3}{4}$   | $\frac{3}{4}$                                |  | 206                              |
| Issuance of Common Stock for debt        | 90,000        | $\frac{3}{4}$ | 200                              | $\frac{3}{4}$          | $\frac{3}{4}$ | $\frac{3}{4}$   | $\frac{3}{4}$                                |  | 200                              |
| Issuance of warrants for debt            | $\frac{3}{4}$ | $\frac{3}{4}$ | 59                               | $\frac{3}{4}$          | $\frac{3}{4}$ | $\frac{3}{4}$   | $\frac{3}{4}$                                |  | 59                               |
| Cash in lieu - reverse stock split       | (110 )        | $\frac{3}{4}$ | $\frac{3}{4}$                    | $\frac{3}{4}$          | $\frac{3}{4}$ | $\frac{3}{4}$   | $\frac{3}{4}$                                |  | $\frac{3}{4}$                    |
| Stock-Based Compensation                 | $\frac{3}{4}$ | $\frac{3}{4}$ | 125                              | $\frac{3}{4}$          | $\frac{3}{4}$ | $\frac{3}{4}$   | $\frac{3}{4}$                                |  | 125                              |
| Balance at December 31, 2013             | 11,406,573    | \$11          | \$103,454                        | \$ (88 )               | \$ 2          | \$ $\frac{3}{4}$  | \$ (55,078 )                                 |  | \$ 48,301                        |

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

IndexPERMA-FIX ENVIRONMENTAL SERVICES, INC.  
CONSOLIDATED STATEMENTS OF CASH FLOWS

For the years ended December 31,

| (Amounts in Thousands)   | 2013       | 2012       |
|--|------------|------------|
| Cash flows from operating activities:  |            |            |
| Net loss   | \$(36,039) | \$(3,179 ) |
| Less: loss on discontinued operations  | (1,568 )   | (30 )      |
| Loss from continuing operations  | (34,471)   | (3,149 )   |
| Adjustments to reconcile net income from continuing operations to cash provided by operations: |            |            |
| Depreciation and amortization  | 4,126      | 5,470      |
| Amortization of debt discount  | 36         | 12         |
| Amortization of fair value of customer contracts   | (1,298 )   | (3,667 )   |
| Deferred tax benefit   | (639 )     | (234 )     |
| (Benefit) provision for bad debt and other reserves  | (304 )     | 124        |
| Foreign exchange translation gain  | 4          | 1          |
| Impairment of goodwill   | 27,856     |            |
| Loss on disposal of plant, property and equipment  | 49         | 15         |
| Issuance of common stock for services  | 206        | 217        |
| Stock-based compensation   | 125        | 191        |
| Changes in operating assets and liabilities of continuing operations                           |            |            |
| Accounts receivable  | 3,769      | 5,929      |
| Unbilled receivables   | 3,448      | 1,390      |
| Prepaid expenses, inventories and other assets   | 1,828      | 2,845      |
| Accounts payable, accrued expenses and unearned revenue  | (6,431 )   | (11,631)   |
| Cash used in continuing operations   | (1,696 )   | (2,487 )   |
| Cash used in discontinued operations   | (1,020 )   | (922 )     |
| Cash used in operating activities  | (2,716 )   | (3,409 )   |
| Cash flows from investing activities:  |            |            |
| Purchases of property and equipment, net   | (944 )     | (412 )     |
| Proceeds from sale of plant, property and equipment  |            | 121        |
| Change in restricted cash, net   |            | 1,500      |
| Payments to finite risk sinking fund   | (35 )      | (1,918 )   |
| Non-controlling interest distribution/redemption   | (508 )     |            |
| Cash used in investing activities of continuing operations                                     | (1,487 )   | (709 )     |
| Cash used in investing activities of discontinued operations                                   |            | (2 )       |
| Net cash used in investing activities  | (1,487 )   | (711 )     |
| Cash flows from financing activities:  |            |            |
| Net repayments of revolving credit   |            |            |
| Principal repayments of long term debt   | (2,796 )   | (3,532 )   |
| Proceeds from issuance of long-term debt   | 3,000      |            |
| Cash provided by (used in) financing activities of continuing operations                       | 204        | (3,532 )   |
| Principal repayment of long-term debt for discontinued operations                              | (36 )      | (35 )      |
| Cash provided by (used in) financing activities  | 168        | (3,567 )   |
| Decrease in cash   | (4,035 )   | (7,687 )   |

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|                             |       |         |
|-----------------------------|-------|---------|
| Cash at beginning of period | 4,368 | 12,055  |
| Cash at end of period       | \$333 | \$4,368 |

Supplemental disclosure:

|  |       |       |
|--|-------|-------|
| Interest paid  | \$714 | \$922 |
| Income taxes paid                                      | 110   | 479   |
| Issuance of Common Stock for debt                      | 200   |       |
| Issuance of Warrants for debt                          | 59    |       |
| Purchase of equipment through capital lease obligation | 71    |       |

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

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PERMA-FIX ENVIRONMENTAL SERVICES, INC.

Notes to Consolidated Financial Statements

December 31, 2013 and 2012

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NOTE 1

DESCRIPTION OF BUSINESS AND BASIS OF PRESENTATION

Perma-Fix Environmental Services, Inc. (the Company, which may be referred to as we, us, or our), an environmental and technology know-how company, is a Delaware corporation, engaged through its subsidiaries, in two reportable segments:

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

Our consolidated financial statements include our accounts and the accounts of our wholly-owned subsidiaries as follows:

Continuing Operations: Diversified Scientific Services, Inc. (“DSSI”), East Tennessee Materials & Energy Corporation (“M&EC”), Perma-Fix of Florida, Inc. (“PFF”), Perma-Fix of Northwest Richland, Inc. (“PFNWR”), Schreiber, Yonley & Associates (“SYA”), Safety & Ecology Corporation (“SEC”), Perma-Fix Environmental Services UK Limited (“Perma-Fix UK Limited” - a United Kingdom facility), Perma-Fix of Canada, and SEC Radcon Alliance, LLC (“SECRA”).

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Discontinued Operations (See “Note 7”): Perma-Fix of Fort Lauderdale, Inc. (“PFFL” – divested in August 2011), Perma-Fix of South Georgia, Inc. (“PFSG” – held for sale), Perma-Fix of Orlando (“PFO” – divested in October 2011), Perma-Fix of Maryland (“PFMD” – divested in January 2008), Perma-Fix of Dayton, Inc. (“PFD” – divested in March 2008), and Perma-Fix Treatment Services, Inc. (“PFTS” – divested in May 2008). Our discontinued operations also include Perma-Fix of Michigan, Inc. (“PFMI”) and Perma-Fix of Memphis, Inc. (“PFM”), two non-operational facilities.

## Reverse Stock Split

The Company effected a reverse stock split at a ratio of 1-for-5 of the Company’s then outstanding Common Stock (“Common Stock”), and shares of Common Stock issuable upon exercise of the then outstanding stock options and warrants, effective as of 12:01 a.m. on October 15, 2013. As a result of the reverse stock split, each five shares of the outstanding Common Stock and shares held in treasury were combined into one share of Common Stock without any change to the par value per share. The reverse stock split did not affect the number of authorized shares of Common Stock which remains at 75,000,000. As a result of this reverse stock split, all references in the financial statements and notes thereto to the number of shares outstanding, per share amounts, and outstanding stock option and warrant data of the Company’s Common Stock have been restated to reflect the effect of the stock split for all periods presented.

The primary reason for implementing this reverse stock split was to increase the market price per share of our Common Stock in order to regain compliance with the NASDAQ’s continued listing criteria related to Minimum Bid Price Rule. On October 29, 2013, we received a letter from the NASDAQ Stock Market indicating that we had regained compliance with the minimum bid price requirement under NASDAQ Listing Rule 5550(a)(2) for continued listing on the NASDAQ Capital Market. The Company’s Common Stock continues to be listed on the NASDAQ Capital Market.

## Financial Position and Liquidity

During the years ended December 31, 2013 and 2012, the Company incurred net losses of \$36,039,000 and \$3,179,000, respectively, and net cash used in operating activities was \$2,716,000 and \$3,409,000, respectively. Our net loss for 2013 included approximately \$27,856,000 in goodwill impairment charges recorded for three of our four reporting units and a charge to tax expense of approximately \$4,760,000 (\$3,596,000 for our continuing operations and \$1,164,000 for our discontinued operations) to provide a full valuation allowance on our net deferred tax assets. As of December 31, 2013, we have a deficit in working capital of \$2,958,000, an accumulated deficit of \$55,078,000 and cash on hand of \$333,000. Revenues for fiscal years 2013 and 2012 were \$74,413,000 and \$127,509,000, respectively, and were below our expectations and internal forecasts as a result, in large part, of the government sequestration, federal governmental clients operating under reduced budgets, the government shutdown of approximately 16 days in October 2013, ending of contracts, and general adverse economic conditions. Our revenue during the year ended December 31, 2013 was insufficient to attain profitable operations and generated negative operating cash flow from operations. We did not meet the minimum quarterly fixed charge coverage ratio requirement under our credit facility for the first and fourth quarters of 2013; however, we obtained a waiver from our lender for each of these quarters for the non-compliance. Our lender has waived our fixed charge coverage ratio testing requirement for the first quarter of 2014 and made certain revisions to our quarterly fixed charge coverage ratio testing requirements for the remaining quarters of 2014. (See “Note 8 - Long Term Debt” and “Note 18 - Subsequent Events - Waivers and Revisions from PNC Bank, National Association” for waivers received and revisions made to our fixed charge coverage ratio for 2014 and other matters). Based on these revisions above, we expect to meet our quarterly fixed charge coverage ratio requirement in each of the second to fourth quarters of 2014. If we fail to meet the minimum quarterly fixed charge coverage ratio requirement in any of the quarters starting with the second quarter in 2014 and PNC does not waive the non-compliance or further revise our covenant so that we are in compliance, our lender could accelerate the repayment of borrowings under our credit facility. In the event that our lender accelerates the payment of our borrowings, we may not have sufficient liquidity to repay our debt under our credit facility and other indebtedness.

The Company's cash flow requirements during 2013 have been financed by cash on hand, operations, our credit facility, and debt financing. The Company is continually reviewing operating costs and is committed to further reducing operating costs to bring them in line with revenue levels.

Our ability to achieve and maintain profitability is dependent upon our ability to successfully raise additional capital and develop our business plans that will generate profitable revenues. The Company continues to explore all sources of increasing revenue. If the Company is unable in the near term to raise capital on commercially reasonable terms or increase revenue, it may not have sufficient cash to sustain its operations for the next twelve months. As a result, the Company may be forced to further reduce or even curtail its operations. These factors raise substantial doubt about the Company's ability to continue as a going concern. We obtained a waiver from the Company's lender which waived the requirement by our lender that the Company's consolidated financial statements for the year ended December 31, 2013, be issued without a going concern qualification. (See "Note 18 - Subsequent Events - Waivers and Revisions from PNC Bank, National Association" for further information of this waiver along with other matters). The accompanying financial statements do not include any adjustments that might be necessary if the Company is unable to continue as a going concern.

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The Company continues to focus on expansion into both commercial and international markets to help offset the uncertainties of government spending in the USA. 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. In January 2014, the fiscal year 2014 Omnibus spending bill was approved by Congress and the President. This budget, the first approved in several years, restores federal government funding cuts instituted in 2013 from sequestration and allows for new spending on projects that was not allowed under Continuing Resolutions ("CR").

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## NOTE 2

### SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

#### Principles of Consolidation

Our consolidated financial statements include our accounts and those of our wholly-owned subsidiaries after elimination of all significant intercompany accounts and transactions.

#### Use of Estimates

When we prepare financial statements in conformity with generally accepted accounting principles ("GAAP") in the United States of America, we make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements, as well as, the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. See Notes 7, 10, 11 and 12 for estimates of discontinued operations and environmental liabilities, closure costs, income taxes and contingencies for details on significant estimates.

#### Restricted Cash

Restricted cash reflects \$35,000 held in escrow for our worker's compensation policy.

#### Accounts Receivable

Accounts receivable are customer obligations due under normal trade terms requiring payment within 30 or 60 days from the invoice date based on the customer type (government, broker, or commercial). The carrying amount of accounts receivable is reduced by an allowance for doubtful accounts, which is a valuation allowance that reflects management's best estimate of the amounts that will not be collected. We regularly review all accounts receivable balances that exceed 60 days from the invoice date and based on an assessment of current credit worthiness, estimate the portion, if any, of the balance that will not be collected. This analysis excludes government related receivables due to our past successful experience in their collectability. Specific accounts that are deemed to be uncollectible are reserved at 100% of their outstanding balance. The remaining balances aged over 60 days have a percentage applied by aging category, based on a historical valuation, that allows us to calculate the total reserve required. Once we have exhausted all options in the collection of a delinquent accounts receivable balance, which includes collection letters, demands for payment, collection agencies and attorneys, the account is deemed uncollectible and subsequently written off. The write off process involves approvals, based on dollar amount, from senior management.

Retainage receivables represent amounts that are billed or billable to our customers, but are retained by the customer until completion of the project or as otherwise specified in the contract. Our retainage receivable balances are all current.

#### Unbilled Receivables

Unbilled receivables are generated by differences between invoicing timing and our performance based methodology used for revenue recognition purposes. As major processing and contract completion phases are completed and the costs incurred, we recognize the corresponding percentage of revenue. Within our Treatment Segment, we experience delays in processing invoices due to the complexity of the documentation that is required for invoicing, as well as the difference between completion of revenue recognition milestones and agreed upon invoicing terms, which results in



unbilled receivables. The timing differences occur for several reasons: partially from delays in the final processing of all wastes associated with certain work orders and partially from delays for analytical testing that is required after we have processed waste but prior to our release of waste for disposal. The tasks relating to these delays usually take several months to complete. As we now have historical data 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. However, our historical experience suggests that a significant part of unbilled receivables are ultimately collectible with minimal concession on our part. We, therefore, segregate the unbilled receivables between current and long term.

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Unbilled receivables within our Services Segment can result from: (1) revenue recognized by our Earned Value Management program (a program which integrates project scope, schedule, and cost to provide an objective measure of project progress) but invoice milestones have not yet been met and/or (2) contract claims and pending change orders, including Requests for Equitable Adjustments (“REAs”) when work has been performed and collection of revenue is reasonably assured.

### Inventories

Inventories consist of treatment chemicals, saleable used oils, and certain supplies. Additionally, we have replacement parts in inventory, which are deemed critical to the operating equipment and may also have extended lead times should the part fail and need to be replaced. Inventories are valued at the lower of cost or market with cost determined by the first-in, first-out method.

### Property and Equipment

Property and equipment expenditures are capitalized and depreciated using the straight-line method over the estimated useful lives of the assets for financial statement purposes, while accelerated depreciation methods are principally used for income tax purposes. Generally, asset lives range from ten to forty years for buildings (including improvements and asset retirement costs) and three to seven years for office furniture and equipment, vehicles, and decontamination and processing equipment. Leasehold improvements are capitalized and amortized over the lesser of the term of the lease or the life of the asset. Maintenance and repairs are charged directly to expense as incurred. The cost and accumulated depreciation of assets sold or retired are removed from the respective accounts, and any gain or loss from sale or retirement is recognized in the accompanying consolidated statements of operations. Renewals and improvement, which extend the useful lives of the assets, are capitalized.

In accordance with ASC 360, “Property, Plant, and Equipment”, long-lived assets, such as property, plant and equipment, and purchased intangible assets subject to amortization, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to estimated undiscounted future cash flows expected to be generated by the asset. If the carrying amount of an asset exceeds its estimated future cash flows, an impairment charge is recognized in the amount by which the carrying amount of the asset exceeds the fair value of the asset. Assets to be disposed of are separately presented in the balance sheet and reported at the lower of the carrying amount or fair value less costs to sell, and are no longer depreciated. The assets and liabilities of a disposal group classified as held for sale would be presented separately in the appropriate asset and liability sections of the balance sheet.

Our PFSG subsidiary is within our discontinued operations and is held for sale. On August 14, 2013, our PFSG facility incurred fire damage which has left it non-operational. As of December 31, 2013, we have recorded \$130,000 for impairment of fixed assets related to the fire. We performed updated financial valuation on the tangible assets of PFSG and concluded that no further tangible asset impairment existed as of December 31, 2013.

Our depreciation expense totaled approximately \$3,381,000 and \$4,795,000 in 2013 and 2012, respectively.

### Goodwill and Other Intangible Assets

Intangible assets relating to acquired businesses consist primarily of the cost of purchased businesses in excess of the estimated fair value of net identifiable assets acquired, or goodwill, and the recognized value of the permits required to operate the business. We continually reevaluate the propriety of the carrying amount of goodwill and permits to determine whether current events and circumstances warrant adjustments to the carrying value. We test each Reporting Unit’s goodwill and permits, separately, for impairment, annually as of October 1 and also if an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying amount.



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We can assess qualitative factors in determining whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount; however, we elected to bypass the qualitative assessment aspect of the test in 2013 as we identified indicators of potential impairment (market capitalization in relation to net book value, negative industry and economic trends, and lower than anticipated results of operations). We follow a two-step quantitative process. In the first step, we compare the fair value of each reporting unit, as computed primarily by present value cash flow calculation, to its book carrying value. If the fair value exceeds the carrying value, no further work is required and no impairment loss is recognized. If the carrying value exceeds the fair value, the goodwill of the reporting unit is potentially impaired and we would then complete step 2 in order to measure the impairment loss. In step 2, the implied fair value is compared to the carrying amount of the goodwill. If the implied fair value of goodwill is less than the carrying value of goodwill, we would recognize an impairment loss equal to the difference. The implied fair value is calculated by assigning the fair value of the reporting unit (as determined in step 1) to all of its assets and liabilities (including unrecognized intangible assets) and any excess in fair value that is not assigned to the asset and liabilities is the implied fair value of goodwill.

In estimating the fair value of the reporting units, the Company makes estimates and judgments about its future cash flows using an income approach. The income approach, specifically a discounted cash flow analysis, includes assumptions for, among others, forecasted revenue, gross margin, operating income, working capital cash flow, perpetual growth rates and long-term discount rates (reflects a weighted average cost of capital rate), all of which require significant judgment by management. The sum of the fair values of the Company's reporting units are also compared to its external market capitalization to determine the appropriateness of its assumptions. These assumptions take into account the current industry environment (with significant focus on government spending trends), and its impact on the Company's business.

Intangible assets that have definite useful lives are amortized using the straight-line method over the estimated useful lives (with the exception of customer relationships which are amortized using an accelerated method) and are excluded from our annual intangible asset valuation review conducted as of October 1. The Company also has one definite-lived permit which was excluded from our annual impairment review as noted above.

Definite-lived intangible assets are tested for impairment whenever events or changes in circumstances suggest impairment might exist (see Note 3 – “Goodwill and Other Intangible Assets” for further discussion on goodwill and other intangible assets).

## Research and Development

Innovation and technical know-how by our operations is very important to the success of our business. Our goal is to discover, develop, and bring to market innovative ways to process waste that address unmet environmental needs and to develop new company service offerings. We conduct research internally and also through collaborations with other third parties. 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 and are charged to expense when incurred in accordance with Accounting Standards Codification (“ASC”) Topic 730, “Research and Development.”

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### Accrued Closure Costs and Asset Retirement Obligations (“ARO”)

Accrued closure costs represent our estimated environmental liability to clean up our facilities as required by our permits, in the event of closure. Accounting Standards Codification (“ASC”) 410, “Asset Retirement and Environmental Obligations” requires that the discounted fair value of a liability for an ARO be recognized in the period in which it is incurred with the associated ARO capitalized as part of the carrying cost of the asset. The recognition of an ARO requires that management make numerous estimates, assumptions and judgments regarding such factors as estimated probabilities, timing of settlements, material and service costs, current technology, laws and regulations, and credit adjusted risk-free rate to be used. This estimate is inflated, using an inflation rate, to the expected time at which the closure will occur, and then discounted back, using a credit adjusted risk free rate, to the present value. AROs are included within buildings as part of property and equipment and are depreciated over the estimated useful life of the property. In periods subsequent to initial measurement of the ARO, the Company must recognize period-to-period changes in the liability resulting from the passage of time and revisions to either the timing or the amount of the original estimate of undiscounted cash flow. Increases in the ARO liability due to passage of time impact net income as accretion expense. Changes in costs resulting from changes or expansion at the facilities require adjustment to the ARO liability calculated in the aforementioned method, and are capitalized and charged as depreciation expense, in accordance with the Company’s depreciation policy. (See Note 10 – “Accrued Closure Costs and Asset Retirement Obligations (“ARO”)” for further information of our closure liabilities and AROs).

### Income Taxes

Income taxes are accounted for in accordance with ASC 740, “Income Taxes.” Under ASC 740, the provision for income taxes is comprised of taxes that are currently payable and deferred taxes that relate to the temporary differences between financial reporting carrying values and tax bases of assets and liabilities. Deferred 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 tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

ASC 740 requires that deferred income tax assets be reduced by a valuation allowance if it is more likely than not that some portion or all of the deferred income tax assets will not be realized. We evaluate the realizability of our deferred income tax assets, primarily resulting from impairment loss and net operating loss carryforwards, and adjust our valuation allowance, if necessary. Once we utilize our net operating loss carryforwards or reverse the related valuation allowance we have recorded on these deferred tax assets, we would expect our provision for income tax expense in future periods to reflect an effective tax rate that will be significantly higher than past periods.

ASC 740 sets out a consistent framework for preparers to use to determine the appropriate recognition and measurement of uncertain tax positions. ASC 740 uses a two-step approach wherein a tax benefit is recognized if a position is more-likely-than-not to be sustained. The amount of the benefit is then measured to be the highest tax benefit which is greater than 50% likely to be realized. ASC 740 also sets out disclosure requirements to enhance transparency of an entity’s tax reserves. The Company recognizes accrued interest and income tax penalties related to unrecognized tax benefits as a component of income tax expense.

We reassess the validity of our conclusions regarding uncertain income tax positions on a quarterly basis to determine if facts or circumstances have arisen that might cause us to change our judgment regarding the likelihood of a tax position’s sustainability under audit.

### Foreign Operation

Our Services Segment includes a foreign operation, Perma-Fix Environmental Services UK Limited (“Perma-Fix UK Limited”). We also have a Canadian subsidiary, Perma-Fix of Canada. The financial results of Perma-Fix UK Limited and Perma-Fix of Canada (immaterial at this time) are included in the consolidated financial statements of the Company within the Services Segment. The financial results of Perma-Fix UK Limited and Perma-Fix of Canada are translated into U.S. dollars using exchange rates in effect at period-end for assets and liabilities and average exchange

rates during the period for results of operations. The related translation adjustments are reported as a separate component of stockholders' equity.

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## Concentration Risk

We performed services relating to waste generated by the federal government, either directly as a prime contractor or indirectly as a subcontractor (including the CH Plateau Remediation Company (“CHPRC”)) to the federal government, representing approximately \$47,557,000 or 63.9% of our total revenue from continuing operations during 2013, as compared to \$101,533,000 or 79.6% of our total revenue from continuing operations during 2012.

The following customer accounted for 10% or more of the total revenues generated from continuing operations for twelve months ended December 31, 2013 and 2012:

| Customer | Year | Total<br>Revenue | % of<br>Total<br>Revenue |   |
|----------|------|------------------|--------------------------|---|
| CHPRC    | 2013 | \$19,922,000     | 26.8                     | % |
|          | 2012 | \$24,652,000     | 19.3                     | % |

Revenue generated from CHPRC includes revenue generated from the CHPRC subcontract at our Services Segment and various waste processing contracts at our Treatment Segment. The CHPRC subcontract was a cost plus award fee subcontract awarded to us during the second quarter of 2008 to participate in the cleanup of the central portion of the Hanford Site located in the state of Washington. This subcontract expired on September 30, 2013.

The outstanding net receivable balance for the customer representing more than 10% of consolidated net accounts receivable is (“AR”) as follows:

| Customer            | Year | AR          | AR     |
|---------------------|------|-------------|--------|
| Clauss Construction | 2013 | \$1,145,000 | 14.2 % |
|                     | 2012 | \$1,486,000 | 13.0 % |

## Gross Receipts Taxes and Other Charges

ASC 605-45, “Revenue Recognition – Principal Agent Consideration” provides guidance regarding the accounting and financial statement presentation for certain taxes assessed by a governmental authority. These taxes and surcharges include, among others, universal service fund charges, sales, use, waste, and some excise taxes. In determining whether to include such taxes in our revenue and expenses, we assess, among other things, whether we are the primary obligor or principal taxpayer for the taxes assessed in each jurisdiction where we do business. As we are merely a collection agent for the government authority in certain of our facilities, we record the taxes on a net method and do not include them in our revenue and cost of services.

## Revenue Recognition

Treatment Segment revenues. The processing of mixed waste is complex and may take several months or more to complete; as such, we recognize revenues using a performance based methodology with our measure of progress towards completion determined based on output measures consisting of milestones achieved and completed. We have waste tracking capabilities, which we continue to enhance, to allow us to better match the revenues earned to the processing phases achieved. The revenues are recognized as each of the following three processing phases are completed: receipt, treatment/processing and shipment/final disposal. However, based on the processing of certain waste streams, the treatment/processing and shipment/final disposal phases may be combined as sometimes they are completed concurrently. As major processing phases are completed and the costs incurred, we recognize the corresponding percentage of revenue utilizing a proportional performance model. We experience delays in processing invoices due to the complexity of the documentation that is required for invoicing, as well as the difference between completion of revenue recognition milestones and agreed upon invoicing terms, which results in unbilled receivables. The timing differences occur for several reasons, partially from delays in the final processing of all wastes associated with certain work orders and partially from delays for analytical testing that is required after we have processed waste

but prior to our release of waste for disposal. As the waste moves through these processing phases and revenues are recognized, the correlating costs are expensed as incurred. Although we use our best estimates and all available information to accurately determine these disposal expenses, the risk does exist that these estimates could prove to be inadequate in the event the waste requires retreatment. Furthermore, should the waste be returned to the generator, the related receivables could be uncollectible; however, historical experience has not indicated this to be a material uncertainty.

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Services Segment revenues. Revenue includes services performed under time and material, fixed price, and cost-reimbursement contracts. Revenues and costs associated with fixed price contracts are recognized using the percentage of completion (efforts expended) method. We estimate our percentage of completion based on attainment of project milestones. Revenues and costs associated with time and material contracts are recognized as revenue when earned and costs are incurred.

Under cost reimbursement contracts, we are reimbursed for costs incurred plus a certain percentage markup for indirect costs, in accordance with contract provision. Costs incurred in excess of contract funding may be renegotiated for reimbursement. We also earn a fee based on the approved costs to complete the contract. We recognize this fee using the proportion of costs incurred to total estimated contract costs.

Contract costs include all direct labor, material and other non-labor costs and those indirect costs related to contract support, such as depreciation, fringe benefits, overhead labor, supplies, tools, repairs and equipment rental. Provisions for estimated losses on uncompleted contracts are made in the period in which such losses are determined. Changes in job performance, job conditions and estimated profitability, including those arising from contract penalty provisions and final contract settlements, may result in revisions to costs and income and are recognized in the period in which the revisions are determined.

Consulting revenues are recognized as services are rendered. The services provided are based on billable hours and revenues are recognized in relation to incurred labor and consulting costs. Out of pocket costs reimbursed by customers are also included in revenues.

The liability, "billings in excess of costs and estimated earnings", represents billings in excess of revenues recognized and accrued costs to jobs.

### Self-Insurance

We are self-insured for a significant portion of our group health. The Company estimates expected losses based on statistical analyses of historical industry data, as well as our own estimates based on the Company's actual historical data to determine required self-insurance reserves. The assumptions are closely reviewed, monitored, and adjusted when warranted by changing circumstances. The estimated accruals for these liabilities could be affected if actual experience related to the number of claims and cost per claim differs from these assumptions and historical trends. Based on the information known on December 31, 2013, we believe we have provided adequate reserves for our self-insurance exposure. As of December 31, 2013 and 2012, self-insurance reserves were \$473,000 and \$644,000, respectively, and were included in accrued expenses in the accompanying consolidated balance sheets. The total amounts expensed for self-insurance during 2013 and 2012 were \$2,906,000, and \$4,388,000, respectively, for our continuing operations, and \$160,000 and \$171,000, for our discontinued operations, respectively.

### Stock-Based Compensation

Stock-Based Compensation. We account for stock-based compensation in accordance with ASC 718, "Compensation – Stock 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 uses the Black-Scholes option-pricing model to determine the fair-value of stock-based awards which requires subjective assumptions. 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.

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We recognize stock-based compensation expense using a straight-line amortization method over the requisite period, which is the vesting period of the stock option grant. As ASC 718 requires that stock-based compensation expense be based on options that are ultimately expected to vest, our stock-based compensation expense is reduced at an estimated forfeiture rate. Our estimated forfeiture rate is generally based on historical trends of actual forfeitures. Forfeiture rates are evaluated, and revised as necessary.

### Comprehensive Income

The components of comprehensive income are net income and the effects of foreign currency translation adjustments.

### Net Income (Loss) Per Share

Basic earnings (loss) 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. Net income (loss) attributable to non-controlling interests are excluded from (loss) income from continuing operations in the below calculation in accordance with ASC 260, "Earnings Per Share."

The diluted loss per share calculations exclude options to purchase approximately 339,000 and 517,000 shares of common stock for the years ended December 31, 2013 and 2012, respectively, because their effect would have been antidilutive as a result of the net losses recorded in these periods.

### Fair Value of Financial Instruments

Certain assets and liabilities are required to be recorded at fair value on a recurring basis, while other assets and liabilities are recorded at fair value on a nonrecurring basis. Fair value is determined based on the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants. The three-tier value hierarchy, which prioritizes the inputs used in the valuation methodologies, is:

Level 1—Valuations based on quoted prices for identical assets and liabilities in active markets.

Level 2—Valuations based on observable inputs other than quoted prices included in Level 1, such as quoted prices for similar assets and liabilities in active markets, quoted prices for identical or similar assets and liabilities in markets that are not active, or other inputs that are observable or can be corroborated by observable market data.

Level 3—Valuations based on unobservable inputs reflecting the Company's own assumptions, consistent with reasonably available assumptions made by other market participants.

Financial instruments include cash and restricted cash (Level 1), accounts receivable, accounts payable, and debt obligations (Level 3). At December 31, 2013 and December 31, 2012, the fair value of the Company's financial instruments approximated their carrying values. The fair value of the Company's revolving credit facility approximates its carrying value due to the variable interest rate. The carrying value of our subsidiary's preferred stock is not significantly different than its fair value.

### Recent Accounting Standards

There have been no recently issued accounting standards that are expected to have a material impact on the Company's financial condition or results of operations.

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## NOTE 3

## GOODWILL AND OTHER INTANGIBLE ASSETS

The following summarizes changes in the carrying amount of goodwill by reporting segments:

| Goodwill (amounts in thousands) | Treatment | Services  | Total       |
|---------------------------------|-----------|-----------|-------------|
| Balance as of December 31, 2011 | \$ 13,691 | \$ 15,495 | \$ \$29,186 |
| Balance as of December 31, 2012 | \$ 13,691 | \$ 15,495 | \$ \$29,186 |
| Goodwill impairment             | (13,691 ) | (14,165 ) | (27,856 )   |
| Balance as of December 31, 2013 | \$ ¾      | \$ 1,330  | \$ \$ 1,330 |

Our 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 U.S. Department of Energy (“DOE”), relating to waste management and facility operations at the DOE’s Hanford, Washington site. The CHPRC subcontract provided 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, which expired on September 30, 2013, would 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; accordingly, based on the Company’s 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. Upon finalization, the Company determined there was no change in the estimated impairment charge recorded in the second quarter. This amount represented the total goodwill for our CHPRC reporting unit – our operations under the CHPRC subcontract.

The Company performed its annual goodwill testing as of October 1, for its remaining three reporting units: (1) SYA reporting unit (Services Segment); (2) SEC reporting unit (Services Segment); and (3) Treatment reporting unit (Treatment Segment). The Company identified indicators of potential impairment (market capitalization in relation to net book value, negative industry and economic trends, and lower than anticipated results of operations), which resulted in performance of step 1 of the impairment test. In determining the estimated fair values of the reporting units, the Company generally employed a discounted cash flows analysis (“DCF”) and, in certain cases, used a combination of a DCF analysis and a market-based approach. As noted in the summary of the Company’s significant accounting policies, determining estimated fair values requires the application of significant judgment. As a result of the financial downturn suffered by the Company in 2013, and uncertainties with regards to federal government spending, determining the fair value of the Company’s reporting units was even more judgmental than it has been in the past. These factors reduced the Company’s visibility into long-term trends and dampened the Company’s expectations of future business performance. Consequently, estimates of future cash flows used in the fourth quarter 2013 DCF analyses were moderated, in some cases significantly, relative to the estimates used in the fourth quarter of 2012. The discount rates utilized in these DCF analyses reflect market-based estimates of the risks associated with the projected cash flows of individual reporting units. The discount rates utilized in the DCF analyses were increased to reflect increased risk due to current economic volatility to a range of 21% to 35% in 2013 from 15% in 2012. In addition, the terminal growth rates used in the DCF analyses were decreased to 3% in 2013 from 4% in 2012. The results of the DCF analyses were corroborated with other value indicators where available, such as comparable company earnings multiples and research analyst estimates. The results of this Step 1 process indicated that there was a potential impairment of goodwill in the Treatment and SEC reporting units, as the book values of the reporting units exceeded their respective estimated fair values. As a result, the Company performed step 2 of the impairment analysis for the two reporting units discussed above. In step 2, the implied fair value is compared to the carrying amount of the goodwill. If the implied fair value of goodwill is less than the carrying value of goodwill, we would recognize an impairment loss equal to the difference. The implied fair value is calculated by assigning the fair value of the reporting unit (as determined in step 1) to all of its assets and liabilities (including unrecognized intangible assets) and any excess in fair value that is not assigned to the asset and liabilities is the implied fair value of goodwill. Based on

the result of our step 2 analysis, we determined that the goodwill for each of our Treatment and SEC reporting units was fully impaired, and therefore, we recorded a goodwill impairment loss of \$13,691,000 and \$13,016,000, for our Treatment and SEC reporting unit, respectively.

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The following table summarizes changes in the carrying amount of permits. No permit exists at our Services Segment.

|                                     |           |
|-------------------------------------|-----------|
| Permit (amount in thousands)        | Treatment |
| Balance as of December 31, 2011     | \$ 16,854 |
| PCB permit amortized <sup>(1)</sup> | (55 )     |
| Balance as of December 31, 2012     | 16,799    |
| PCB permit amortized <sup>(1)</sup> | (55 )     |
| Balance as of December 31, 2013     | \$ 16,744 |

<sup>(1)</sup> Amortization for the one definite-lived permit capitalized in 2009 in connection with the authorization issued by the U.S. EPA to our DSSI facility to commercially store and dispose of radioactive PCBs. This permit is being amortized over a ten year period in accordance with its estimated useful life.

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

|                                   | Useful<br>Lives<br>(Years) | December 31, 2013           |                             |                           | December 31, 2012           |                             |                           |
|-----------------------------------|----------------------------|-----------------------------|-----------------------------|---------------------------|-----------------------------|-----------------------------|---------------------------|
|                                   |                            | Gross<br>Carrying<br>Amount | Accumulated<br>Amortization | Net<br>Carrying<br>Amount | Gross<br>Carrying<br>Amount | Accumulated<br>Amortization | Net<br>Carrying<br>Amount |
| Intangibles (amount in thousands) |                            |                             |                             |                           |                             |                             |                           |
| Patent                            | 8-18                       | \$514                       | \$ (155 )                   | \$ 359                    | \$453                       | \$ (105 )                   | \$ 348                    |
| Software                          | 3                          | 379                         | (258 )                      | 121                       | 380                         | (145 )                      | 235                       |
| Non-compete agreement             | 1.2                        | 265                         | (174 )                      | 91                        | 265                         | (62 )                       | 203                       |
| Customer contracts                | 0.5                        | 790                         | (790 )                      | ¾                         | 790                         | (790 )                      | ¾                         |
| Customer relationships            | 12                         | 3,370                       | (961 )                      | 2,409                     | 3,370                       | (546 )                      | 2,824                     |
| Total                             |                            | \$5,318                     | \$ (2,338 )                 | \$ 2,980                  | \$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 (including the one definite-lived permit) discussed above:

|      | Amount<br>(In<br>Year thousands) |
|------|----------------------------------|
| 2014 | \$ 527                           |
| 2015 | 563                              |
| 2016 | 398                              |
| 2017 | 385                              |
| 2018 | 355                              |
|      | \$ 2,228                         |

Amortization expense relating to intangible assets for the Company was approximately \$745,000 and \$675,000, for the years ended December 31, 2013 and 2012, respectively.

#### 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 statement of operations 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.

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On September 12, 2013, we granted an aggregate of 18,000 options from the Company's 2003 Outside Directors Stock Plan to our five re-elected directors and one new director at our Annual Meeting of Stockholders. The options granted were for a contractual term of ten years with vesting period of six months. The exercise price of the options was \$2.79 per share, which was equal to our closing stock price the day preceding the grant date, pursuant to the 2003 Outside Directors Stock Plan.

On October 4, 2013, we granted 6,000 options from the Company's Outside Directors Stock Plan to a new director elected by the Company's Board of Directors to fill a newly created directorship. The options granted were for a contractual term of ten years with vesting period of six months. The exercise price of the options was \$3.20 per share, which was equal to our closing stock price the day preceding the grant date, pursuant to the 2003 Outside Directors Stock Plan.

The Company estimates fair value of stock options using the Black-Scholes valuation model. The fair value of the director stock options granted (no employees were granted options in 2013 and 2012) and the related assumptions used in the Black-Scholes option pricing model used to value the options granted for fiscal year 2013 and 2012 were as follows after giving effect to the reverse stock split:

|  | Outside Director Stock<br>Options Granted<br>For Year Ended |        |
|--|---|--------|
|  | 2013  | 2012   |
| Weighted-average fair value per share          | \$2.06  | \$3.55 |
| Risk -free interest rate <sup>(1)</sup>        | 2.66% - 2.92%   | 1.75%  |
| Expected volatility of stock <sup>(2)</sup>    | 58.88% - 59.76%   | 56.74% |
| Dividend yield                                 | None  | None   |
| Expected option life (in years) <sup>(3)</sup> | 10.0  | 10.0   |

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

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

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

As of December 31, 2013, we had an aggregate of 193,600 employee stock options outstanding (from the 2004 and 2010 Stock Option Plans), of which 173,600 are vested. The weighted average exercise price of the 173,600 outstanding and fully vested employee stock options is \$10.07 with a remaining weighted contractual life of 1.3 years. Additionally, we had an aggregate of 169,200 outstanding director stock options (from the 2003 Outside Directors Stock Plans), of which 145,200 are vested. The weighted average exercise price of the 145,200 outstanding and fully vested director stock options is \$10.22 with a remaining weighted contractual life of 4.5 years.

The following table summarizes stock-based compensation recognized for the fiscal year 2013 and 2012.

|                        | Year Ended |           |
|------------------------|------------|-----------|
|                        | 2013       | 2012      |
| Employee Stock Options | \$80,000   | \$140,000 |
| Director Stock Options | 45,000     | 51,000    |
| Total                  | \$125,000  | \$191,000 |

We recognized stock-based compensation expense using a straight-line amortization method over the requisite service 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 and 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 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 SEC President from the Company which became effective May 24, 2013 (see Note 15 – "Related Party Transactions" 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 50,000 shares of our Common Stock at \$6.75 per share, with 25% yearly vesting over a four-year period (in accordance with a Non-Qualified Option Agreement). As of December 31, 2013, we have approximately \$71,000 of total unrecognized compensation cost related to unvested options, which is expected to be recognized in 2013.

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NOTE 5

CAPITAL STOCK, STOCK PLANS, WARRANTS, AND INCENTIVE COMPENSATION

Stock Option Plans

Effective July 29, 2003, we adopted the 2003 Outside Directors Stock Plan, which was approved by our stockholders at the Annual Meeting of Stockholders on such date. The plan provides for the grant of an option to purchase up to 30,000 shares of Common Stock for each outside director upon initial election to the Board of Directors, and the grant of an option to purchase up to 12,000 shares of Common Stock upon each re-election. The options granted generally have a vesting period of six months from the date of grant, with an exercise price equal to the closing trade price on the date prior to grant date. The plan also provides for the issuance to each outside director a number of shares of Common Stock in lieu of 65% or 100% of the fee payable to the eligible director for services rendered as a member of the Board of Directors. The number of shares issued is determined at 75% of the market value as defined in the plan. A maximum of 3,000,000 shares of our Common Stock are authorized for issuance under this plan, as amended.

Effective July 28, 2004, we adopted the 2004 Stock Option Plan, which was approved by our stockholders at the Annual Meeting of Stockholders on such date. The plan provides for the grants of options to selected officers and employees, including any employee who is also a member of the Board of Directors of the Company. A maximum of 2,000,000 shares of our Common Stock are authorized for issuance under this plan in the form of either Incentive or Non-Qualified Stock Options. The option grants under the plan are exercisable for a period of up to 10 years from the date of grant at an exercise price of not less than market price of the Common Stock at grant date.

On April 28, 2010, we adopted the 2010 Stock Option Plan, which was approved by our stockholders at the Company's Annual Meeting of Stockholders on September 29, 2010. The Plan authorizes an aggregate grant of 1,000,000 non-qualified and incentive stock options to officers and employees (including an employee who is a member of the Board of Directors) of the Company for the purchase of up to 1,000,000 shares of the Company's Common Stock. The term of each stock option granted will be fixed by the Compensation Committee, but no stock option will be exercisable more than ten years after the grant date, or in the case of an incentive stock option granted to a 10% stockholder, five years after the grant date. The exercise price of any incentive stock option granted under the Plan to an individual who is not a 10% stockholder at the time of the grant will not be less than the fair market value of the shares at the time of the grant, and the exercise price of any incentive stock option granted to a 10% stockholder shall not be less than 110% of the fair market value at the time of grant. The exercise price of any non-qualified stock options granted under Plan will not be less than the fair market value of the shares at the time of grant.

We follow FASB ASC 718 to account for employee and director stock options. See Note 4 – “Stock-Based Compensation” for further discussion on ASC 718.

No employees exercised options during 2013 and 2012.

We issued, after giving effect to the reverse stock split, a total of 69,041 and 34,055 shares of our Common Stock in 2013 and 2012, respectively, under our 2003 Outside Directors Stock Plan to our outside directors as compensation for serving on our Board of Directors. Each member of our outside directors is paid a quarterly fee of \$8,000 for serving as a member of our Board of Directors. The Audit Committee Chairman receives an additional quarterly fee of \$5,500 due to the position's additional responsibility. Each board member is also paid \$1,000 for each board meeting attendance as well as \$500 for each telephonic conference call. As a member of the Board of Directors, each director elects to receive either 65% or 100% of the director's fee in shares of our Common Stock. The number of shares received is calculated based on 75% of the fair market value of our Common Stock determined on the business day immediately preceding the date that the quarterly fee is due. The balance of each director's fee, if any, is payable in cash.



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Summary of the status of options under the Company's total Plans and a Non-Qualified Stock Option Agreement (which was forfeited in the second quarter of 2013), as of December 31, 2013 and 2012, and changes during the years ending on those dates is presented below, giving the effect to the reverse stock split:

|   | 2013      |  |                           | 2012      |  |                           |
|---|-----------|--|---------------------------|-----------|--|---------------------------|
|   | Shares    | Weighted<br>Average<br>Exercise<br>Price | Intrinsic<br>Value<br>(a) | Shares    | Weighted<br>Average<br>Exercise<br>Price | Intrinsic<br>Value<br>(a) |
| <u>1993 Non-qualified Stock Option Plan</u> |           |  |                           |           |  |                           |
| Balance at beginning of year                | 70,500    | \$ 10.95                                 |                           | 71,600    | \$ 10.95                                 |                           |
| Exercised                                   | —         | —  | \$ —                      | —         | —  | \$ —                      |
| Forfeited                                   | (70,500 ) | 10.95                                    |                           | (1,100 )  | 10.95                                    |                           |
| Balance at end of year                      | —         | —  | \$ —                      | 70,500    | 10.95                                    | \$ —                      |
| Options exercisable at year end             | —         | —  | \$ —                      | 70,500    | 10.95                                    | \$ —                      |
| <u>1992 Outside Directors Stock Plan</u>    |           |  |                           |           |  |                           |
| Balance at beginning of year                | 3,000     | \$ 10.10                                 |                           | 11,000    | \$ 12.23                                 |                           |
| Forfeited                                   | (3,000 )  | 10.10                                    |                           | (8,000 )  | 13.65                                    |                           |
| Balance at end of year                      | —         | —  | \$ —                      | 3,000     | 10.10                                    | \$ —                      |
| Options exercisable at year end             | —         | —  | \$ —                      | 3,000     | 10.10                                    | \$ —                      |
| <u>2003 Outside Directors Stock Plan</u>    |           |  |                           |           |  |                           |
| Balance at beginning of year                | 163,200   | \$ 10.19                                 |                           | 151,200   | \$ 10.56                                 |                           |
| Granted                                     | 24,000    | 2.89                                     |                           | 12,000    | 5.50                                     |                           |
| Forfeited                                   | (18,000 ) | 9.95                                     |                           | —         | —  |                           |
| Balance at end of year                      | 169,200   | 9.18                                     | \$ 5,850                  | 163,200   | 10.19                                    | \$ —                      |
| Options exercisable at year end             | 145,200   | 10.22                                    | \$ —                      | 151,200   | 10.56                                    | \$ —                      |
| <u>2004 Stock Option Plan</u>               |           |  |                           |           |  |                           |
| Balance at beginning of year                | 182,100   | \$ 10.55                                 |                           | 264,167   | \$ 10.17                                 |                           |
| Forfeited                                   | (48,500 ) | 10.05                                    |                           | (82,067 ) | 9.33                                     |                           |
| Balance at end of year                      | 133,600   | 10.73                                    | \$ —                      | 182,100   | 10.55                                    | \$ —                      |
| Options exercisable at year end             | 133,600   | 10.73                                    | \$ —                      | 182,100   | 10.55                                    | \$ —                      |
| <u>2010 Stock Option Plan</u>               |           |  |                           |           |  |                           |
| Balance at beginning of year                | 60,000    | \$ 7.85                                  |                           | 60,000    | \$ 7.85                                  |                           |
| Granted                                     | —         | —  |                           | —         | —  |                           |
| Balance at end of year                      | 60,000    | 7.85                                     | \$ —                      | 60,000    | 7.85                                     | \$ —                      |
| Options exercisable at year end             | 40,000    | 7.85                                     | \$ —                      | 20,000    | 7.85                                     | \$ —                      |
| <u>Non-Qualified Stock Option Agreement</u> |           |  |                           |           |  |                           |
| Balance at beginning of year                | 50,000    | \$ 6.75                                  |                           | 50,000    | \$ 6.75                                  |                           |
| Forfeited                                   | (50,000 ) | \$ 6.75                                  |                           | —         | —  |                           |
| Balance at end of year                      | —         | —  | \$ —                      | 50,000    | 6.75                                     | \$ —                      |
| Options exercisable at year end             | —         | —  | \$ —                      | 12,500    | 6.75                                     | \$ —                      |

(a) Represents the difference between the market price at the date of exercise or the end of the year, as applicable, and the exercise price.

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The summary of the Company's total Plans (as noted above) as of December 31, 2013, and changes during the period then ended are presented as follows (giving effect of the reverse stock split):

|   | Shares    | Weighted<br>Average<br>Exercise<br>Price | Weighted<br>Average<br>Remaining<br>Contractual<br>Term | Aggregate<br>Intrinsic<br>Value |
|---|-----------|--|---|---------------------------------|
| Options outstanding January 1, 2013                           | 528,800   | \$ 9.82                                  |   |                                 |
| Granted   | 24,000    | 2.89                                     |   |                                 |
| Exercised   |           |  |   |                                 |
| Forfeited/Expired   | (190,000) | 9.51                                     |   |                                 |
| Options outstanding End of Period <sup>(1)</sup>              | 362,800   | \$ 9.53                                  | 3.3   | \$ 5,850                        |
| Options Exercisable at December 31, 2013 <sup>(2)</sup>       | 318,800   | \$ 10.14                                 | 2.8   |                                 |
| Options Vested and expected to be vested at December 31, 2013 | 362,800   | \$ 9.53                                  | 3.3   | \$ 5,850                        |

<sup>(1)</sup> Options with exercise prices ranging from \$2.79 to \$14.75

<sup>(2)</sup> Options with exercise prices ranging from \$5.50 to \$14.75

#### Warrants and Capital Stock Issuance for Debt

As of December 31, 2013, we have two Warrants outstanding which provide for the purchase of up to an aggregate of 70,000 shares of the Company's Common Stock at \$2.23 per share. The two Warrants were issued on August 2, 2013, as consideration of a \$3,000,000 loan received by the Company from Messrs. William N. Lampson and Robert L. Ferguson (the "Lenders"). Each Warrant provides for the Lender to purchase up to 35,000 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 \$2.23. The Warrants are exercisable six months from August 2, 2013 and expire on August 2, 2016. We estimated the fair value of the Warrants to be approximately \$59,000 using the Black-Scholes option pricing model with the following assumptions: 55.54% volatility, risk free interest rate of .59%, an expected life of three years and no dividends. We also issued 90,000 shares of the Company's Common Stock to the Lenders. See Note 8 – "Long-Term Debt – Promissory Note and Installment Agreement" for further information regarding the Warrants and Common Stock.

#### Shares Reserved

At December 31, 2013, we have reserved approximately 432,800 shares of Common Stock for future issuance under all of the option and warrant arrangements.

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#### NOTE 6

##### PREFERRED STOCK ISSUANCE AND CONVERSION

###### Series B Preferred Stock

The Series B Preferred Stock is non-voting and non-convertible, has a \$1.00 liquidation preference per share and may be redeemed at the option of the former stockholders of M&EC at any time for the per share price of \$1.00. The holders of the Series B Preferred Stock will be entitled to receive when, as, and if declared by the Board of Directors of M&EC out of legally available funds, dividends at the rate of 5% per year per share applied to the amount of \$1.00 per share, which shall be fully cumulative. We began accruing dividends for the Series B Preferred Stock in July 2002, and have accrued a total of approximately \$738,000 since July 2002, of which \$64,000 was accrued in each of the years ended December 31, 2003 to 2013.

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NOTE 7

DISCONTINUED OPERATIONS AND DIVESTITURES

Our discontinued operations consist of our 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 PFFL, PFO, PFMD, PFD, and 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, PFMI, and PFM.

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On August 14, 2013, our PFSG facility incurred fire damage which has left it non-operational. Certain equipment and portions of the building structures were damaged. We carry general liability, pollution, property and business interruption, and workers compensation insurance with a maximum deductible of approximately \$300,000 (consisting of \$100,000 deductible for each workers compensation, pollution, and property insurance policy), which was accrued and included within our "loss from discontinued operations." As of December 31, 2013, we have recorded \$130,000 for impairment of fixed assets related to the fire, and have incurred approximately \$6,729,000 of other costs related to the fire. As of December 31, 2013, approximately \$3,664,000 in insurance proceed reimbursements have been paid by our insurers, of which \$1,750,000 was paid to us, with the remaining paid directly to the vendor performing the clean-up of the facility. We have recorded a receivable of approximately \$2,995,000 as of December 31, 2013 as we have determined that the receipt of reimbursement of these expenses from our insurer is probable in accordance with its insurance policies. The table below details the nature of expense as well as insurance receivables and insurance recoveries related to the fire:

|  |             |
|--|-------------|
| Clean up costs                                 | \$6,293,000 |
| Impairment of fixed assets                     | 130,000     |
| Incremental payroll costs                      | 244,000     |
| Other incremental costs                        | 192,000     |
| Total incurred costs through December 31, 2013 | \$6,859,000 |
| Insurance recovery receivable                  | \$2,995,000 |
| Insurance recoveries already received          | \$3,664,000 |

The insurance receivable recorded is net of \$200,000 of deductible on our property and pollution insurance policies and the insurance recoveries already received. The receivables and the related payables in connection with this claim are included within our current assets and current liabilities related to discontinued operations in our consolidated balance sheet.

Subsequent to December 31, 2013, our insurers paid approximately \$3,510,000 of insurance recoveries, of which approximately \$2,000,000 was paid to us, with the remaining paid directly to the vendor working on the clean-up of the facility. We continue to gather information related to insurance claims on this fire.

We are currently evaluating options regarding the future operation of this facility as we undergo the rebuilding process on the part of the facility damaged by the fire. 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 December 31, 2013, other than the write-off of the equipment damaged in the fire as discussed above. No intangible assets exist at PFSG.

The following table summarizes the results of discontinued operations for the years ended December 31, 2013 and 2012. The operating results of discontinued operations are included in our Consolidated Statements of Operations as part of our "Loss from discontinued operations, net of taxes." Our income tax expense included a charge to tax expense of approximately \$1,164,000 to provide a full valuation allowance on our net deferred tax assets.

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| Amount in Thousands                                  | For The Year<br>Ended December<br>31, |         |
|--|---------------------------------------|---------|
|  | 2013                                  | 2012    |
| Net revenue  | \$1,789                               | \$2,204 |
| Interest Expense                                     | (27 )                                 | (34 )   |
| Operating income (loss) from discontinued operations | 59                                    | (560 )  |
| Income tax expense (benefit)                         | 1,627                                 | (530 )  |
| Loss from discontinued operations                    | (1,568)                               | (30 )   |

Assets related to discontinued operations totaled \$4,481,000 and \$2,113,000 as of December 31, 2013, and 2012, respectively, and liabilities related to discontinued operations totaled \$4,596,000 and \$3,341,000 as of December 31, 2013 and 2012, respectively.

The following table presents the major classes of assets and liabilities of discontinued operations that are classified as held for sale as of December 31, 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 December 31, 2013:

| (Amounts in Thousands)                            | December<br>31,<br>2013 | December<br>31,<br>2012 |
|---|-------------------------|-------------------------|
| Accounts receivable, net <sup>(1)</sup>           | \$ 20                   | \$ 391                  |
| Inventories                                       | 37                      | 32                      |
| Other assets                                      | 3,018                   | 16                      |
| Property, plant and equipment, net <sup>(2)</sup> | 1,367                   | 1,614                   |
| Total assets held for sale                        | \$ 4,442                | \$ 2,053                |
| Accounts payable                                  | \$ 2,716                | \$ 229                  |
| Accrued expenses and other liabilities            | 363                     | 528                     |
| Note payable                                      | 35                      | 71                      |
| Environmental liabilities                         | 840                     | 1,373                   |
| Total liabilities held for sale                   | \$ 3,954                | \$ 2,201                |

<sup>(1)</sup> net of allowance for doubtful accounts of \$13,000 and \$45,000 as of December 31, 2013 and December 31, 2012, respectively.

<sup>(2)</sup> net of accumulated depreciation of \$55,000 and \$60,000 as of December 31, 2013 and 2012, respectively.

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

| (Amounts in Thousands)                  | December<br>31,<br>2013 | December<br>31,<br>2012 |
|---|-------------------------|-------------------------|
| Other assets                            | \$ 39                   | \$ 60                   |
| Total assets of discontinued operations | \$ 39                   | \$ 60                   |
| Accrued expenses and other liabilities  | \$ 436                  | \$ 884                  |
| Accounts payable                        | 15                      | 15                      |

|  |        |          |
|--|--------|----------|
| Environmental liabilities                    | 191    | 241      |
| Total liabilities of discontinued operations | \$ 642 | \$ 1,140 |



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## Environmental Liabilities

We have four remediation projects, which are currently in progress at certain of our discontinued facilities. These remediation projects principally entail the removal/remediation of contaminated soil and, in most cases, the remediation of surrounding ground water. All of the remedial clean-up projects in question were an issue for that facility for years prior to our acquisition of the facility and were recognized pursuant to a business combination and recorded as part of the purchase price allocation to assets acquired and liabilities assumed. Three of the facilities (PFD, PFM, and PFSG) are RCRA permitted facilities, and as a result, the remediation activities are closely reviewed and monitored by the applicable state regulators. We recognized our best estimate of such environmental liabilities upon the acquisition of our facilities, as part of the acquisition cost.

At December 31, 2013, we had total accrued environmental remediation liabilities of \$1,031,000, of which \$649,000 is recorded as a current liability, which reflects a decrease of \$583,000 from the December 31, 2012 balance of \$1,614,000. The net decrease represents payments of approximately \$50,000 on remediation projects and a reduction in reserve of approximately \$533,000 at PFSG based on reassessment of the remediation reserve. The December 31, 2013 current and long-term accrued environmental balance is recorded as follows (in thousands):

|                 | Current<br>Accrual | Long-term<br>Accrual | Total   |
|-----------------|--------------------|----------------------|---------|
| PFD             | \$ 11              | \$ 58                | \$69    |
| PFM             | 34                 | 11                   | 45      |
| PFSG            | 604                | 236                  | 840     |
| PFMI            | —                  | 77                   | 77      |
| Total Liability | \$ 649             | \$ 382               | \$1,031 |

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## NOTE 8

## LONG-TERM DEBT

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

| (Amounts in Thousands)   | December<br>31, 2013 | December<br>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 December 31, 2013) plus 2.0% or London Interbank Offer Rate ("LIBOR") plus 3.0%, balance due October 31, 2016. Effective interest rate for 2013 and 2012 was 3.7% and 3.8%, respectively. <sup>(1)</sup> | \$ —                 | \$ —                 |
| 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 2013 and 2012 was 3.9% and 3.9%, respectively. <sup>(1)</sup>   | 11,238               | 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%. <sup>(2)</sup>   | —                    | 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. <sup>(2)</sup>   | 127                  | —                    |
| Promissory Note dated August 2, 2013, payable in twelve monthly installments of interest only, starting September 1, 2013 and twenty-four monthly installments of \$125 in principal plus accrued interest. Interest accrues at annual rate of 2.99%. <sup>(2) (3)</sup>   | 2,777                | —                    |
| Various capital lease and promissory note obligations, payable 2014 to 2014, interest at rates ranging from 5.3% to 7.1%.  | 141                  | 391                  |
|  | \$ 14,283            | \$ 14,267            |
| Less current portion of long-term debt   | 2,876                | 2,794                |
| Less long-term debt related to assets held for sale  | 35                   | 71                   |
|  | \$ 11,372            | \$ 11,402            |

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

<sup>(2)</sup>Uncollateralized note.

<sup>(3)</sup> Net of debt discount of (\$223,000) for December 31, 2013. See "Promissory Note and Installment Agreement" below for additional information.

## Revolving Credit and Term Loan Agreement

The Company entered into an Amended and Restated Revolving Credit, Term Loan and Security Agreement, dated October 31, 2011 ("Amended Loan Agreement"), with PNC 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;

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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. No early termination fee shall apply if we pay off our obligations under the Amended Loan Agreement after October 31, 2013.

As of December 31, 2013, the excess availability under our revolving credit was \$6,642,000, 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 and third quarters of 2013.

On August 2, 2013, the Company entered into another 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 a result of this amendment, we recorded approximately \$65,000 in loss on debt modification (included in interest expense) in accordance with ASC 470-50, “Debt – Modification and Extinguishment.”

The Company did not meet its fixed charge coverage ratio requirement for the fourth quarter of 2013; however, during April 2014, we received a waiver from the Company’s lender which waived this non-compliance. Our lender has waived our fixed charge coverage ratio testing requirement for the first quarter of 2014 and made certain revisions to our quarterly fixed charge coverage ratio testing requirements for the remaining quarters of 2014 (See “Note 18 – Subsequent Events – Waivers and Revisions from PNC Bank, National Association” for waivers received and revisions made to our fixed charge coverage ratio for 2014 and other matters). Based on these revisions above, we expect to meet our quarterly fixed charge coverage ratio requirement in each of the second to fourth quarters of 2014. If we fail to meet the minimum quarterly fixed charge coverage ratio requirement in any of the quarters starting with the second quarter in 2014 and PNC does not waive the non-compliance or further revise our covenant so that we are in compliance, our lender could accelerate the repayment of borrowings under our credit facility. In the event that our lender accelerates the payment of our borrowings, we may not have sufficient liquidity to repay our debt under our credit facility and other indebtedness.

**Promissory Notes and Installment Agreements**

On February 12, 2013, the Company entered into an unsecured promissory 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 Safety and Ecology Corporation or “SEC”) from TNC on October 31, 2011 (See Note 14 – “Business Acquisition (Settlement and Release Agreement)” for further information of this note). The promissory 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

promissory note provides us the right to prepay such at any time without interest or penalty.

The promissory 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 new 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 December 31, 2013. We will continue to monitor the fair value of the Conversion Option on a regular basis.

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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 PFWN 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 was paid in full in September 2013. See further details of the earn-out amount in Note 12 – “Commitments and Contingencies - Earn-Out Amount.”

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 PFWN prior to our acquisition of PFWN and PFNWR and are also stockholders of the Company, having received shares of our Common Stock in connection with the acquisition of PFWN 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 were 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 35,000 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 \$2.23. The Warrants are exercisable six months from August 2, 2013 and expire on August 2, 2016. We estimated the fair value of the Warrants to be approximately \$59,000 using the Black-Scholes option pricing model with the following assumptions: 55.54% volatility, risk free interest rate of .59%, an expected life of three years and no dividends. As further consideration for the Loan, the Company issued an aggregate 90,000 shares of the Company’s Common Stock, with each Lender receiving 45,000 shares. The 90,000 shares of Common Stock and 70,000 Common Stock purchase warrants were 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. We determined the fair value of the 90,000 shares of Common Stock to be approximately \$200,000 which was based on the closing price of the stock of \$2.23 per share on August 2, 2013. The fair value of the Warrants and Common Stock and the related closing fees incurred from the transaction (approximately \$13,000) were recorded as a debt discount, which is being amortized over the term of the loan as interest expense – financing fees.

The promissory note includes an embedded Put Option (“Put”) that can be exercised upon default, whereby the lender has the option to receive a cash payment equal to the amount of the unpaid principal balance plus all accrued and unpaid interest (“Payoff Amount”), or the number of whole shares of our Common Stock equal to the Payoff Amount divided by the closing bid price of our Common Stock on the date immediately prior to the date of default of the promissory note, as reported by the primary national securities exchange on which our Common Stock is traded. The maximum number of payoff shares is restricted to less than 20% of the outstanding equity. We concluded that the Put should have been bifurcated at inception and recorded at fair value; however, the Put Option had and continues to have nominal value as of December 31, 2013. We will continue to monitor the fair value of the Put on a regular basis.

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The following table approximates amount of the maturities of long-term debt maturing in future years as of December 31, 2013 of our continuing operations (excludes debt discount of \$223,000) (in thousands):

| Year ending December 31: |          |
|--------------------------|----------|
| 2014                     | \$2,962  |
| 2015                     | 3,819    |
| 2016                     | 7,690    |
| Total                    | \$14,471 |

Debt related to assets held for sale totals \$35,000 at December 31, 2013, and is due in 2014.

## NOTE 9

## ACCRUED EXPENSES

Accrued expenses at December 31 include the following (in thousands):

|                                       | 2013    | 2012    |
|---------------------------------------|---------|---------|
| Salaries and employee benefits        | \$3,473 | \$4,430 |
| Accrued sales, property and other tax | 370     | 793     |
| Interest payable                      | 27      | 29      |
| Insurance payable                     | 726     | 978     |
| Other                                 | 337     | 442     |
| Total accrued expenses                | \$4,933 | \$6,672 |

The Company has an individual Management Incentive Plan (“MIP”) for each of our CEO, CFO, and COO which awards cash compensation based on achievement of certain performance targets for fiscal year 2013. No compensation was accrued for in 2013 under each MIP as none of the performance targets were met. No cash compensation was paid to the President of SEC under his MIP upon his voluntary termination and retirement from the Company effective May 24, 2013 (See Note 15 – “Related Party Transactions – Christopher Leichtweis” for further information regarding his voluntary termination and retirement). In addition, no performance incentive payments were made under each of the 2012 MIP plans in 2012.

## NOTE 10

## ACCRUED CLOSURE COSTS AND ASSET RETIREMENT OBLIGATIONS (“ARO”)

Accrued closure costs represent our estimated environmental liability to clean up our fixed-based regulated facilities as required by our permits, in the event of closure. Accounting Standards Codification (“ASC”) 410, “Asset Retirement and Environmental Obligations” requires that the discounted fair value of a liability for an ARO be recognized in the period in which it is incurred with the associated ARO capitalized as part of the carrying cost of the asset. The recognition of an ARO estimate is inflated, using an inflation rate, to the expected time at which the closure will occur, and then discounted back, using a credit adjusted risk free rate, to the present value. AROs are included within buildings as part of property and equipment and are depreciated over the estimated useful life of the property. In periods subsequent to initial measurement of the ARO, the ARO is adjusted at the end of each period to reflect the passage of time (as accretion expense) and changes in the estimated future cash flows underlying the obligations (capitalized to the associated ARO and depreciated in accordance with the Company’s depreciation policy).

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Changes to reported closure liabilities for the years ended December 31, 2013 and 2012, were as follows:

| Amounts in thousands            |          |
|---------------------------------|----------|
| Balance as of December 31, 2011 | \$11,937 |
| Accretion expense               | 185      |
| Payments                        | (773 )   |
| Adjustment to closure liability |          |
| Balance as of December 31, 2012 | 11,349   |
| Accretion expense               | 272      |
| Adjustment to closure liability | (6,399 ) |
| Balance as of December 31, 2013 | \$5,222  |

The adjustment in 2013 was made principally to record the obligation using appropriate discount rates. The obligations were previously based on undiscounted values. The associated assets were also adjusted to reflect this change. The net impact of the adjustment to pretax loss from operations was approximately (\$448,000) in 2013. The decrease in closure accrual in 2012 included approximately \$773,000 of costs incurred in connection with the closure of a processing unit at our PFNWR facility.

The reported closure asset or ARO, is reported as a component of "Net Property and equipment" in the Consolidated Balance Sheet for the years ended December 31, 2013 and 2012 as follows:

| Amounts in thousands                           |         |
|--|---------|
| Balance as of December 31, 2011                | \$9,370 |
| Adjustment to closure and post-closure asset   |         |
| Amortization of closure and post-closure asset | (290 )  |
| Balance as of December 31, 2012                | 9,080   |
| Adjustment to closure and post-closure asset   | (5,830) |
| Amortization of closure and post-closure asset | (289 )  |
| Balance as of December 31, 2013                | \$2,961 |

The adjustment to the ARO for 2013 was due to the adjustment made to our closure accrual as discussed above.

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**NOTE 11**
**INCOME TAXES**

The components of current and deferred federal and state income tax (benefit) expense for continuing operations for the years ended December 31, consisted of the following (in thousands):

|   | 2013     | 2012      |
|---|----------|-----------|
| Federal income tax benefit - current            | \$(144 ) | \$(2,107) |
| Federal income tax (benefit) expense - deferred | (1,989)  | 11        |
| State income tax expense - current              | 158      | 191       |
| State income tax expense (benefit) - deferred   | 1,350    | (246 )    |
| Total income tax benefit                        | \$(625 ) | \$(2,151) |

We had temporary differences and net operating loss carry forwards from both our continuing and discontinued operations, which gave rise to deferred tax assets and liabilities at December 31, as follows (in thousands):





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|   |         |         |
|---|---------|---------|
| Deferred tax assets:                            | 2013    | 2012    |
| Net operating losses                            | \$6,001 | \$4,612 |
| Environmental and closure reserves              | 2,387   | 4,740   |
| Impairment of assets                            |         | 505     |
| Investment                                      | (50 )   | (59 )   |
| Other   | 3,626   | 3,798   |
| Deferred tax liabilities:                       |         |         |
| Depreciation and amortization                   | (3,762) | (6,973) |
| Goodwill and indefinite lived intangible assets | (1,012) | (902 )  |
| Prepaid expenses                                | (20 )   | (16 )   |
|   | 7,170   | 5,705   |
| Valuation allowance                             | (8,182) | (5,729) |
| Net deferred income tax liabilities             | (1,012) | (24 )   |

An overall reconciliation between the expected tax benefit using the federal statutory rate of 34% and the benefit for income taxes from continuing operations as reported in the accompanying consolidated statement of operations is provided below (in thousands).

|  |            |           |
|--|------------|-----------|
|  | 2013       | 2012      |
| Tax benefit at statutory rate              | \$(11,880) | \$(1,847) |
| State tax benefit, net of federal benefit  | (102 )     | (131 )    |
| Permanent items                            | 166        | 110       |
| Non-deductible Goodwill                    | 9,471      |           |
| Other                                      | 125        | (100 )    |
| Reserve for uncertain tax positions        | 180        |           |
| Increase (decrease) in valuation allowance | 1,415      | (183 )    |
| Income tax benefit                         | \$(625 )   | \$(2,151) |

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 taxes to an amount that is more likely than not to be realized. In 2013 and 2012, we determined that it was more likely than not that approximately \$8,182,000 and \$5,729,000, respectively, of deferred income tax assets would not be realized, and as such, a full valuation allowance was applied against those deferred income tax assets. Our valuation allowance increased by \$1,415,000 and decreased by approximately \$183,000 for the years ended December 31, 2013 and 2012, respectively.

We have estimated net operating loss carryforwards (NOLs) for federal and state income tax purposes of approximately \$9,715,000 and \$53,035,000, respectively, as of December 31, 2013. These net operating losses can be carried forward and applied against future taxable income, if any, and expire in various amounts starting in 2021. However, as a result of various stock offerings and certain acquisitions, which in the aggregate constitute a change in control, the use of these NOLs will be limited under the provisions of Section 382 of the Internal Revenue Code of 1986, as amended. Additionally, NOLs may be further limited under the provisions of Treasury Regulation 1.1502-21 regarding Separate Return Limitation Years.



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The Company accounts for uncertainties in income taxes pursuant to ASC 740 (formerly FASB interpretation No. 48, “Accounting for Uncertainties in Income Taxes – an Interpretation of FASB Statement No. 109”) (“FIN 48”). A reconciliation of the beginning and ending amount of our unrecognized tax expense is summarized as follows (in thousands):

|   | 2013  | 2012 |
|---|-------|------|
| Balances at beginning of year               | \$    | \$   |
| Addition related to prior year tax position | 180   |      |
| Balances at end of the year                 | \$180 | \$   |

Included in the unrecognized tax expense is approximately \$26,000 in interest and penalties.

## NOTE 12

## 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

In the normal course of conducting our business, we are involved in various litigations. We are not a party to any litigation or governmental proceeding which our management believes could result in any judgments or fines against us that would have a material adverse affect on our financial position, liquidity or results of future operations.

## Insurance

The Company has a 25-year finite risk insurance policy entered into in June 2003 with American International Group, Inc. (“AIG”), which provides financial assurance to the applicable states for our permitted facilities in the event of unforeseen closure. The policy, as amended, provides for a maximum allowable coverage of \$39,000,000 and has available capacity to allow for annual inflation and other performance and surety bond requirements. 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 AIG. As of December 31, 2013, our financial assurance coverage amount under this policy totaled approximately \$38,161,000. We have recorded \$15,409,000 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 \$938,000 on the sinking fund as of December 31, 2013. Interest income for twelve months ended December 31, 2013, was approximately \$27,000. On the fourth and subsequent anniversaries of the contract inception, we may elect to terminate this contract. If we so elect, AIG 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 AIG. The policy provided an initial \$7,800,000 of financial assurance coverage with an annual growth rate of 1.5%, which at the end of the four year term policy, provides maximum coverage of \$8,200,000. 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 December 31, 2013, we have recorded \$5,898,000 in our sinking fund related to this policy in other long term assets on the accompanying balance sheets, which includes interest earned of \$198,000 on the sinking fund as of December 31, 2013. Interest income for the twelve months ended December 31, 2013 totaled

approximately \$8,000. 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 have renewed this policy annually from 2011 to 2013 with an annual fee of \$46,000. All other terms of the policy remain substantially unchanged.

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## Operating Leases

We lease certain facilities and equipment under operating leases. The following table lists future minimum rental payments as of December 31, 2013 under these leases for our continuing operations (in thousands):

| Year ending December 31: |         |
|--------------------------|---------|
| 2014                     | \$809   |
| 2015                     | 728     |
| 2016                     | 590     |
| 2017                     | 529     |
| 2018                     | 174     |
| beyond 2018              |         |
| Total                    | \$2,830 |

We have no future minimum rental payment requirement for our discontinued operations as of December 31, 2013.

Total rent expense was \$1,381,000, and \$1,569,000, for 2013 and 2012, respectively for our continuing operations. These amounts included payments on non-cancelable operating leases of approximately \$913,000 and \$972,000 for 2013 and 2012, respectively. The remaining rent expense was for non-contractual monthly and daily rentals of specific use vehicles, machinery and equipment.

Total rent expense was \$27,000 and \$42,000 for 2013 and 2012, respectively for our discontinued operations. These amounts included payments on non-cancelable operating leases of approximately \$0, and \$5,000, respectively. The remaining rent expense was for non-contractual monthly and daily rentals of specific use vehicles, machinery and equipment.

## NOTE 13

## PROFIT SHARING PLAN

We adopted a 401(k) Plan in 1992, which is intended to comply with Section 401 of the Internal Revenue Code and the provisions of the Employee Retirement Income Security Act of 1974. All full-time employees who have attained the age of 18 are eligible to participate in the 401(k) Plan. Eligibility is immediate upon employment but enrollment is only allowed during four quarterly open periods of January 1, April 1, July 1, and October 1. Participating employees may make annual pretax contributions to their accounts up to 100% of their compensation, up to a maximum amount as limited by law. We, at our discretion, may make matching contributions of 25% based on the employee's elective contributions. Our contributions vest over a period of five years. We contributed \$0 and \$348,000, in matching funds during 2013 and 2012, respectively. Effective June 15, 2012, we suspended our matching contribution in an effort to reduce costs in light of the recent economic environment. We will evaluate the reversal of this suspension as the economic environment improves.

## NOTE 14

## BUSINESS ACQUISITION (SETTLEMENT AND RELEASE AGREEMENT)

On February 12, 2013, the Company entered into a Settlement and Release Agreement ("Settlement Agreement") with Timios National Corporation ("TNC" – formerly known as Homeland Security Capital Corporation) (the Company and TNC are collectively known as the "Parties"), in connection with the settlement of certain claims the Company made against TNC, subsequent to the acquisition of Safety and Ecology Holdings Corporation ("SEHC") and its subsidiaries (collectively known as Safety and Ecology Corporation or "SEC") on October 31, 2011 from TNC. The Settlement

Agreement resolved (collectively, the “Subject Claims”): (a) the Disputed Claims, and (b) any other claim arising under the Stock Purchase Agreement, dated July 15, 2011 (“Purchase Agreement”) with respect to a breach of (i) the representations and warranties of the Parties contained in the Purchase Agreement, and (ii) certain covenants contained in the Purchase Agreement. Pursuant to the Settlement Agreement, the Parties agreed as follows:

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a promissory note (“October Note” - with original principal balance of \$2,500,000 which was part consideration of the acquisition), with an principal balance of approximately \$1,460,000, was cancelled, terminated and rendered null and void;

the Company issued to TNC a new, two-year, non-negotiable, unsecured promissory note in the principal amount of approximately \$230,000 (the “New Note”) 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 first payment due February 28, 2013;

the remaining escrow balance of \$500,000 was released to TNC. \$2,000,000 was deposited into an escrow account as partial consideration of the purchase price and was established to satisfy any claims that we may have against TNC for indemnification pursuant to the Purchase Agreement. TNC and SEHC further agreed that if certain conditions were not met by December 31, 2011, relating to a certain contract, then the Company could withdraw \$1,500,000 from the amount deposited into the escrow. On January 10, 2012, we received \$1,500,000 from the escrow as certain conditions were not met under this certain contract as of December 31, 2011;

the Parties terminated all of their rights and obligations to indemnification under the Purchase Agreement, except with respect to TNC’s covenants relating to non-complete, non-solicitation of customers and employees, confidentiality, and related remedies which will continue in full force and effect in accordance with the terms of the Purchase Agreement (the “Continuing Covenants”);

the Parties terminated their rights and obligations with respect to (i) the representations, warranties, and covenants contained in the Purchase Agreement, except for the Continuing Covenants; and

the Company terminated its contractual right to offset amounts owing to TNC under the Purchase Agreement to satisfy claims against TNC.

In connection with the resolution of the Disputed Claims, we also entered into a Settlement and Release Agreement and Amendment to Employment Agreement (“Leichtweis Settlement”) with Christopher Leichtweis, our President of SEC, who voluntarily terminated and retired from all positions of the Company, effective May 24, 2013 (see discussion under Note 15 – “Related Party Transactions – Christopher Leichtweis” for a discussion of the Leichtweis Settlement and his voluntary termination and retirement).

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NOTE 15

RELATED PARTY TRANSACTIONS

Mr. Robert Schreiber, Jr.

During March 2011, we entered into a lease with Lawrence Properties LLC, a company jointly owned by Robert Schreiber, Jr., the President of Schreiber, Yonley and Associates, and Mr. Schreiber’s spouse. Mr. Schreiber is a member of our executive management team. The lease is for a term of five years starting June 1, 2011. Under the lease, we pay monthly rent of approximately \$11,400, which we believe is lower than costs charged by unrelated third party landlords. Additional rent will be assessed for any increases over the new lease commencement year for property taxes or assessments and property and casualty insurance premiums.

Mr. David Centofanti

Mr. David Centofanti serves as our Director of Information Services. For such services, he received total compensation in 2013 of approximately \$163,000. Mr. David Centofanti is the son of our Chief Executive Officer and Chairman of our Board, Dr. Louis F. Centofanti. We believe the compensation received by Mr. Centofanti for his technical expertise which he provides to the Company is competitive and comparable to compensation we would have



to pay to an unaffiliated third party with the same technical expertise.

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Christopher Leichtweis

The Company is obligated to make lease payments of approximately \$29,000 per month through June 2018, pursuant to a Lease Agreement, dated June 1, 2008 (the “Lease”), between Leichtweis Enterprises, LLC, as lessor, and Safety and Ecology Holdings Corporation (“SEHC”), as lessee. Leichtweis Enterprises, LLC, is owned by Mr. Christopher Leichtweis (“Leichtweis”), who was a Senior Vice President of the Company and President of SEC, prior to his voluntary termination and retirement from the Company effective May 24, 2013. The Lease covers SEC’s principal offices in Knoxville, Tennessee.

Under an agreement of indemnity (“Indemnification Agreement”), SEC, Leichtweis and his spouse (“Leichtweis Parties”), jointly and severally, agreed to indemnify the individual surety with respect to contingent liabilities that may be incurred by the individual surety under certain of SEC’s bonded projects. In addition, SEC agreed to indemnify Leichtweis Parties against judgments, penalties, fines, and expense associated with those SEC performance bonds that Leichtweis Parties have agreed to indemnify in the event SEC cannot perform, which has an aggregate bonded amount of approximately \$10,900,000 (which has been released/expired). The Indemnification Agreement provided by SEC to the Leichtweis Parties also provides for compensating the Leichtweis Parties at a rate of 0.75% of the value of bonds (60% having been paid previously and the balance at substantial completion of the contract). On February 14, 2013, the Company entered into a Settlement and Release Agreement and Amendment to Employment Agreement (the “Leichtweis Settlement”), in final settlement of certain claims made by us against Leichtweis in connection with the certain claims asserted by the Company against TNC subsequent to our acquisition of SEC on October 31, 2011. The Leichtweis Settlement terminated our obligation to pay the Leichtweis Parties a fee under the Indemnification Agreement.

Employment Agreements

We have an employment agreement with each of Dr. Centofanti (our President and Chief Executive Officer or “CEO”), Ben Naccarato (our Chief Financial Officer or “CFO”), and James Blankenhorn (our Chief Operating Officer or “COO”). Each employment agreement provides for annual base salaries, bonuses, and other benefits commonly found in such agreements. In addition, each employment agreement provides that in the event of termination of such officer without cause or termination by the officer for good reason (as such terms are defined in the employment agreement), the terminated officer shall receive payments of an amount equal to benefits that have accrued as of the termination but not yet paid, plus an amount equal to one year’s base salary at the time of termination. In addition, the employment agreements provide that in the event of a change in control (as defined in the employment agreements), all outstanding stock options to purchase our Common Stock granted to, and held by, the officer covered by the employment agreement to be immediately vested and exercisable. See “Note 18 – Subsequent Events – Resignation of Chief Operating Officer” for information regarding resignation of COO in March 2014 and the termination of his employment agreement.

The Company also had an employment agreement with Christopher Leichtweis (the “Leichtweis Employment Agreement”), containing substantially the terms described above with respect to the employment agreements of Messrs. Centofanti, Naccarato and Blankenhorn. On May 14, 2013, the Company entered into a Separation and Release Agreement (“Agreement”) with Mr. Leichtweis, which terminated Mr. Leichtweis’ employment with the Company and his position as an officer of the Company effective May 24, 2013, and voided the Leichtweis Employment Agreement (except for the “Confidentiality of Trade Secrets and Business Information (“Section 7”)” clause). Leichtweis’ termination was not “for cause” by the Company nor “for good reason” by Mr. Leichtweis (as defined in the Leichtweis Employment Agreement). Mr. Leichtweis was paid only his accrued salary, vacation and any benefits under the employee’s benefit plan, upon his separation date of May 24, 2013. In connection with the Agreement, the Company also entered into a Consulting Services Agreement (“Consulting Agreement”) with Leichtweis, dated May 24, 2013 and terminating 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, 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.

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SEGMENT REPORTING

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 (our Chief Operating Decision Maker) 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, Treatment and Services 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 7 – Discontinued Operations and Divestitures."

The table below shows certain financial information of our reporting segments for 2013 and 2012 (in thousands).

## Segment Reporting as of and for the year ended December 31, 2013

|                                 | Treatment    | Services     | Segments<br>Total | Corporate<br>And<br>Other | (2) Consolidated<br>Total |
|---------------------------------|--------------|--------------|-------------------|---------------------------|---------------------------|
| Revenue from external customers | \$ 35,540    | \$38,873     | \$74,413 (3)      | \$ —                      | \$ 74,413                 |
| Intercompany revenues           | 1,179        | 77           | 1,256             | ¾                         | ¾                         |
| Gross profit                    | 5,574        | 4,242        | 9,816             | ¾                         | 9,816                     |
| Interest income                 | ¾            | ¾            | ¾                 | 35                        | 35                        |
| Interest expense                | 42           | (3 )         | 39                | 723                       | 762                       |
| Interest expense-financing fees | ¾            | ¾            | ¾                 | 132                       | 132                       |
| Depreciation and amortization   | 3,045        | 990          | 4,035             | 91                        | 4,126                     |
| Segment loss                    | (8,198 ) (6) | (20,042) (6) | (28,240 )         | (6,231 )                  | (34,471 )                 |
| Segment assets <sup>(1)</sup>   | 49,978       | 11,951       | 61,929            | 29,671 (4)                | 91,600                    |
| Expenditures for segment assets | 477          | 466          | 943               | 1                         | 944                       |
| Total debt                      | 106          | ¾            | 106               | 14,142 (5)                | 14,248                    |

## Segment Reporting as of and for the year ended December 31, 2012

|                                 | Treatment | Services | Segments<br>Total | Corporate<br>And<br>Other | (2) Consolidated<br>Total |
|---------------------------------|-----------|----------|-------------------|---------------------------|---------------------------|
| Revenue from external customers | \$ 45,882 | \$81,627 | \$ 127,509 (3)    | \$ —                      | \$ 127,509                |
| Intercompany revenues           | 1,785     | 845      | 2,630             | ¾                         | ¾                         |
| Gross profit                    | 9,268     | 6,536    | 15,804            | ¾                         | 15,804                    |
| Interest income                 | ¾         | ¾        | ¾                 | 41                        | 41                        |
| Interest expense                | 9         | 12       | 21                | 797                       | 818                       |
| Interest expense-financing fees | ¾         | ¾        | ¾                 | 107                       | 107                       |
| Depreciation and amortization   | 4,448     | 949      | 5,397             | 73                        | 5,470                     |
| Segment profit (loss)           | 2,951     | 1,474    | 4,425             | (7,574 )                  | (3,149 )                  |
| Segment assets <sup>(1)</sup>   | 75,405    | 36,120   | 111,525           | 28,166 (4)                | 139,691                   |
| Expenditures for segment assets | 263       | 145      | 408               | 4                         | 412                       |
| Total debt                      | 85        | 5        | 90                | 14,106                    | 14,196                    |

(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.

The consolidated revenues included the CH Plateau Remediation Company (“CHPRC”) revenue of \$19,922,000 or (3) 26.8% and \$24,652,000 or 19.3%, for 2013 and 2012, respectively, of our total consolidated revenue from continuing operations.

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(4) Amount includes assets from our discontinued operations of \$4,481,000 and \$2,113,000, as of December 31, 2013 and 2012, respectively.

(5) Net of debt discount of (\$223,000) based on the estimated fair value at issuance of two Warrants and 90,000 shares of the Company's Common Stock issued on August 2, 2013 in connection with a \$3,000,000 promissory note entered into by the Company and Messrs. William Lampson and Robert L. Ferguson. See Note 8 – "Long-Term Debt – Promissory Note and Installment Agreement" for additional information."

(6) Includes goodwill impairment charge of \$13,691,000 for the Treatment Segment and \$14,165,000 for the Services Segment.

## NOTE 17

## QUARTERLY OPERATING RESULTS (UNAUDITED)

Unaudited quarterly operating results are summarized as follows (in thousands, except per share data). Net income attributable to non-controlling interests are excluded from (loss) income from continuing operations in the below earning (loss) per share calculation in accordance with ASC 260, "Earnings Per Share:"

|  | March<br>31 | June 30    | Sept 30  | Dec. 31     |
|--|-------------|------------|----------|-------------|
| 2013   |             |            |          |             |
| Net revenues   | \$19,829    | \$22,784   | \$19,072 | \$12,728    |
| Gross profit   | 537         | 4,023      | 3,129    | 2,127       |
| Loss from continuing operations  | (2,888 )    | (980 )     | (568 )   | (30,035 )   |
| (Loss) income from discontinued operations, net of taxes   | (27 )       | 43         | (240 )   | (1,344 )    |
| Net loss   | (2,915 )    | (937 )     | (808 )   | (31,379 )   |
| Net loss attributable to noncontrolling interest   | (3 )        | (61 )      | —        | —           |
| Net loss attributable to Perma-Fix Environmental Services, Inc. common stockholders                              | \$(2,912 )  | \$(876 )   | \$(808 ) | \$(31,379 ) |
| Basic and diluted net loss per common share attributable to Perma-Fix Environmental Services, Inc. stockholders: |             |            |          |             |
| Continuing operations  | \$(.26 )    | \$(.08 )   | \$(.05 ) | \$(2.63 )   |
| Discontinued operations  | —           | —          | (.02 )   | (.12 )      |
| Net loss per common share  | \$(.26 )    | \$(.08 )   | \$(.07 ) | \$(2.75 )   |
| 2012   |             |            |          |             |
| Net revenues   | \$37,936    | \$33,698   | \$29,190 | \$26,684    |
| Gross profit   | 4,369       | 3,930      | 4,226    | 3,279       |
| Loss from continuing operations  | (807 )      | (1,009 )   | (472 )   | (861 )      |
| (Loss) income from discontinued operations, net of taxes   | (138 )      | (60 )      | (61 )    | 229         |
| Net loss   | (945 )      | (1,069 )   | (533 )   | (632 )      |
| Net income attributable to noncontrolling interest   | 56          | 102        | 21       | 1           |
| Net loss attributable to Perma-Fix Environmental Services, Inc. common stockholders                              | \$(1,001 )  | \$(1,171 ) | \$(554 ) | \$(633 )    |

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Basic and diluted net (loss) income per common share attributable to  
Perma-Fix Environmental Services, Inc. stockholders:

|                           |        |   |        |   |        |   |        |   |
|---------------------------|--------|---|--------|---|--------|---|--------|---|
| Continuing operations     | \$(.08 | ) | \$(.10 | ) | \$(.04 | ) | \$(.08 | ) |
| Discontinued operations   | (.01   | ) | —      |   | (.01   | ) | .02    |   |
| Net loss per common share | \$(.09 | ) | \$(.10 | ) | \$(.05 | ) | \$(.06 | ) |

Net loss for the second and fourth quarters of 2013 included goodwill impairment charges of \$1,149,000 and \$26,707,000, respectively, recorded within our continuing operations (See “Note 3 - Goodwill and Other Intangible Assets” for further information). Net loss for the fourth quarters of 2013 included a charge of approximately \$4,760,000 to tax expense (\$3,596,000 within continuing operations and \$1,164,000 within discontinued operations) to provide a full valuation allowance on the Company’s net deferred tax assets.

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The sum of the quarterly earnings per common share amounts may not equal the annual amount reported because per share amounts are computed independently for each quarter and for the full year based on respective weighted-average common shares outstanding and other dilutive potential common shares.

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NOTE 18

SUBSEQUENT EVENTS

Waivers and Revisions from PNC Bank, National Association

On April 14, 2014, the Company entered into an Amendment to the Company's Amended Loan Agreement with PNC Bank, our lender under the credit facility. Pursuant to the Amendment, our lender waived and/or amended the following:

- the Company's failure to meet the minimum quarterly fixed charge coverage ratio requirement for the fourth quarter of 2013 (see "Note 8 – Long Term Debt" for further information of this non-compliance;
- the quarterly fixed charge coverage ratio testing requirement for the first quarter of 2014;
- the requirement that the Company's consolidated financial statements for the year ended December 31, 2013 be issued without a going concern qualification;
- violation, if any, for the purchase of 80% of a subsidiary in Poland ("CEE Opportunity Partners Poland S.A on April 4, 2014) and the formation of Perma-Fix Medical Corporation ("PFMedical" which was incorporated on January 21, 2014), neither of which shall be a credit party under our Amended Loan Agreement;
- revised the methodology to be used in calculating the fixed charge coverage ratio in each of the subsequent quarters of 2014 and changed the minimum quarterly fixed charge coverage ratio requirement of 1:25 to 1:00 to 1:15 to 1:00 for each of the subsequent quarters of 2014; and
- reduced our Revolving Credit facility from \$18,000,000 to \$12,000,000.

As a condition of this Amendment, we agreed to pay PNC a fee of \$30,000.

Based on these revisions above, we expect to meet our quarterly fixed charge coverage ratio requirement in each of the second to fourth quarters of 2014. If we fail to meet the minimum quarterly fixed charge coverage ratio requirement in any of the quarters starting with the second quarter in 2014 and PNC does not waive the non-compliance or further revise our covenant so that we are in compliance, our lender could accelerate the repayment of borrowings under our credit facility. In the event that our lender accelerates the payment of our borrowings, we may not have sufficient liquidity to repay our debt under our credit facility and other indebtedness.

Resignation of Chief Operating Officer

On April 3, 2014, the Company's Board of Directors approved the appointment by the Company on March 20, 2014 of Mr. John Lash as the Chief Operating Officer ("COO"), upon the Company's acceptance of Mr. James A. Blankenhorn's resignation on March 20, 2014 as the COO. Mr. Blankenhorn's resignation was effective March 28, 2014. Mr. Blankenhorn's resignation was not due to a disagreement with the Company. Upon Mr. Blankenhorn's resignation, his employment agreement also terminated. Mr. Lash previously served as Senior Vice President of Operations of the Company's Treatment Segment for over ten years and has been employed by the Company since 2001 in various management positions.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

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 Commission and that such information is accumulated and communicated to our management, including the Chief Executive Officer (“CEO”) (Principal Executive Officer), and Chief Financial Officer (“CFO”) (Principal Financial Officer), as appropriate to allow timely decisions regarding the required disclosure. In designing and assessing our disclosure controls and procedures, our management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their stated control objectives and are subject to certain limitations, including the exercise of judgment by individuals, the difficulty in identifying unlikely future events, and the difficulty in eliminating misconduct completely. Our management, with the participation of our CEO and CFO, evaluated the effectiveness of our disclosure controls and procedures pursuant to Rule 13a-15 and 15d-15 of the Securities Exchange Act of 1934, as amended. Based upon this assessment, our CEO and CFO have concluded that our disclosure controls and procedures were effective as of December 31, 2013.

#### Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rules 13a-15(f) of the Securities Exchange Act of 1934. Internal control over financial reporting is designed 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 in the United States of America. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements or fraudulent acts. A control system, no matter how well designed, can provide only reasonable assurance with respect to financial statement preparation and presentation.

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Internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit the preparation of the consolidated financial statements in accordance with generally accepted accounting principles in the United States of America, and that receipts and expenditures of the Company are being made only in accordance with appropriate authorizations of management and directors of the Company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on the consolidated financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements or fraudulent acts. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management, with the participation of our CEO and CFO, conducted an assessment of the effectiveness of internal control over financial reporting based on the framework in Internal Control – Integrated Framework (1992) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this assessment, management, with the participation of our CEO and CFO, concluded that the Company's internal control over financial reporting was effective as of December 31, 2013.

This annual report does not include an attestation report of the Company's independent registered public accounting firm regarding internal control over financial reporting. Management's report was not subject to attestation by the Company's independent registered public accounting firm pursuant to the rules of the Commission that permit the Company to provide only the management's report in this annual report.

## Changes in Internal Control over Financial Reporting

There was one change in our internal controls over financial reporting (as defined in Rule 13a-15(f) under the Securities Exchange Act of 1934) during the fiscal quarter ended December 31, 2013, that has materially affected, or is reasonably likely to materially affect, our internal controls over financial reporting:

Management has implemented an increase in the level of review and validation of the Company's accounting for its deferred tax accounting in preparation of the Company's provision for income taxes.

## ITEM 9B. OTHER INFORMATION

None.

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## PART III

## ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

## DIRECTORS

The following table sets forth, as of the date hereof, information concerning our Directors:

| <u>NAME</u>                    | <u>AGE</u> | <u>POSITION</u>  |
|--------------------------------|------------|--|
| Dr. Louis F. Centofanti        | 70         | Chairman of the Board, President and Chief Executive Officer |
| Mr. Jack Lahav                 | 65         | Director   |
| Honorable Joe R. Reeder        | 66         | Director   |
| Mr. Larry M. Shelton           | 60         | Director   |
| Dr. Charles E. Young           | 82         | Director   |
| Mr. Mark A. Zwecker            | 63         | Director   |
| Dr. Gary Kugler                | 73         | Director   |
| John M. Climaco <sup>(1)</sup> | 45         | Director   |

Each director is elected to serve until the next annual meeting of stockholders.

<sup>(1)</sup> Mr. Climaco was elected as a director on October 4, 2013, to fill a newly created directorship.

## Director Information

## Dr. Louis F. Centofanti

Dr. Centofanti has served as Board Chairman since joining the Company in February 1991. Dr. Centofanti also served as Company President and Chief Executive Officer (February 1991 to September 1995) and again in March 1996 was elected Company President and Chief Executive Officer. From 1985 until joining the Company, Dr. Centofanti served as Senior Vice President of USPCI, Inc., a large hazardous waste management company, where he was responsible for managing the treatment, reclamation and technical groups within USPCI. In 1981 he founded PPM, Inc. (later sold to USPCI), a hazardous waste management company specializing in treating PCB contaminated oils. From 1978 to 1981, Dr. Centofanti served as Regional Administrator of the U.S. Department of Energy for the southeastern region of the United States. Dr. Centofanti has a Ph.D. and a M.S. in Chemistry from the University of Michigan, and a B.S. in Chemistry from Youngstown State University.

As founder of Perma-Fix, PPM, Inc., and senior executive leader at USPCI, Dr. Centofanti combines extensive business experience in the waste management industry with a drive for innovative technology which is critical for a waste management company. In addition, his service in the government sector provides a solid foundation for the continuing growth of the Company, particularly within the Company's Nuclear business. Dr. Centofanti's comprehensive understanding of the Company and his extensive knowledge of its history, coupled with his drive for innovation and excellence, positions our Board Chairman, President and Chief Executive Officer, to optimize our role in this competitive, evolving market.

## Mr. Jack Lahav

Jack Lahav, a director since September 2001, is a private investor, specializing in launching and growing businesses. Mr. Lahav devotes much of his time to charitable activities, serving as president as well as board member of several charities. Previously, Mr. Lahav founded Remarkable Products Inc. and served as its president from 1980 to 1993. Mr. Lahav co-founded Lamar Signal Processing, Inc., a digital signal processing company, was president of Advanced Technologies, Inc., a robotics company, and director of Vocaltec Communications, Ltd., a publicly-traded telecom equipment provider. From 2001 to 2004, Mr. Lahav served as Chairman of Quigo Technologies, Inc., a private search-engine marketing company acquired by AOL in December 2007. Mr. Lahav currently serves as Chairman of

Phoenix Audio Technologies, a private company that provides audio communication solutions for VoIP and other internet applications.

Having launched a number of successful businesses, Mr. Lahav has established a record of success in developing and growing a business. His “know how” enables him to provide important perspectives to the Board relating to a variety of business challenges. His commitment to charitable organizations provides a unique component of a well-rounded Board.

Honorable Joe R. Reeder

Mr. Reeder, a director since April 2003, served as the Shareholder-in-Charge of the Mid-Atlantic Region (1999-2008) for Greenberg Traurig LLP, one of the nation's largest law firms, with 29 offices and over 1,800 attorneys worldwide. Currently, a principal shareholder in the law firm, his clientele includes sovereign nations, international corporations, and law firms throughout the U.S. As the 14th Undersecretary of the U.S. Army (1993-97), Mr. Reeder also served for three years as Chairman of the Panama Canal Commission's Board of Directors where he oversaw a multibillion-dollar infrastructure program. He serves on the boards of the National Defense Industry Association (NDIA) (and chairs NDIA's Ethics Committee), the Armed Services YMCA, and many other private companies and charitable organizations. Following successive appointments by Governors Mark Warner and Tim Kaine, Mr. Reeder served seven years as Chairman of two Commonwealth of Virginia military boards and served ten years on the National USO board. Mr. Reeder is also a frequent television commentator on legal and national security issues. Among other corporate positions, he has been a director since September 2005 for ELBIT Systems of America, LLC, a NASDAQ company that provides product and system solutions focusing on defense, homeland security, and commercial aviation. Mr. Reeder also serves as a board member for Washington First Bank (since April 2004). Mr. Reeder was a member of the Corporate Advisory Board for ICX Technologies, a publicly traded company specializing in development and integration of advanced sensor technologies for homeland security and commercial applications, from April 2007 to July 2008. A graduate of West Point who served in the 82nd Airborne Division following Ranger School, Mr. Reeder earned his J.D. from the University of Texas and his L.L.M. from Georgetown University.

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Mr. Reeder has a distinguished career in providing solutions to complex issues involving substantial domestic and international concerns. He has demonstrated extensive knowledge and problem-solving background, which skills enhance the Board's ability to address challenging issues in the nuclear market.

Mr. Larry M. Shelton

Mr. Shelton, a director since July 2006, currently is the Chief Financial Officer (since 1999) of S K Hart Management, LC, an investment holding company. In March 2012, he was appointed Director and Chief Financial Officer of SK Hart Ranches (PTY) Ltd, a private South African Company involved in agriculture business. Mr. Shelton has over 18 years of experience as financial executive officer for several waste management companies. He was Chief Financial Officer of Envirocare of Utah, Inc. (1995–1999), and Chief Financial Officer of USPCI, Inc. (1982–1987). Mr. Shelton has served on the Board of Directors of Subsurface Technologies, Inc., a privately-held company specializing in providing environmentally sound innovative solutions for water well rehabilitation and development, since July 1989, and Pony Express Land Development, Inc., a privately-held land development company, since December 2005. Mr. Shelton has a B.A. in accounting from the University of Oklahoma.

With his years of accounting experience as Chief Financial Officer for various companies, including a number of waste management companies, Mr. Shelton combines extensive knowledge and understanding of accounting principles, financial reporting requirements, evaluating and overseeing financial reporting processes and business savvy.

Dr. Charles E. Young

Dr. Charles E. Young, a director since July 2003, currently serves as a director (since September 2011) of SteriMed, Inc., a privately held company in the medical waste business. He was president of the University of Florida from November 1999 to January 2004 and chancellor of the University of California, Los Angeles (UCLA) for 29 years until his retirement in 1997. He also was the President of Qatar Foundation from 2004 to November 2005. In addition, from December 2009 to June 2010, he served as the Chief Executive Officer of the Los Angeles Museum of Contemporary Art. Dr. Young has chaired the Association of American Universities, and served on numerous commissions, including the American Council on Education, the National Association of State Universities and Land-Grant Colleges, and the Business-Higher Education Forum. Dr. Young served on the Board of Directors of I-MARK, Inc., a privately held software and professional services company from 1997 to 2012. He previously served on the Board of Directors of Intel Corp. and Nicholas-Applegate Growth Equity Fund, Inc., as well as Fiberspace, Inc., a privately-held company that designs and manufacturers stabilized laser products, Student Advantage, Inc., an integrated media and commerce company, and AAFL Enterprises, a sports development company. Dr. Young has a Ph.D. and M.A. in political science from UCLA and a B.A. from the University of California at Riverside.

Having presided over two major universities with multi-billion budgets, a major educational foundation, a world-renowned museum, and as a board member for a publicly-held multi-billion dollar corporation, Dr. Young brings unique perspectives and extensive experience to our Board. His savvy in the process of policy making and long-term leadership development provides a valuable component of a well-rounded Board.

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Mr. Mark A. Zwecker

Mark Zwecker, a director since the Company's inception in January 1991, currently serves as the Chief Financial Officer and a board member for JCI US Inc., a telecommunication company providing cellular service for machine to machine applications. From 2006 to 2013, Mr. Zwecker served as Director of Finance for Communications Security and Compliance Technologies, Inc., a software company developing security products for the mobile workforce. From 1997 to 2006, Mr. Zwecker served as president of ACI Technology, LLC, an IT services provider, and from 1986 to 1998, he served as vice president of finance and administration for American Combustion, Inc., a combustion technology solution provider. In 1983, with Dr. Centofanti, Mr. Zwecker co-founded a start-up, PPM, Inc., a hazardous waste management company. He remained with PPM, Inc. until its acquisition in 1985 by USPCI. Mr. Zwecker has a B.S. in Industrial and Systems Engineering from the Georgia Institute of Technology and an M.B.A. from Harvard University.

As a director since our inception, Mr. Zwecker's understanding of our business provides valuable insight to the Board. With years of experience in operations and finance for various companies, including a number of waste management companies, Mr. Zwecker combines extensive knowledge of accounting principles, financial reporting rules and regulations, the ability to evaluate financial results, and understanding of financial reporting processes. He has an extensive background in operating complex organizations. Mr. Zwecker's experience and background positions him well to serve as a member of our Audit Committee.

Dr. Gary G. Kugler

Dr. Gary Kugler was elected as a director at the Company's Annual Meeting of Stockholders held on September 12, 2013. Dr. Kugler currently serves as the Chairman of the Board of Director of Nuclear Waste Management Organization ("NWMO"), a position he has held since 2006. NWMO was established under the Nuclear Fuel Waste Act (2002) to investigate and implement approaches for managing Canada's used nuclear fuel. Dr. Kugler is also a current board member of Ontario Power Generation, Inc. ("OPG"), a position he has held since 2004. OPG is one of Canada's largest electricity generation companies. Dr. Kugler has had an extensive career in the nuclear industry, both nationally and internationally. He retired from Atomic Energy of Canada Limited ("AECL") as Senior Vice President, Nuclear Products & Services, in 2004, where he was responsible for all of AECL's commercial operations, including nuclear power plant sales and services world-wide. During his 34 years with AECL, he held various technical, project management, business development, and executive positions. Prior to joining AECL, Dr. Kugler served as a pilot in the Canadian air force. He holds a PH.D. in nuclear physics from McMaster University and is a graduate of the Directors Education Program of the Institute of Corporate Directors.

Dr. Kugler's extensive career in the nuclear industry, both nationally and internationally, brings valuable insight and knowledge to the Company as it expands its business internationally.

John M. Climaco

John Climaco was elected by the Company's Board of Directors, on October 4, 2013, to fill a newly created directorship. From 2003 to 2012, Mr. John Climaco served as President and Chief Executive Officer, as well as a member of the board of directors of Axial Biotech, Inc., a venture-backed molecular diagnostics company specializing in spine disorders, which he cofounded in 2003. From 2001 to 2007, he practiced law for the firm of Fabian and Clendenin, specializing in corporate and tax legal strategies for diverse clients across the U.S. and Europe, as well as joint venture, corporate and securities transactions. Mr. Climaco currently serves as a member of the Board of Directors for Digirad Corporation, a position he has held since 2012. Digirad manufactures cameras for nuclear imaging applications and provides for in-office nuclear cardiology imaging. Mr. Climaco is also a Board member for PDI, Inc. (since October 2013), a provider of outsourced commercial services to pharmaceutical, biotechnology, and healthcare companies. Mr. Climaco also served as a board member of InfuSystem Holdings, Inc., a leading supplier of infusion services to oncologists and other out-patient treatment settings. Mr. Climaco earned his B.A. in Philosophy from Middlebury College and holds a J.D. from the University of California Hastings College of the Law.



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Mr. Climaco's extensive legal and operational experience, including strategic planning and business development provide valuable asset to the Company's immediate and future growth in our industry.

## BOARD LEADERSHIP STRUCTURE

Dr. Louis Centofanti, the Company's President and Chief Executive Officer, also holds the position of the Chairman of the Board. The Company believes such structure currently promotes the best interests of our stockholders. Dr. Centofanti's extensive knowledge of the history of the Company, its customers, and his background in our complex and unique nuclear business, enables him to provide guidance to our Board with day to day and long-term strategic business recommendations and decisions which ultimately enhance shareholder value.

Although the Company's Amended and Restated Bylaws do not formally require the designation of an independent Lead Director, because the positions of Chairman and Chief Executive Officer are held by the same person, Mr. Mark Zwecker was appointed by our Board of Directors and has served as the independent Lead Director since February 2010. The Board believes that the Lead Director enhances the Board's ability to fulfill its responsibilities independently in the best interests of the Company's stockholders. The Lead Director's role includes:

- convening and chairing meetings of the non-employee directors as necessary from time to time and Board meetings in the absence of the Chairman of the Board;
- acting as liaison between directors, committee chairs and management;
- serving as information sources for directors and management; and
- carrying out responsibilities as the Board may delegate from time to time.

## AUDIT COMMITTEE

We have a separately designated standing Audit Committee of our Board of Directors established in accordance with Section 3(a)(58)(A) of the Exchange Act. The members of the Audit Committee are Mark A. Zwecker (Chairperson), Larry M. Shelton, and John Climaco. Effective December 13, 2013, Dr. Charles E. Young was no longer a member of the Audit Committee.

Our Board of Directors has determined that each of our Audit Committee members is independent within the meaning of the rules of NASDAQ and was an "audit committee financial expert" as defined by Item 407(d)(5)(ii) of Regulation S-K of the Securities Exchange Act of 1934, as amended (the "Exchange Act").

The Audit Committee has also received from, and discussed with, BDO, the Company's independent registered accounting firm, the matters required to be discussed by Public Company Accounting Oversight Board ("PCAOB") Auditing Standard No. 16 (Communications with Audit Committee).

## BOARD INDEPENDENCE

The Board has determined that each director, other than Dr. Centofanti, is "independent" within the meaning of the applicable rules of the NASDAQ Stock Market, Inc. ("NASDAQ") on which the Company's Common Stock is listed. Dr. Centofanti is not deemed to be an "independent director" because of his employment as a senior executive of the Company. The Board considered the independence of the Company's use of Mr. Reeder's law firm from time to time in considering his independence, and determined that he should be deemed an independent director since the amount paid to Mr. Reeder's law firm was a nominal amount.

## CORPORATE GOVERNANCE AND NOMINATING COMMITTEE

We have a separately-designated standing Corporate Governance and Nominating Committee (the "Nominating Committee"). Members of the Nominating Committee are Joe R. Reeder (Chairperson), Jack Lahav, Dr. Gary G. Kugler and Dr. Charles E. Young. Effective December 13, 2013, Larry Shelton was no longer a member of the Nominating Committee and Dr. Gary Kugler was added as a member of the Nominating Committee. All members of the Corporate Governance and Nominating Committee are and were "independent" as that term is defined by current



NASDAQ listing standards.

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The Nominating Committee recommends to the Board of Directors candidates to fill vacancies on the Board and the nominees for election as the directors at each annual meeting of stockholders. In making such recommendation, the Nominating Committee takes into account information provided to them from the candidate, as well as the Nominating Committee's own knowledge and information obtained through inquiries to third parties to the extent the Nominating Committee deems appropriate. The Company's Amended and Restated Bylaws sets forth certain minimum director qualifications to qualify for nomination for elections as a Director. To qualify for nomination or election as a director, an individual must:

- be an individual at least 21 years of age who is not under legal disability;
- have the ability to be present, in person, at all regular and special meetings of the Board of Directors;
- not serve on the boards of more than three other publicly held companies;
- satisfy the director qualification requirements of all environmental and nuclear commissions, boards or similar regulatory or law enforcement authorities to which the Corporation is subject so as not to cause the Corporation to fail to satisfy any of the licensing requirements imposed by any such authority;
- not be affiliated with, employed by or a representative of, or have or acquire a material personal involvement with, or material financial interest in, any "Business Competitor" (as defined);
- not have been convicted of a felony or of any misdemeanor involving moral turpitude; and
- have been nominated for election to the Board of Directors in accordance with the terms of the Amended and Restated Bylaws.

In addition to the minimum director qualifications as mentioned above, each candidate's qualifications are also reviewed to include:

- standards of integrity, personal ethics and value, commitment, and independence of thought and judgment;
- ability to represent the interests of the Company's stockholders;
- ability to dedicate sufficient time, energy and attention to fulfill the requirements of the position; and
- diversity of skills and experience with respect to accounting and finance, management and leadership, business acumen, vision and strategy, charitable causes, business operations, and industry knowledge.

The Nominating Committee does not assign specific weight to any particular criteria and no particular criterion is necessarily applicable to all prospective nominees. The Nominating Committee does not have a formal policy for the consideration of diversity in identifying nominees for directors. However, the Company believes that the backgrounds and qualifications of the directors, considered as a group, should provide a significant composite mix of experience, knowledge, and abilities that will allow the Board to fulfill its responsibilities.

### Stockholder Nominees

The Nominating Committee will consider properly submitted stockholder nominations for candidates for membership on the Board of Directors from stockholders who meet each of the requirements set forth in the Amended and Restated Bylaws, including, but not limited to, the requirements that any such stockholder own at least 1% of the Company's shares of the Common Stock entitled to vote at the meeting on such election, has held such shares continuously for at least one full year, and continuously holds such shares through and including the time of the annual or special meeting. Nominations of persons for election to the Board of Directors may be made at any Annual Meeting of Stockholders, or at any Special Meeting of Stockholders called for the purpose of electing directors. Any stockholder nomination ("Proposed Nominee") must comply with the requirements of the Company's Amended and Restated Bylaws and the Proposed Nominee must meet the minimum qualification requirements as discussed above. For a nomination to be made by a stockholder, such stockholder must provide advance written notice to the Corporate Governance and Nominating Committee, delivered to the Company's principal executive office address (i) in the case of an Annual Meeting of Stockholders, no later than the 90<sup>th</sup> day nor earlier than the 120<sup>th</sup> day prior to the anniversary date of the immediately preceding Annual Meeting of Stockholders; and (ii) in the case of a Special Meeting of Stockholders called for the purpose of electing directors, not later than the 10<sup>th</sup> day following the day on which public

disclosure of the date of the Special Meeting of Stockholders was made.

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The Nominating Committee will evaluate the qualification of the Proposed Nominee and the Proposed Nominee's disclosure and compliance requirements in accordance with the Company's Amended and Restated Bylaws. If the Board of Directors, upon the recommendation of the Nominating Committee, determines that a nomination was not made in accordance with the Amended and Restated Bylaws, the Chairman of the Meeting shall declare the nomination defective and it will be disregarded.

### RESEARCH AND DEVELOPMENT COMMITTEE

Effective December 13, 2013, we re-established the separately-designated standing Research and Development Committee (the "R&D Committee"). Members of the R&D Committee include Dr. Gary G. Kugler and Dr. Louis Centofanti.

The R&D Committee outlines the structures and functions of the Company's research and development strategies, the acquisition and protection of the Company's intellectual property rights and assets, and provides its perspective on such matter to the Board of Directors. The R&D Committee does not have a charter.

The R&D Committee was disbanded effective September 13, 2012, upon Mr. Ferguson's election not to stand for re-election at the Company's 2012 Annual Meeting of Stockholders held on September 13, 2012. However, Dr. Louis Centofanti, Board Chairman and Chief Executive Officer, led a R&D management team in carrying out our R&D functions as noted above during the disbandment period.

### STRATEGIC ADVISORY COMMITTEE

On December 13, 2013, the Company Board of Directors formed a new Strategic Advisory Committee ("Strategic Committee"). The primary functions of the Strategic Committee are to investigate and evaluate strategic alternatives available to the Company and to work with management on long-range strategic planning and identifying potential new business opportunities. The members of the Strategic Advisory Committee are John M. Climaco (Chairperson), Joe R. Reeder, Mark A. Zwecker, and Larry M. Shelton. The Strategic Advisory Committee does not have a charter.

### EXECUTIVE OFFICERS

See Item 4A – "Executive Officers of the Registrant" in Part I of this report for information concerning our executive officers, as of the date hereof.

There are no family relationships between any of the directors or executive officers.

### Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Exchange Act, and the regulations promulgated thereunder require our executive officers and directors and beneficial owners of more than 10% of our Common Stock to file reports of ownership and changes of ownership of our Common Stock with the Securities and Exchange Commission, and to furnish us with copies of all such reports. Based solely on a review of the copies of such reports furnished to us and written information provided to us, we believe that during 2013 none of our executive officers, directors, or beneficial owners of more than 10% of our Common Stock failed to timely file reports under Section 16(a).

Capital Bank–Grawe Gruppe AG ("Capital Bank") has advised us that it is a banking institution regulated by the banking regulations of Austria, which holds shares of our Common Stock as agent on behalf of numerous investors. Capital Bank has represented that all of its investors are accredited investors under Rule 501 of Regulation D promulgated under the Act. In addition, Capital Bank has advised us that none of its investors, individually or as a group, beneficially own more than 4.9% of our Common Stock. Capital Bank has further informed us that its clients (and not Capital Bank) maintain full voting and dispositive power over such shares. Consequently, Capital Bank has advised us that it believes it is not the beneficial owner, as such term is defined in Rule 13d-3 of the Exchange Act, of the shares of our Common Stock registered in the name of Capital Bank because it has neither voting nor investment

power, as such terms are defined in Rule 13d-3, over such shares. Capital Bank has informed us that it does not believe that it is required (a) to file, and has not filed, reports under Section 16(a) of the Exchange Act or (b) to file either Schedule 13D or Schedule 13G in connection with the shares of our Common Stock registered in the name of Capital Bank.

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If the representations of, or information provided by Capital Bank are incorrect or Capital Bank was historically acting on behalf of its investors as a group, rather than on behalf of each investor independent of other investors, then Capital Bank and/or the investor group would have become a beneficial owner of more than 10% of our Common Stock on February 9, 1996, as a result of the acquisition of 1,100 shares of our Preferred Stock that were convertible into a maximum of 256,560 shares (after giving effect to the reverse stock split) of our Common Stock. If either Capital Bank or a group of Capital Bank's investors became a beneficial owner of more than 10% of our Common Stock on February 9, 1996, or at any time thereafter, and thereby required to file reports under Section 16(a) of the Exchange Act, then Capital Bank has failed to file a Form 3 or any Forms 4 or 5 since February 9, 1996. (See "Item 12 - Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matter – Security Ownership of Certain Beneficial Owners" for a discussion of Capital Bank's current record ownership of our securities).

## Code of Ethics

Our Code of Ethics applies to all our executive officers and is available on our website at [www.perma-fix.com](http://www.perma-fix.com). If any amendments are made to the Code of Ethics or any grants of waivers are made to any provision of the Code of Ethics to any of our executive officers, we will promptly disclose the amendment or waiver and nature of such amendment or waiver on our website.

## ITEM 11. EXECUTIVE COMPENSATION

### Compensation Discussion and Analysis

Our long-term success depends on our ability to efficiently operate our facilities, increase the profitability of our business, evaluate strategic acquisitions, and to continue to research and develop innovative technologies in the treatment of nuclear waste, mixed waste, and industrial waste. To achieve these goals, it is important that we be able to attract, motivate, and retain highly talented individuals who are committed to our values and goals.

The Compensation and Stock Option Committee (for purposes of this analysis, the "Compensation Committee") of the Board has responsibility for establishing, implementing and continually monitoring adherence with our compensation philosophy. The Compensation Committee ensures that the total compensation paid to Dr. Louis F. Centofanti, our Chief Executive Officer or "CEO," Ben Naccarato, our Chief Financial Officer or "CFO," Jim Blankenhorn, our Chief Operating Officer or "COO," Robert Schreiber, President of SYA or "SYA President," and Christopher Leichtweis, Senior Vice President and President of Safety and Ecology Corporation ("SEC") or "SEC President" (who voluntarily terminated and retired from all positions with the Company and its subsidiaries effective May 24, 2013) (together, our named executive officers or "NEOs") is fair, reasonable and competitive. Generally, the types of compensation and benefits provided to the NEOs are similar to those provided to other executive officers at similar sized companies and industries. On March 20, 2014, the Company accepted the resignation of Mr. James A. Blankenhorn, as Vice President and Chief Operating Officer of the Company. The resignation was effective March 28, 2014.

### Compensation Philosophy and Objectives

The Compensation Committee bases its executive compensation program on our performance objectives. The Compensation Committee evaluates both executive performance and compensation to ensure that we maintain our ability to attract superior employees in key positions and to remain competitive relative to the compensation paid to similarly situated executives of our peer companies. The Compensation Committee believes executive compensation packages provided to our executives, including the NEOs, should include both cash and equity-based compensation that provide rewards for performance. The Compensation Committee bases its executive compensation program on the following philosophy:

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- Compensation should be based on the level of job responsibility, executive performance, and company performance.
- Executive officers' pay should be more closely linked to company performance than that of other employees because the executive officers have a greater ability to affect our results.
- Compensation should be competitive with compensation offered by other companies (subject to size and revenues) that compete with us for talented individuals.
- Compensation should reward performance.
- Compensation should motivate executives to achieve our strategic and operational goals.

Role of Executive Officers in Compensation Decisions

The Compensation Committee makes all compensation decisions for the NEOs and equity awards to all of our officers. Decisions regarding the non-equity compensation of other officers are made by the Compensation Committee, based on the recommendations of the CEO.

The CEO annually reviews the performance of each of the NEOs (other than the CEO whose performance is reviewed by the Compensation Committee). Based on such reviews, the CEO presents a recommendation to the Compensation Committee, which may include salary adjustments, bonus and equity-based awards. The Compensation Committee considers such recommendation in light of the compensation philosophy and objectives described above and the processes described below. Based on its analysis, the Compensation Committee exercises its discretion in accepting or modifying all such recommendations. The CEO is not present during the voting or deliberations of the Compensation Committee with respect to the CEO's compensation.

The Compensation Committee's Processes

The Compensation Committee has established certain processes designed to achieve our annual executive compensation objectives. These processes include the following:

- Company Performance Assessment; MIP. The Compensation Committee assesses our performance in order to establish compensation ranges and, as described below, to establish specific performance measures that determine incentive compensation under the Management Incentive Plan ("MIP") established for each of our NEOs. For this purpose, the Compensation Committee considers numerous measures of performance of both us and industries with which we compete, including, but not limited to, revenue, gross profit, net income, administrative expenses, and earnings before interests, taxes and depreciation ("EBITDA").
- Individual Performance Assessment. Because the Compensation Committee believes that an individual's performance should effect an individual's compensation, the Compensation Committee seeks to encourage and reward each NEO based on achievement of individual performance goals, in addition to overall company performance measures mentioned above. With respect to the CEO and COO, compensation is also awarded based on qualitative measures such as maintaining the safety of our facilities as well maintaining permit compliance. With respect to the CFO, the Compensation Committee takes into account improvements made in accounting and financial processes such as maintaining Sarbanes-Oxley Act of 2002 ("SOX") and Securities and Exchange Commission compliance, improving accounts receivable ("AR") targets, system integration, and centralization of the Company's systems. In designing the compensation plan for the NEO, the Compensation Committee believes individual measures result in short and long term value to stockholders. The Compensation Committee also considers input of, and the performance analysis provided by, the CEO when designing the compensation plan for the other NEOs. The Compensation Committee believes that the CEO's daily interactions with the other NEOs provide valuable insight regarding the contributions made by the other NEOs. With respect to all NEOs, the Compensation Committee also exercises its judgment based on its interactions with the particular NEO, such officer's contribution to our performance and other leadership

achievements.

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Peer Group Assessment. The Compensation Committee compares our compensation program with a group of companies against which the Compensation Committee believes we compete for talented individuals (the “Peer Group”). The composition of the Peer Group is periodically reviewed and updated by the Compensation Committee. The companies currently comprising the Peer Group are Clean Harbors, Inc., American Ecology Corporation, and EnergySolutions, Inc., each of which is a waste disposal/management company. The Compensation Committee considers the Peer Group’s executive compensation programs as a whole and the compensation of individual officers in the Peer Group, if job responsibilities are meaningfully similar. When comparing the Peer Group’s executive compensation programs to our programs, the Compensation Committee considers that the companies within this Peer Group have substantially greater revenues than our Company, as well as subjective factors with respect to each of our NEOs. These individual subjective factors include the relative level of experience of each executive officer, the general responsibilities of each executive officer, and the relative capitalization and revenues of the Peer Group members.

The Compensation Committee believes that the Peer Group comparison assists it in attempting to structure an executive compensation program that is competitive with other companies in the industry, subject to size and revenues of companies within the Peer Group. Although our Compensation Committee makes a comparison to the Peer Group compensation, the Compensation Committee does not use the Peer Group as a benchmark for compensation of the NEOs. Instead, the Compensation Committee considers the following when reviewing the Peer Group compensation information:

The Compensation Committee understands that our competitors generally have greater capital resources than we do and are larger businesses than we are; as a result, the Compensation Committee does not attempt to match the compensation packages offered by the Peer Group or to set our compensation packages at a certain percentage or other objective target level as compared to members of the Peer Group;

The Compensation Committee considers what compensation package is expected to enable us to compete for talented individuals given the opportunities and compensation offered by us; and

Our executive compensation will necessarily fall below (and sometimes significantly below) the compensation offered by members of the Peer Group due to our limited resources as compared to the resources of members of the Peer Group.

As described above, the Compensation Committee (along with our CEO) reviews the publicly available compensation disclosures of the Peer Group. However, when making its own annual compensation decisions, the Compensation Committee currently has no policy for setting our compensation levels based on or as compared to the compensation practices of such Peer Group members. Accordingly, the Company does not believe that benchmarking is currently material to the Company's compensation policies and decisions.

The executive compensation program for our SEC President was negotiated as part of our acquisition of SEC in October 2011. On May 14, 2013, the Company entered into a Separation and Release Agreement with the SEC President which terminated and voided the Leichtweis Employment Agreement and MIP (see “Employment Agreement” and “MIPs” below regarding termination of these agreements and payments made to the SEC President upon his voluntary termination and retirement from the Company effective May 24, 2013).

## Employment Agreements

The Company entered into employment agreements on August 24, 2011 with our CEO, COO, and CFO, which were approved by the Compensation Committee and Board. These agreements provided that (a) Dr. Centofanti, CEO, was entitled to receive an annual base salary of \$263,218; (b) Mr. Blankenhorn, COO, was entitled to receive an annual base salary of \$245,000; and (c) Mr. Naccarato, CFO, was entitled to receive an annual base salary of \$208,000. The base salary is subject to adjustment as determined by the Compensation Committee (no change in base salary was

made for each CEO, COO, and CFO in 2013 from the 2012 base salary). In connection with the closing of our acquisition of SEC, on October 31, 2011, we entered into an employment agreement with Mr. Christopher Leichtweis, which was approved by the Compensation Committee and Board. Mr. Leichtweis, who prior to the acquisition was an officer and director of SEC's former parent company (Homeland Security Capital Corporation now known as Timios National Corporation or "TNC"), was appointed as the SEC President and a senior vice president. Mr. Leichtweis' employment agreement provided that he is entitled to receive an annual base salary of \$324,480. The base salary is subject to adjustment as determined by the Compensation Committee. The employment agreements with our CEO, COO, CFO and SEC President are collectively referred to as the "Employment Agreements."

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In addition to base salary, each of these executive officers is entitled to participate in the Company's benefits plans and to any performance compensation payable under an individual Management Incentive Plan ("MIP") for the CEO, CFO, COO, and SVP (see "Management Incentive Plans," below).

Each of the Employment Agreements is effective for three years, except the term for the SEC President is four years. Each Employment Agreement may be terminated prior to its expiration by the Company with or without "cause" (as defined below) or by the executive officer for "good reason" (as defined below) or any other reason. If the NEO's employment is terminated due to death, disability or for cause, we will pay to the NEO or to his estate a lump sum equal to the sum of any unpaid base salary through the date of termination and any benefits otherwise due at that time under any employee benefit plan, excluding any severance program or policy (the "Accrued Amounts").

If the NEO terminates his employment for "good reason" or is terminated without cause, we will pay the NEO a sum equal to the total Accrued Amounts, plus one year of full base salary. If the NEO terminates his employment for a reason other than for good reason, we will pay to him the amount equal to the Accrued Amounts. If there is a Change in Control (as defined below), all outstanding stock options to purchase common stock held by the NEO will immediately become vested and exercisable in full. The amounts payable with respect to a termination (other than base salary and amounts otherwise payable under any Company employee benefit plan) are payable only if the termination constitutes a "separation from service" (as defined under Treasury Regulation Section 1.409A-1(h)).

"Cause" is generally defined in each of the Employment Agreements as follows:

- the ultimate conviction (after all appeals have been decided) of the executive by a court of competent jurisdiction, or a plea of nolo contendere or a plea of guilty by the executive, to a felony involving a moral practice or act;
- willful or gross misconduct or gross neglect of duties by the executive, which is injurious to the Company. Failure of the executive to perform his duties due to disability shall not be considered gross misconduct or gross neglect of duties;
- act of fraud or embezzlement against the Company; and
- willful breach of any material provision of the employment agreement.

"Good reason" is generally defined in each of the Employment Agreements as follows:

- assignment to the executive of duties inconsistent with his responsibilities as they existed during the 90-day period preceding the date of the employment agreement, including status, office, title, and reporting requirement;

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any other action by the Company which results in a reduction in (i) the compensation payable to the executive, or (ii) the executive's position, authority, duties, or other responsibilities without the executive's prior approval;

the relocation of the executive from his base location on the date of the employment agreement, excluding travel required in order to perform the executive's job responsibilities;

any purported termination by the Company of the executive's employment otherwise than as permitted by the agreement; and

any material breach by the Company of any provision of the employment agreement, except that an insubstantial or inadvertent breach by the Company which is promptly remedied by the Company after receipt of notice by the executive is not considered a material breach.

"Change in Control" is generally defined in each of the Employment Agreements as follows:

a transaction in which any person, entity, corporation, or group (as such terms are defined in Sections 13(d)(3) and 14(d)(2) of the Exchange (other than the Company, or a profit sharing, employee ownership or other employee benefit plan sponsored by the Company or any subsidiary of the Company): (i) will purchase any of the Company's voting securities (or securities convertible into such voting securities) for cash, securities or other consideration pursuant to a tender offer, or (ii) will become the "beneficial owner" (as such term is defined in Rule 13d-3 under the Exchange Act, directly or indirectly (in one transaction or a series of transactions), of securities of the Company representing 50% or more of the total voting power of the then outstanding securities of the Company ordinarily having the right to vote in the election of directors; or

a change, without the approval of at least two-thirds of the Board of Directors then in office, of a majority of the Company's Board of Directors; or

the Company's execution of an agreement for the sale of all or substantially all of the Company's assets to a purchaser which is not a subsidiary of the Company; or

the Company's adoption of a plan of dissolution or liquidation; or

the Company's closure of the facility where the executive works; or

the Company's execution of an agreement for a merger or consolidation or other business combination involving the Company in which the Company is not the surviving corporation, or, if immediately following such merger or consolidation or other business combination, less than fifty percent (50%) of the surviving corporation's outstanding voting stock is held by persons who are stockholders of the Company immediately prior to such merger or consolidation or other business combination; or

such event that is of a nature that is required to be reported in response to Item 5.01 of Form 8-K.

On February 14, 2013, the Company entered into a Settlement and Release Agreement and Amendment to Employment Agreement (the "Leichtweis Settlement), in final settlement of certain claims made by us against Mr. Leichtweis in connection with Disputed Claims asserted by us against TNC subsequent to the acquisition of SEC. The Leichtweis Settlement amended Mr. Leichtweis Employment Agreement which reduced the base salary of Mr. Leichtweis by \$30,000 per year commencing the earlier occurrence of (i) the date the Company files its 2012 Form 10-K with the Securities and Exchange Commission, or (ii) April 1, 2013, and continuing for a period of three years from such date (or, if the Mr. Leichtweis's Employment Agreement is earlier terminated, through the date of such earlier termination). The Company filed its Form 10-K on March 22, 2013.



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On May 14, 2013, the Company entered into a Separation and Release Agreement (“Agreement”) with Leichtweis. 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 in all respects, 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) After given the effect of the reverse stock split, a nonqualified stock option (the “Option”) granted to Leichtweis on October 31, 2011, which provided for the purchase of up to 50,000 shares of the Company’s Common Stock at \$6.75 per share pursuant to the Leichtweis Employment Agreement, was forfeited. Within 30 days after Separation Date, Leichtweis had the option to exercise 12,500 options (amount vested) to purchase 12,500 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 and terminating 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, 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.

On March 20, 2014, the Company accepted the resignation of Mr. James A. Blankenhorn, as Vice President and COO of the Company. The resignation was effective March 28, 2014. When Mr. Blankenhorn’s resignation as the COO became effective, his employment agreement also terminated.

**Potential Payments**

The following table sets forth the potential (estimated) payments and benefits to which our NEOs would be entitled under the Employment Agreements upon termination of employment or following a Change in Control, assuming each circumstance described below occurred on December 31, 2013.

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The following table sets forth the potential (estimated) payments and benefits to which Dr. Centofanti, Mr. Jim Blankenhorn, and Mr. Naccarato would be entitled upon termination of employment or following a Change in Control of the Company, as specified under each employment agreement with the Company, assuming each circumstance described below occurred on December 31, 2013, the last day of our fiscal year.

| Name and Principal Position  | Disability,<br>Death,<br>or For<br>Cause | Executive<br>for Good<br>Reason<br>or by<br>Company<br>Without<br>Cause | Change in<br>Control<br>of the<br>Company |
|--|--|---|---|
| Dr. Louis Centofanti<br>Chairman of the Board,<br>President and Chief Executive<br>Officer |  |   |   |
| Severance  | \$                                       | \$271,115   | \$  |
| Stock Options  | \$ (1)                                   | \$ (1)  | \$ (2)                                    |
| Ben Naccarato<br>Chief Financial Officer   |  |   |   |
| Severance  | \$                                       | \$214,240   | \$  |
| Stock Options  | \$ (1)                                   | \$ (1)  | \$ (2)                                    |
| Jim Blankenhorn <sup>(3)</sup><br>Chief Operating Officer                                  |  |   |   |
| Severance  | \$                                       | \$252,350   | \$  |
| Stock Options  | \$ (1)                                   | \$ (1)  | \$ (2)                                    |

<sup>(1)</sup> Benefit is estimated to be zero since the number of stock options vested that were in-the-money as of December 31, 2013 (as reported on NASDAQ) was zero.

<sup>(2)</sup> Benefit is estimated to be zero since the number of stock options outstanding that were in-the-money as of December 31, 2013 (as reported on NASDAQ) was zero.

<sup>(3)</sup> On March 20, 2014, resigned as Vice President and COO, effective March 28, 2014.

No performance compensation under the NEO's MIP would have been payable at December 31, 2013 under any of the circumstances described in the table above. Pursuant to each MIP, if the participant's employment with the Company is voluntarily or involuntarily terminated prior to the annual payment of the MIP compensation payment period, no MIP payment is payable. The payment is otherwise payable under each MIP on or about 90 days after year-end, or sooner, based on finalization of our financial statements for year-end. See "2013 Management Incentive Plans," below.

The amounts payable with respect to a termination (other than base salary and amounts otherwise payable under any Company employee benefit plan) are payable only if the termination constitutes a "separation from service" (as defined under Treasury Regulation Section 1.409A-1(h)).

## 2013 Executive Compensation Components

For the fiscal year ended December 31, 2013, the principal components of compensation for executive officers were:

- base salary;
- performance-based incentive compensation;
- long term incentive compensation;
- retirement and other benefits; and
- perquisites.

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Based on the amounts set forth in the Summary Compensation Table, during 2013, salary accounted for 89.4% of the total compensation of our NEOs, while equity option awards, bonus, MIP compensation, and other compensation accounted for approximately 10.6% of the total compensation of the NEOs.

### Base Salary

The NEOs, other executive officers, and other employees of the Company receive a base salary during the fiscal year. Base salary ranges for executive officers are determined for each executive based on his or her position and responsibility by using market data and comparisons to the Peer Group.

During its review of base salaries for executives, the Compensation Committee primarily considers:

- market data and Peer Group comparisons;
- internal review of the executive's compensation, both individually and relative to other officers; and
- individual performance of the executive.

Salary levels are typically considered annually as part of the performance review process as well as upon a promotion or other change in job responsibility. Merit based salary increases for executives are based on the Committee's assessment of the individual's performance. The base salary and potential annual base salary adjustments for the CEO, COO, CFO, and the SEC President for are set forth in their respective Employment Agreements.

### Performance-Based Incentive Compensation

The Compensation Committee has the latitude to design cash and equity-based incentive compensation programs to promote high performance and achievement of our corporate objectives by directors and the NEOs, encourage the growth of stockholder value and enable employees to participate in our long-term growth and profitability. The Compensation Committee may grant stock options and/or performance bonuses. In granting these awards, the Compensation Committee may establish any conditions or restrictions it deems appropriate. In addition, the CEO has discretionary authority to grant stock options to certain high-performing executives or officers, subject to the approval of the Compensation Committee.

The exercise price for each stock options granted is at or above the market price of our common stock on the date of grant. Stock options may be awarded to newly hired or promoted executives at the discretion of the Compensation Committee. Grants of stock options to eligible newly hired executive officers are generally made at the next regularly scheduled Compensation Committee meeting following the hire date.

### 2013 Management Incentive Plans ("MIPs")

On June 6, 2013, the Compensation Committee approved individual MIPs for our CEO, COO, and CFO. The MIPs is effective as of January 1, 2013. Each MIP provided guidelines for the calculation of annual cash incentive based compensation, subject to Compensation Committee oversight and modification. Each MIP awards cash compensation based on achievement of performance thresholds, with the amount of such compensation established as a percentage of base salary. The potential target performance compensation ranges from 50% to 87% or \$135,558 to \$237,224 of the 2013 base salary for the CEO, 50% to 87% or \$126,175 to \$220,808 of the 2013 base salary for the COO, and 25% to 44% or \$53,560 to \$93,731 of the 2013 base salary for the CFO.

Performance compensation is to be paid on or about 90 days after year-end, or sooner, based on finalization of our audited financial statements for 2013. If the MIP participant's employment with the Company is voluntarily or involuntarily terminated prior to a regularly scheduled MIP compensation payment date, no MIP payment will be payable for and after such period.

The Compensation Committee retains the right to modify, change or terminate each MIP and may adjust the various target amounts described below, at any time and for any reason.

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The following describes the principal terms of each MIP:

**CEO:**

2013 CEO performance compensation is based upon meeting corporate revenue, earnings before interest, taxes, depreciation and amortization (“EBITDA”), health, safety, and environmental compliance objectives during fiscal year 2013 from our continuing operations. Of the total potential performance compensation, 55% is based on EBITDA goal, 15% on revenue goal, 15% on the number of health and safety claim incidents that occur during fiscal year 2013, and the remaining 15% on the number of notices alleging environmental, health or safety violations under our permits or licenses that occur during the fiscal year 2013. Each of the revenue and EBITDA components is based on our board approved Revenue Target and EBITDA Target. The 2013 target compensation for our CEO is as follows:

|   |           |
|---|-----------|
| Annualized Base Pay:  | \$271,115 |
| Performance Incentive Compensation Target (at 100% of MIP): | \$135,558 |
| Total Annual Target Compensation (at 100% of MIP):          | \$406,673 |

The Performance Incentive Compensation Target is based on the schedule below.

Target  
Objectives

|                             | Weights | Performance Target Thresholds |           |           |           |           |           |           |
|-----------------------------|---------|-------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
|                             |         | 85-100%                       | 101-120%  | 121-130%  | 131-140%  | 141-150%  | 151-160%  | 161%+     |
| Revenue                     | 15 %    | \$20,334                      | \$24,400  | \$26,434  | \$28,467  | \$30,500  | \$32,534  | \$35,584  |
| EBITDA                      | 55 %    | 74,556                        | 89,467    | 96,922    | 104,378   | 111,833   | 119,289   | 130,472   |
| Health & Safety             | 15 %    | 20,334                        | 24,400    | 26,434    | 28,467    | 30,500    | 32,534    | 35,584    |
| Permit & License Violations | 15 %    | 20,334                        | 24,400    | 26,434    | 28,467    | 30,500    | 32,534    | 35,584    |
|                             |         | \$135,558                     | \$162,667 | \$176,224 | \$189,779 | \$203,333 | \$216,891 | \$237,224 |

Revenue is defined as the total consolidated third party top line revenue from continuing operations as publicly reported in the Company’s financial statements. The percentage achieved is determined by comparing the actual consolidated revenue from continuing operations to the Board approved Revenue Target from continuing operations, which is \$126,190,000. The Board reserves the right to modify or change the Revenue Targets as defined herein in the event of the sale or disposition of any of the assets of the Company or in the event of an acquisition.

EBITDA is defined as earnings before interest, taxes, depreciation, and amortization from continuing operations. The percentage achieved is determined by comparing the actual EBITDA to the Board approved EBITDA Target, which is \$9,567,000. The Board reserves the right to make adjustments to the EBITDA Target to account for the unique accounting treatment of fair market value of percentage of completion contracts resulting from the acquisition of Safety and Ecology Holdings Corporation (“SEHC”) and its subsidiaries (collectively, known as Safety and Ecology Corporation or “SEC”).

The Health and Safety Incentive Target is based upon the actual number of Worker's Compensation Lost Time Accidents, as provided by the Company's Worker's Compensation carrier. The Corporate Treasurer will submit a report on a quarterly basis documenting and confirming the number of Worker's Compensation Lost Time 3) Accidents, supported by the AIG Worker's Compensation Loss Report. Such claims will be identified on the loss report as "indemnity claims." The following number of Worker's Compensation Lost Time Accidents and corresponding Performance Target Thresholds has been established for the annual Incentive Compensation Plan calculation for 2013.

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| Worker's Compensation<br>Claim Number | Performance<br>Target |
|---------------------------------------|-----------------------|
| 7                                     | 85%-100%              |
| 6                                     | 101%-120%             |
| 5                                     | 121%-130%             |
| 4                                     | 131%-140%             |
| 3                                     | 141%-150%             |
| 2                                     | 151%-160%             |
| 1                                     | 161% Plus             |

- Permits or License Violations incentive is earned/determined according to the scale set forth below: An “official notice of non-compliance” is defined as an official communication from a local, state, or federal regulatory authority alleging one or more violations of an otherwise applicable Environmental, Health or Safety requirement or permit provision, which results in a facility’s implementation of corrective action(s).

| Permit and<br>License Violations | Performance<br>Target |
|----------------------------------|-----------------------|
| 7                                | 85%-100%              |
| 6                                | 101%-120%             |
| 5                                | 121%-130%             |
| 4                                | 131%-140%             |
| 3                                | 141%-150%             |
| 2                                | 151%-160%             |
| 1                                | 161% Plus             |

- 5) No performance incentive compensation will be payable for achieving the health and safety, permit and license violation, and revenue targets unless a minimum of 70% of the EBITDA Target is achieved.

COO:

2013 COO performance compensation is based upon meeting corporate revenue, EBITDA, health, safety, and environmental compliance objectives during fiscal year 2013 from our continuing operations. Of the total potential performance compensation, 55% is based on EBITDA goal, 15% on revenue goal, 15% on the number of health and safety claim incidents that occur during fiscal year 2013, and the remaining 15% on the number of notices alleging environmental, health or safety violations under our permits or licenses that occur during the fiscal year 2013. Each of the revenue and EBITDA components is based on our board approved Revenue Target and EBITDA Target. The 2013 target compensation for our COO is as follows:

|  |           |
|--|-----------|
| Annualized Base Pay:   | \$252,350 |
| Performance Incentive Compensation Target (at 100% of Plan): | \$126,175 |
| Total Annual Target Compensation (at 100% of Plan):          | \$378,525 |

The Performance Incentive Compensation Target is based on the schedule below.

Target  
Objectives

| Performance Target Thresholds |         |          |          |          |          |          |       |
|-------------------------------|---------|----------|----------|----------|----------|----------|-------|
| Weights                       | 85-100% | 101-120% | 121-130% | 131-140% | 141-150% | 151-160% | 161%+ |

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|                             |    |   |           |           |           |           |           |           |           |
|-----------------------------|----|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Revenue                     | 15 | % | \$18,926  | \$22,712  | \$24,604  | \$26,497  | \$28,389  | \$30,282  | \$33,121  |
| EBITDA                      | 55 | % | 69,397    | 83,277    | 90,216    | 97,156    | 104,096   | 111,036   | 121,445   |
| Health & Safety             | 15 | % | 18,926    | 22,712    | 24,604    | 26,497    | 28,389    | 30,282    | 33,121    |
| Permit & License Violations | 15 | % | 18,926    | 22,712    | 24,604    | 26,497    | 28,389    | 30,282    | 33,121    |
|                             |    |   | \$126,175 | \$151,413 | \$164,028 | \$176,647 | \$189,263 | \$201,882 | \$220,808 |

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Revenue is defined as the total consolidated third party top line revenue from continuing operations as publicly reported in the Company's financial statements. The percentage achieved is determined by comparing the actual consolidated revenue from continuing operations to the Board approved Revenue Target from continuing operations, which is \$126,190,000. The Board reserves the right to modify or change the Revenue Targets as defined herein in the event of the sale or disposition of any of the assets of the Company or in the event of an acquisition.

EBITDA is defined as earnings before interest, taxes, depreciation, and amortization from continuing operations. The percentage achieved is determined by comparing the actual EBITDA to the Board approved EBITDA Target, which is \$9,567,000. The Board reserves the right to make adjustments to the EBITDA Target to account for the unique accounting treatment of fair market value of percentage of completion contracts resulting from the acquisition of SEC.

The Health and Safety Incentive target is based upon the actual number of Worker's Compensation Lost Time Accidents, as provided by the Company's Worker's Compensation carrier. The Corporate Treasurer will submit a report on a quarterly basis documenting and confirming the number of Worker's Compensation Lost Time Accidents, supported by the AIG Worker's Compensation Loss Report. Such claims will be identified on the loss report as "indemnity claims." The following number of Worker's Compensation Lost Time Accidents and corresponding Performance Target Thresholds has been established for the annual Incentive Compensation Plan calculation for 2013.

| Worker's Compensation<br>Claim Number | Performance<br>Target |
|---------------------------------------|-----------------------|
| 7                                     | 85%-100%              |
| 6                                     | 101%-120%             |
| 5                                     | 121%-130%             |
| 4                                     | 131%-140%             |
| 3                                     | 141%-150%             |
| 2                                     | 151%-160%             |
| 1                                     | 161% Plus             |

Permits or License Violations incentive is earned/determined according to the scale set forth below: An "official notice of non-compliance" is defined as an official communication from a local, state, or federal regulatory authority alleging one or more violations of an otherwise applicable Environmental, Health or Safety requirement or permit provision, which results in a facility's implementation of corrective action(s).

| Permit and<br>License Violations | Performance<br>Target |
|----------------------------------|-----------------------|
| 7                                | 85%-100%              |
| 6                                | 101%-120%             |
| 5                                | 121%-130%             |
| 4                                | 131%-140%             |
| 3                                | 141%-150%             |
| 2                                | 151%-160%             |
| 1                                | 161% Plus             |

No performance incentive compensation will be payable for achieving the health and safety, permit and license violation, and revenue targets unless a minimum of 70% of the EBITDA Target is achieved.

CFO:

The CFO's 2013 performance compensation is based upon achievement of EBITDA and administrative expense objectives. The performance compensation also provides for a discretionary incentive payment component, subject to approval by the Company's Compensation Committee. Of the total potential performance compensation, 25% is based on maintaining or reducing our targeted administrative expense, 50% is based on EBITDA goal, with the remaining 25% subject to approval by the Compensation Committee. Each of the EBITDA and administrative expense component is based on our board approved 2013 EBITDA Target and Administrative Expense Target. The 2013 target compensation for our CFO is as follows:

|  |           |
|--|-----------|
| Annualized Base Pay:   | \$214,240 |
| Performance Incentive Compensation Target (at 100% of Plan): | \$53,560  |
| Total Annual Target Compensation (at 100% of Plan):          | \$267,800 |



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The Performance Incentive Compensation Target is based on the schedule below.

## Target Objectives

|                |    |   | Performance Target Thresholds |          |          |          |          |          |          |
|----------------|----|---|-------------------------------|----------|----------|----------|----------|----------|----------|
|                |    |   | Weights                       | 100%+    | 98-99%   | 96-97%   | 94-95%   | 92-93%   | 90-91%   |
| Administrative | 25 | % | \$13,390                      | \$16,068 | \$17,407 | \$18,746 | \$20,085 | \$21,424 | \$23,433 |
|                |    |   |                               |          |          |          |          |          |          |
|                |    |   | Performance Target Thresholds |          |          |          |          |          |          |
|                |    |   | Weights                       | 85-100%  | 101-120% | 121-130% | 131-140% | 141-150% | 151-160% |
| EBITDA         | 50 | % | \$26,780                      | \$32,136 | \$34,814 | \$37,492 | \$40,170 | \$42,848 | \$46,865 |
| Discretionary  | 25 | % | 13,390                        | 16,068   | 17,407   | 18,746   | 20,085   | 21,424   | 23,433   |
|                |    |   | \$53,560                      | \$64,272 | \$69,628 | \$74,984 | \$80,340 | \$85,696 | \$93,731 |

Administrative Expense is defined as the total consolidated administrative expenses from continuing operations as publicly reported in the Company's financial statements. Administrative expenses will be inclusive of all subsidiaries from continuing operations, and will exclude Marketing Expenses and Interest Expense. The Board reserves the right to make adjustments to Administrative expense Target so as not to penalize the employee for material unforeseen events outside of the employees responsibility and it reserves the right to modify or change the Administrative Expense Targets as defined herein, which is \$13,390,000 in the event of the sale or disposition of any of the assets of the Company or in the event of an acquisition. The Board further reserves the right to adjust Administrative Expenses Target to reflect charges resulting from the vesting of incentive stock options.

EBITDA is defined as earnings before interest, taxes, depreciation, and amortization from continuing operations. The percentage achieved is determined by comparing the actual EBITDA to the Board approved EBITDA Target, which is \$9,567,000. The Board reserves the right to make adjustments to the EBITDA Target to account for the unique accounting treatment of fair market value of percentage of completion contracts resulting from the acquisition of SEC.

Discretionary incentive payment is to be approved by the Compensation Committee based on achievement of accounting, financial, and accounting centralization and information technology oversight objectives, including but not limited to:

Compliance with the requirement of the Sarbanes-Oxley Act of 2002 ("SOX");

Meeting public filing deadlines such as Form 10-K, Form 10-Qs, Form 8-Ks, and press releases;

Automation and centralization of accounting processes, including but not limited to: (a) install multi-company software at corporate office; (b) improve forecasting model from facilities including new software, if cost effective; (c) sales and opportunity tracking system; (d) complete improvement to time management system; and (e) improve project tracking system; and

Collection of problem accounts receivable.

4)

No discretionary performance incentive compensation will be payable unless a minimum of 70% of the EBITDA Target is achieved. In addition, no performance incentive compensation will be payable for achieving the Administrative Expense Target unless a minimum of 70% of the EBITDA Target is achieved.

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### 2013 MIP Targets

As discussed above, 2013 MIPs approved for the CEO, COO, and CFO by the Compensation Committee awards cash compensation based on achievement of performance targets which includes Revenue, EBITDA, and Administrative Expenses as approved by our Board. The Revenue Target of \$126,190,000, EBITDA Target of \$9,567,000, and the Administrative Expense Target of \$13,390,000 set forth in the 2013 MIPs are based on our board approved 2013 budget. In formulating the Revenue Target of \$126,190,000, the Board considered 2012 results, current economic conditions, and forecasts for 2013 government (Department of Energy or DOE) spending under continuing resolution and the sequestration.

No performance incentive compensation was earned under each of the MIPs for the CEO, COO, and CFO for 2013.

### Mr. Robert Schreiber-Schreiber, Yonley, & Associates (“SYA”) - Bonus Plan

Mr. Robert Schreiber, Jr., the President of our environmental engineering and regulatory compliance consulting services firm, SYA, is eligible to be awarded a bonus based on an allocation of a portion of a bonus pool applicable only to SYA employees. The amount of the bonus pool is equal to 40% of the net income of SYA, minus 5% of SYA’s total revenues for 2013. In 2013, the bonus pool was determined to be \$0. The Compensation Committee believes that this formula ties any bonus awarded to employees of SYA directly to SYA’s performance, rewards performance, and motivates the SYA employees to achieve our operational goals (although such formula is not linked to specific targets or benchmarks). The Board delegated to our CEO the authority to determine what portion, if any, of the SYA bonus pool is allocated to Mr. Schreiber for his performance. Our CEO considered the following factors when reviewing Mr. Schreiber’s performance for the purpose of determining Mr. Schreiber’s bonus compensation as a portion of the SYA bonus pool:

- SYA’s performance as a segment of our Company;
- Effectiveness of Mr. Schreiber’s leadership;
- Mr. Schreiber’s role and participation as a member of our executive management team; and
- Our overall performance, based on a subjective analysis of our revenues and net income in the applicable business environment.

The determination of Mr. Schreiber’s bonus is a subjective determination, with the maximum amount of such bonus being 100% of the SYA bonus pool. In 2012, Mr. Schreiber’s bonus represented 0% of the SYA bonus pool. Accordingly, Mr. Schreiber’s compensation is not based on objective metrics, but a subjective assessment of his performance, with the maximum amount of such bonus compensation defined by the Compensation Committee’s formula.

### Long-Term Incentive Compensation

#### Employee Stock Option Plans

The 2004 Stock Option Plan (the “2004 Option Plan”) and 2010 Stock Option Plan (the “2010 Option Plan”) encourage participants to focus on long-term performance and provides an opportunity for executive officers and certain designated key employees to increase their stake in the Company. Stock options succeed by delivering value to the executive only when the value of our stock increases. Both plans authorize the grant of Non-Qualified Stock Options (“NQSOs”) and Incentive Stock Options (“ISOs”) for the purchase of Common Stock.

The 2004 Option Plan and 2010 Option Plan assist the Company to:

- enhance the link between the creation of stockholder value and long-term executive incentive compensation;



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- provide an opportunity for increased equity ownership by executives; and
- maintain competitive levels of total compensation.

Stock option award levels are determined based on market data, vary among participants based on their positions with us and are granted generally at the Compensation Committee's regularly scheduled August or September meeting. Newly hired or promoted executive officers who are eligible to receive options are generally awarded such options at the next regularly scheduled Compensation Committee meeting following their hire or promotion date.

Options are awarded with an exercise price equal to or not less than the closing price of the Company's Common Stock on the date of the grant as reported on the NASDAQ. In certain limited circumstances, the Compensation Committee may grant options to an executive at an exercise price in excess of the closing price of the Company's Common Stock on the grant date.

The Company did not grant any options to any of its employees, including the NEOs in 2013. The Compensation Committee is reviewing the effectiveness of granting options under our option plans. Pursuant to the 2004 Stock Option Plan and the 2010 Stock Option plan, vesting of option awards ceases upon termination of employment and exercise right of the vested option amount ceases upon three months from termination of employment except in the case of death or retirement (subject to a six month limitation), or disability (subject to a one year limitation). Prior to the exercise of an option, the holder has no rights as a stockholder with respect to the shares subject to such option.

In the event of a "change of control" (as defined in the 2004 Stock Option Plan and the 2010 Stock Option Plan) of the Company, each outstanding option and award granted under the plans shall immediately become exercisable in full notwithstanding the vesting or exercise provisions contained in the stock option agreement.

Accounting for Stock-Based Compensation

We account for stock-based compensation in accordance with ASC 718, "Compensation – Stock Compensation." ASC 718 establishes accounting standards for entity exchanges of equity instruments for goods or services. It also addresses transactions in which an entity incurs liabilities in exchange for goods or services that are based on the fair value of the entity's equity instruments or that may be settled by the issuance of those equity instruments. 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 uses the Black-Scholes option-pricing model to determine the fair-value of stock-based awards which requires subjective assumptions. 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.

We recognize stock-based compensation expense using a straight-line amortization method over the requisite period, which is the vesting period of the stock option grant. As ASC 718 requires that stock-based compensation expense be based on options that are ultimately expected to vest, our stock-based compensation expense is reduced at an estimated forfeiture rate. Our estimated forfeiture rate is generally based on historical trends of actual forfeitures. Forfeiture rates are evaluated, and revised as necessary.

Retirement and Other Benefits

401(k) Plan

We adopted the Perma-Fix Environmental Services, Inc. 401(k) Plan (the "401(k) Plan") in 1992, which is intended to comply with Section 401 of the Internal Revenue Code and the provisions of the Employee Retirement Income Security Act of 1974. All full-time employees who have attained the age of 18 are eligible to participate in the 401(k) Plan. Eligibility is immediate upon employment but enrollment is only allowed during four quarterly open periods of

January 1, April 1, July 1, and October 1. Participating employees may make annual pretax contributions to their accounts up to 100% of their compensation, up to a maximum amount as limited by law. We, at our discretion, may make matching contributions based on the employee's elective contributions. Company contributions vest over a period of five years. We have matched 25% of our employees' contributions since inception of the Plan. The Company did not contribute any matching fund in 2013. Effective June 15, 2012, we suspended our matching contribution in an effort to reduce costs in light of the economic environment. We will periodically evaluate whether to resume a matching contribution program.

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Perquisites and Other Personal Benefits

The Company provides executive officers with limited perquisites and other personal benefits that the Company and the Compensation Committee believe are reasonable and consistent with its overall compensation program to better enable the Company to attract and retain superior employees for key positions. The Compensation Committee periodically reviews the levels of perquisites and other personal benefits provided to executive officers. The executive officers are provided an auto allowance.

Consideration of Stockholder Say-On-Pay Advisory Vote.

At our annual meeting of stockholders held in September 2013, our stockholders voted, on a non-binding, advisory basis, on the compensation of our named executive officers for 2012. A substantial majority (approximately 95%) of the total votes cast on our say-on-pay proposal at that meeting approved the compensation of our named officers for 2012 on a non-binding, advisory basis. The Compensation Committee and the Board believes that this affirms our stockholders' support of our approach to executive compensation. The Compensation Committee expects to continue to consider the results of future stockholder say-on-pay advisory votes when making future compensation decisions for our named executive officers. We will hold an advisory vote on the compensation of named executive officers at our 2014 annual meeting of stockholders.

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## Summary Compensation

The following table summarizes the total compensation paid or earned by each of the executive officers for the fiscal years ended December 31, 2013 and 2012.

| Name and Principal Position  | Year | Salary (\$) | Bonus (\$) | Option Awards (\$) | Non-Equity Incentive Plan Compensation (\$) <sup>(2)</sup> | All other Compensation (\$) <sup>(3)</sup> | Total Compensation (\$) |
|--|------|-------------|------------|--------------------|--|--|-------------------------|
| Dr. Louis Centofanti<br>Chairman of the Board,<br>President and Chief<br>Executive Officer | 2013 | 271,115     | ¾          | ¾                  | ¾  | 26,141                                     | 297,256                 |
|  | 2012 | 271,115     | ¾          | ¾                  | ¾  | 25,893                                     | 297,008                 |
| Ben Naccarato<br>Vice President and Chief<br>Financial Officer                             | 2013 | 214,240     | ¾          | ¾                  | ¾  | 33,135                                     | 247,375                 |
|  | 2012 | 214,240     | ¾          | ¾                  | ¾  | 31,918                                     | 246,158                 |
| Jim Blankenhorn <sup>(4)</sup><br>Vice President and Chief<br>Operating Officer            | 2013 | 252,350     | ¾          | ¾                  | ¾  | 33,135                                     | 285,485                 |
|  | 2012 | 252,350     | ¾          | ¾                  | ¾  | 31,918                                     | 284,268                 |
| Robert Schreiber, Jr.<br>President of SYA  | 2013 | 203,821     | ¾          | ¾                  | ¾  | 31,488                                     | 235,309                 |
|  | 2012 | 203,821     | ¾          | ¾                  | ¾  | 31,694                                     | 235,515                 |
| Christopher Leichtweis <sup>(1)</sup><br>Senior Vice President and<br>SEC President        | 2013 | 157,894     | ¾          | ¾                  | ¾  | 6,484                                      | 164,378                 |
|  | 2012 | 324,480     | ¾          | ¾                  | ¾  | 15,547                                     | 340,027                 |

Named as Senior Vice President of the Company and President of SEC on October 31, 2011 upon the Company's acquisition of SEHC and its subsidiaries on October 31, 2011 from Homeland Security Capital Corporation (now known as Timios National Corporation or "TNC"). Mr. Leichtweis was a former officer and director of TNC. Mr.

<sup>(1)</sup>Leichtweis voluntarily terminated and retired from all positions with the Company and its subsidiaries effective May 24, 2013. Mr. Leichtweis was paid his accrued salary and the Company paid his insurance benefit up to his voluntary termination date upon his separation from the Company. (see "Employment Agreement for a discussion of Mr. Leichtweis's Separation and Release Agreement)."

<sup>(2)</sup>Represents performance compensation earned under the Company's MIP. The MIP is described under the heading "2013 Management Incentive Plan."

The amount shown includes a monthly automobile allowance of \$750 or the use of a company car, our 401(k)

<sup>(3)</sup>matching contribution (not applicable for 2013), and insurance premiums (health, disability and life) paid by the Company, on behalf of the executive.

| Name                 | Insurance Premium | Auto Allowance or Company Car | Total     |
|----------------------|-------------------|-------------------------------|-----------|
| Dr. Louis Centofanti | \$ 17,141         | \$ 9,000                      | \$ 26,141 |



|                        |           |          |             |
|------------------------|-----------|----------|-------------|
| Ben Naccarato          | \$ 24,135 | \$ 9,000 | \$ \$33,135 |
| Jim Blankenhorn        | \$ 24,135 | \$ 9,000 | \$ \$33,135 |
| Robert Schreiber, Jr.  | \$ 24,135 | \$ 7,353 | \$ \$31,488 |
| Christopher Leichtweis | \$ 6,484  | \$ ¾     | \$ \$6,484  |

(4) On March 20, 2014, resigned as Vice President and COO, effective March 28, 2014.

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## Outstanding Equity Awards at Fiscal Year

The following table sets forth unexercised options held by the NEOs as of the fiscal year-end.

Outstanding Equity Awards at December 31, 2013

| Name                           | Option Awards <sup>(3)</sup>  |  | Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Options (#) | Option Exercise Price (\$) | Option Expiration Date |
|--------------------------------|---|--|---|----------------------------|------------------------|
|                                | Number of Securities Underlying Unexercised Options (#) Exercisable | Number of Securities Underlying Exercised Options <sup>(1)</sup> Unexercisable |   |                            |                        |
| Dr. Louis Centofanti           | 30,000  | —  | —   | 11.40                      | 8/5/2014               |
| Ben Naccarato                  | 4,000   | —  | —   | 7.20                       | 10/28/2014             |
|                                | 8,000   | —  | —   | 11.40                      | 8/5/2014               |
|                                | 15,000  | —  | —   | 7.10                       | 2/26/2015              |
| Jim Blankenhorn <sup>(4)</sup> | 40,000  | 20,000   | <sup>(2)</sup> —  | 7.85                       | 7/25/2017              |
| Robert Schreiber, Jr.          | 5,000   | —  | —   | 11.40                      | 8/5/2014               |

<sup>(1)</sup> In the event of a change in control (as defined in the Option Plan) of the Company, each outstanding option and award shall immediately become exercisable in full notwithstanding the vesting or exercise provisions contained in the stock option agreement.

<sup>(2)</sup> Incentive stock option granted on July 25, 2011 under the Company's 2010 Stock Option Plan. The option is for a six year term and vests over a three year period, at one third increments per year.

<sup>(3)</sup> After giving effect to the reverse stock split.

<sup>(4)</sup> On March 20, 2014, resigned as Vice President and COO, effective March 28, 2014. Pursuant to the 2010 Stock Option Plan, employee has 90 days from effective date of resignation to exercise vested option, which is 40,000 options to purchase up to 40,000 shares of the Company's Common Stock..

None of the Company's NEOs exercised options during 2013.

## Compensation of Directors

Directors who are employees receive no additional compensation for serving on the Board of Directors or its committees. In 2013, we provided the following annual compensation to directors who are not employees:

each of our five continuing non-employee directors and each of the two new directors was awarded options to purchase 2,400 and 6,000, respectively, shares of our Common Stock;

- a quarterly director fee of \$8,000;
- an additional quarterly fee of \$5,500 to the chairman of our Audit Committee; and
- a fee of \$1,000 for each board meeting attendance and a \$500 fee for each telephonic conference call attendance.

Each director may elect to have either 65% or 100% of such fees payable in Common Stock under the 2003 Outside Director Plan, with the balance payable in cash.

The table below summarizes the director compensation expenses recognized by the Company for the director option and stock (resulting from fees earned) awards for the year ended December 31, 2013. The terms of the 2003 Outside Directors Plan are further described below under “2003 Outside Directors Plan.”

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| Name                              | Fees<br>Earned<br>or<br>Paid<br>In Cash<br>(\$) <sup>(1)</sup> | Stock<br>Awards<br>(\$) <sup>(2)</sup> | Option<br>Awards<br>(\$) <sup>(3)</sup> | Non-Equity<br>Incentive Plan<br>Compensation<br>(\$) | Change in<br>Pension Value<br>and<br>Nonqualified<br>Deferred<br>Compensation<br>Earnings<br>(\$) | All Other<br>Compensation<br>(\$) | Total<br>(\$) |
|-----------------------------------|--|--|---|--|---|-----------------------------------|---------------|
| John M. Climaco <sup>(6)</sup>    | 3,059  | 7,573                                  | 14,220                                  | —  | —   | —                                 | 24,852        |
| Dr. Gary G. Kugler <sup>(5)</sup> | 4,266  | 10,564                                 | 11,760                                  | —  | —   | —                                 | 26,590        |
| Jack Lahav                        | —  | 49,999                                 | 4,704                                   | —  | —   | —                                 | 54,703        |
| Joe R. Reeder                     | 12,950   | 32,067                                 | 4,704                                   | —  | —   | —                                 | 49,721        |
| Larry M. Shelton                  | 13,475   | 33,367                                 | 4,704                                   | —  | —   | —                                 | 51,546        |
| Dr. Charles E. Young              | 12,950   | 32,065                                 | 4,704                                   | —  | —   | —                                 | 49,719        |
| Mark A. Zwecker                   | 21,175   | 52,430                                 | 4,704                                   | —  | —   | —                                 | 78,309        |

Under the 2003 Outside Directors Plan, each director elects to receive 65% or 100% of the director's fees in shares of our Common Stock. The amounts set forth above represent the portion of the director's fees paid in cash and  
(1) excludes the value of the director's fee elected to be paid in Common Stock under the 2003 Outside Director Plan, which value is included under "Stock Awards."

The number of shares of Common Stock comprising stock awards granted under the 2003 Outside Directors Plan is calculated based on 75% of the closing market value of the Common Stock as reported on the NASDAQ on the  
(2) business day immediately preceding the date that the quarterly fee is due. Such shares are fully vested on the date of grant. The value of the stock award is based on the market value of our Common Stock at each quarter end times the number of shares issuable under the award. The amount shown is the fair value of the Common Stock on the date of the award.

Options granted under the Company's 2003 Outside Director Plan resulting from re-election and election to the Board of Directors. Options are for a 10 year period and are fully vested in six months from grant date. The value of the option award for each outside director is calculated based on the fair value of the option per share (\$1.96 per share for each director with the exception of \$2.37 per share for John Climaco) on the date of grant times the  
(3) number of options granted, which was 2,400 for all directors noted with the exception of 6,000 each for John Climaco and Dr. Gary Kugler (after giving effect to the reverse stock split) for each director, pursuant to ASC 718, "Compensation – Stock Compensation." The exercise price of the option for each director is \$2.79 per share with the exception of \$3.20 per share for John Climaco. The following is the aggregate number of outstanding non-qualified stock options held by non-employee directors at December 31, 2013:

| Name                 | December<br>12, 2013<br>(4) |
|----------------------|-----------------------------|
| John M. Climaco      | 6,000                       |
| Dr. Gary G. Kugler   | 6,000                       |
| Jack Lahav           | 27,000                      |
| Joe R. Reeder        | 24,000                      |
| Larry M. Shelton     | 22,800                      |
| Dr. Charles E. Young | 24,000                      |

Mark A. Zwecker      24,000

(4) Giving effect to the reverse stock split.

(5) Newly elected as a Board member at the Company's 2013 Annual Meeting of Stockholders held on September 12, 2013.

(6) Elected by the Company's Board of Directors on October 4, 2013, to fill a newly created directorship.

#### 2003 Outside Directors Plan

We believe that it is important for our directors to have a personal interest in our success and growth and for their interests to be aligned with those of our stockholders. Therefore, under our 2003 Outside Directors Stock Plan ("2003 Directors Plan"), each outside director is granted a 10 year option to purchase up to 30,000 shares of Common Stock on the date such director is initially elected to the Board of Directors, and receives on each re-election date an option to purchase up to another 12,000 shares of Common Stock, with the exercise price being the fair market value of the Common Stock preceding the option grant date. No option granted under the 2003 Directors Plan is exercisable until after the expiration of six months from the date the option is granted and no option shall be exercisable after the expiration of ten years from the date the option is granted. Options to purchase 169,200 shares of Common Stock have been granted and are outstanding under the 2003 Directors Plan, of which 145,200 were vested as of December 31, 2013, after giving effect to the reverse stock split.

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We periodically review compensation paid to our outside directors against compensation paid by our Peer Group (see companies comprising the Peer Group in “Item 11 – Executive Compensation – The Committee’s Process – Peer Group Assessment”) to their outside directors to insure that our outside directors are adequately compensated. As a member of the Board of Directors, each director elects to receive either 65% or 100% of the director’s fee in shares of our Common Stock. The number of shares received by each director is calculated based on 75% of the fair market value of the Common Stock determined on the business day immediately preceding the date that the quarterly fee is due. The balance of each director’s fee, if any, is payable in cash. In 2013, the fees earned by our outside directors totaled approximately \$286,000. Reimbursements of expenses for attending meetings of the Board are paid in cash at the time of the applicable Board meeting. As a management director, Dr. Centofanti is not eligible to participate in the 2003 Directors Plan. Although Dr. Centofanti is not compensated for his services provided as a director, Dr. Centofanti is compensated for his services rendered as an officer of the Company. See “EXECUTIVE COMPENSATION — Summary Compensation Table.”

As of December 31, 2013, we have issued 291,935 shares of our Common Stock in payment of director fees since the inception of the 2003 Directors Plan.

In the event of a “change of control” (as defined in the 2003 Outside Directors Stock Plan), each outstanding stock option and stock award shall immediately become exercisable in full notwithstanding the vesting or exercise provisions contained in the stock option agreement.

Compensation Committee Interlocks and Insider Participation

The Compensation and Stock Option Committee of our Board of Directors is composed of Larry Shelton (Chairperson), Joe Reeder, Dr. Charles E. Young, and Mark Zwecker. Prior to December 13, 2013, Jack Lahav was the Chairperson of the Compensation and Stock Option Committee and Mark Zwecker was not a member of this Committee. None of the members of the Compensation and Stock Option Committee has been an officer or employee of the Company or has had any relationship with the Company requiring disclosure under applicable Securities and Exchange Commission regulations.

## ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Security Ownership of Certain Beneficial Owners

The table below sets forth information as to the shares of Common Stock beneficially owned as of March 13, 2014, by each person known by us to be the beneficial owners of more than 5% of any class of our voting securities.

| Name of Beneficial Owner     | Title<br>Of Class | Amount<br>and<br>Nature of<br>Ownership | Percent<br>Of<br>Class<br>(1) |
|------------------------------|-------------------|---|-------------------------------|
|                              |                   |   |                               |
| Heartland Advisors, Inc. (2) | Common            | 1,786,252                               | 15.64 %                       |

(1) The number of shares and the percentage of outstanding Common Stock shown as beneficially owned by a person are based upon 11,419,650 shares of Common Stock outstanding (excludes 7,642 shares held in treasury) on March 13, 2014, and the number of shares of Common Stock which such person has the right to acquire beneficial ownership of within 60 days. Beneficial ownership by our stockholders has been determined in accordance with the rules promulgated under Section 13(d) of the Exchange Act.

(2) This information is based on the Schedule 13G/A, filed with the Securities and Exchange Commission (the “Commission”) on February 6, 2014, which provides that Heartland Advisors, Inc., an investment advisor, shares voting power over 1,620,592 of such shares and shares dispositive power over all of the shares, and no sole voting or sole

dispositive power over any of the shares. The address of Heartland Advisors, Inc. is 789 North Water Street, Milwaukee, WI 53202.

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Capital Bank represented to us that:

As of March 13, 2014, Capital Bank holds of record as a nominee for, and as an agent of, certain accredited investors, 1,404,004 shares of our Common Stock, after giving effect to the reverse stock split.;

All of our shares of Common Stock held in the name of Capital Bank, as agent of and nominee for its investors, that were acquired directly from us in private placement transactions, or as a result of conversions of our preferred stock or exercise of our warrants (collectively, "Private Placement Transactions"), and all of our shares acquired in Private Placement Transactions by Capital Bank were acquired for and on behalf of accredited investors;

During 2013 and the first two months of 2014, it acquired, as agent for and nominee of, certain of its investors, shares of our Common Stock in open market transactions ("Open Market Transactions");

None of Capital Bank's investors beneficially own more than 4.9% of our Common Stock and to its best knowledge, as far as stocks held in accounts with Capital Bank, none of Capital Bank's investors act together as a group or otherwise act in concert for the purpose of voting on matters subject to the vote of our stockholders or for purpose of dispositive or investment of such stock;

Capital Bank's investors maintain full voting and dispositive power over the Common Stock beneficially owned by such investors;

Capital Bank has neither voting nor investment power over the shares of Common Stock owned by Capital Bank, as agent for its investors;

Capital Bank believes that it is not required to file reports under Section 16(a) of the Exchange Act or to file either Schedule 13D or Schedule 13G in connection with the shares of our Common Stock registered in the name of Capital Bank; and

Capital Bank is not the beneficial owner, as such term is defined in Rule 13d-3 of the Exchange Act, of the shares of Common Stock registered in Capital Bank's name because (a) Capital Bank holds the Common Stock as a nominee only, (b) Capital Bank has neither voting nor investment power over such shares, and (c) Capital Bank has not nominated or sought to nominate, and does not intend to nominate in the future, any person to serve as a member of our Board of Directors.

Notwithstanding the previous paragraph, if Capital Bank's representations to us described above are incorrect or if Capital Bank's investors are acting as a group, then Capital Bank or a group of Capital Bank's investors could be a beneficial owner of more than 5% of our voting securities. If Capital Bank is deemed the beneficial owner of such shares, the following table sets forth information as to the shares of voting securities that Capital Bank may be considered to beneficially own on March 13, 2014.

| Name of<br>Record Owner   | Title<br>Of Class | Amount<br>and<br>Nature of<br>Ownership | Percent<br>Of<br>Class<br>(*) |
|---------------------------|-------------------|---|-------------------------------|
| Capital Bank Grawe Gruppe | Common            | 1,404,004 <sup>(+)</sup>                | 12.29 %                       |

(\*) This calculation is based upon 11,419,650 shares of Common Stock outstanding on March 13, 2014, plus the number of shares of Common Stock which Capital Bank, as agent for certain accredited investors has the right to acquire within 60 days, which is none.

<sup>(+)</sup> This amount is the number of shares that Capital Bank has represented to us that it holds of record as nominee for, and as an agent of, certain of its accredited investors. As of the date of this report, Capital Bank has no warrants or options to acquire, as agent for certain investors, additional shares of our Common Stocks. Although Capital Bank is the record holder of the shares of Common Stock described in this note, Capital Bank has advised us that it does not believe it is a beneficial owner of the Common Stock or that it is required to file reports under Section 16(a) or Section 13(d) of the Exchange Act. Because Capital Bank (a) has advised us that it holds the Common Stock as a nominee only and that it does not exercise voting or investment power over the Common Stock held in its name and that no one investor of Capital Bank for which it holds our Common Stock holds more than 4.9% of our issued and



outstanding Common Stock and (b) has not nominated, and has not sought to nominate, and does not intend to nominate in the future, any person to serve as a member of our Board of Directors, we do not believe that Capital Bank is our affiliate. Capital Bank's address is Burgring 16, A-8010 Graz, Austria. The amount has been amended given the effect of the reverse stock split.

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## Security Ownership of Management

The following table sets forth information as to the shares of voting securities beneficially owned as of March 13, 2014, by each of our Directors and NEOs and by all of our directors and executive officers as a group. Beneficial ownership has been determined in accordance with the rules promulgated under Section 13(d) of the Exchange Act. A person is deemed to be a beneficial owner of any voting securities for which that person has the right to acquire beneficial ownership within 60 days.

| Name of Beneficial Owner <sup>(2)</sup>                  | Amount and Nature                  |                 | Percent                 |   |
|--|------------------------------------|-----------------|-------------------------|---|
|  | of Beneficial Owner <sup>(1)</sup> |                 | of Class <sup>(1)</sup> |   |
| Dr. Louis F. Centofanti <sup>(3)</sup>                   | 234,625                            | <sup>(3)</sup>  | 2.05                    | % |
| John M. Climaco <sup>(4)</sup>                           | 8,435                              | <sup>(4)</sup>  | *                       |   |
| Dr. Gary G. Kugler <sup>(5)</sup>                        | 9,282                              | <sup>(5)</sup>  | 1.29                    | % |
| Jack Lahav <sup>(6)</sup>                                | 213,952                            | <sup>(6)</sup>  | 1.87                    | % |
| Joe R. Reeder <sup>(7)</sup>                             | 147,594                            | <sup>(7)</sup>  | 1.29                    | % |
| Larry M. Shelton <sup>(8)</sup>                          | 57,836                             | <sup>(8)</sup>  | *                       |   |
| Dr. Charles E. Young <sup>(9)</sup>                      | 56,183                             | <sup>(9)</sup>  | *                       |   |
| Mark A. Zwecker <sup>(10)</sup>                          | 128,192                            | <sup>(10)</sup> | *                       |   |
| Robert Schreiber, Jr. <sup>(11)</sup>                    | 26,058                             | <sup>(11)</sup> | *                       |   |
| Ben Naccarato <sup>(12)</sup>                            | 27,000                             | <sup>(12)</sup> | *                       |   |
| James Blankenhorn <sup>(13)</sup>                        | 40,000                             | <sup>(13)</sup> | *                       |   |
| Directors and Executive Officers as a Group (10 persons) | 949,157                            | <sup>(14)</sup> | 8.15                    | % |

\*Indicates beneficial ownership of less than one percent (1%).

<sup>(1)</sup> See footnote (1) of the table under "Security Ownership of Certain Beneficial Owners."

<sup>(2)</sup> The business address of each person, for the purposes hereof, is c/o Perma-Fix Environmental Services, Inc., 8302 Dunwoody Place, Suite 250, Atlanta, Georgia 30350.

<sup>(3)</sup> These shares include (i) 141,825 shares held of record by Dr. Centofanti, (ii) options to purchase 30,000 shares, which are immediately exercisable, and (iii) 62,800 shares held by Dr. Centofanti's wife. Dr. Centofanti has sole voting and investment power of these shares, except for the shares held by Dr. Centofanti's wife, over which Dr. Centofanti shares voting and investment power.

<sup>(4)</sup> Mr. Climaco has sole voting and investment power over these shares which include: (i) 2,435 shares of Common Stock held of record by Mr. Climaco, and (ii) options to purchase 6,000 shares, which are exercisable on April 4, 2014.

<sup>(5)</sup> Dr. Kugler has sole voting and investment power over these shares which include: (i) 3,282 shares of Common Stock held of record by Dr. Kugler, and (ii) options to purchase 6,000 shares, which are immediately exercisable.

<sup>(6)</sup> Mr. Lahav has sole voting and investment power over these shares which include: (i) 189,952 shares of Common Stock held of record by Mr. Lahav, and (ii) options to purchase 24,000 shares, which are immediately exercisable.

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(7) Mr. Reeder has sole voting and investment power over these shares which include: (i) 100,773 shares of Common Stock held of record by Mr. Reeder, and (ii) options to purchase 24,000 shares, which are immediately exercisable, and (iii) 22,821 shares held in a custodian account for Mr. Reeder's grandchildren.

(8) Mr. Shelton has sole voting and investment power over these shares which include: (i) 35,036 shares of Common Stock held of record by Mr. Shelton, and (ii) options to purchase 22,800 shares, which are immediately exercisable.

(9) Dr. Young has sole voting and investment power over these shares which include: (i) 32,183 shares held of record by Dr. Young; and (ii) options to purchase 24,000 shares, which are immediately exercisable.

(10) Mr. Zwecker has sole voting and investment power over these shares which include: (i) 104,192 shares of Common Stock held of record by Mr. Zwecker, and (ii) options to purchase 24,000 shares, which are immediately exercisable.

(11) Mr. Schreiber shares voting and investment power, with his spouse, over 21,058 shares of Common Stock beneficially held and sole voting and investment power over options to purchase 5,000 shares, which are immediately exercisable.

(12) Mr. Naccarato has sole voting and investment power over these shares which include: options to purchase 27,000 shares that are immediately exercisable.

(13) Mr. Blankenhorn has sole voting and investment power over these shares which include: options to purchase 40,000 shares that are immediately exercisable. On March 20, 2014, Mr. Blankenhorn resigned as Vice President and COO, effective March 28, 2014. Pursuant to the 2010 Stock Option Plan, Mr. Blankenhorn has 90 days from the effective date of resignation to exercise the vested options.

(14) Amount includes 226,800 options (includes the 40,000 options for Mr. Blankenhorn), which are immediately exercisable to purchase 226,800 shares of Common Stock, and 6,000 options which are exercisable on April 4, 2014, to purchase up to 6,000 shares of Common Stock.

## Equity Compensation Plans

The following table sets forth information as of December 31, 2013, with respect to our equity compensation plans.

| Plan Category                                      | Equity Compensation Plan   |   |  |
|--|--|---|--|
|  | Number of securities to be issued upon exercise of outstanding warrants and rights (a) | Weighted average price of outstanding warrants and rights (b) | Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a) (c) |
| Equity compensation plans Approved by stockholders | 362,800  | \$ 9.53   | 5,260,298  |

|  |         |         |           |
|--|---------|---------|-----------|
| Equity compensation plans not Approved by stockholders | —       | —       | —         |
| Total  | 362,800 | \$ 9.53 | 5,260,298 |

## ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

## Review of Related Party Transactions

Our Audit Committee Charter provides for the review by our Audit Committee of any related party transactions, other than transactions involving an employment relationship with the Company, which are reviewed by the Compensation and Stock Option Committee. Although the Company does not have written policies for the review of related party transactions, the Audit Committee reviews transactions between the Company and its directors, executive officers, and their respective immediate family members. In approving or rejecting a proposed transaction, the Audit Committee takes into account, among other factors it deems appropriate: (1) the extent of the related person's interest in the transaction; (2) whether the transaction is on terms generally available to an unaffiliated third-party under the same or similar circumstances; (3) the cost and benefit to the Company; (4) the impact or potential impact on a director's independence in the event the related party is a director, an immediate family member of a director or an entity in which a director is a partner, stockholder or executive officer; (5) the availability of other sources for comparable products or services; (5) the terms of the transaction; and (6) the risks to the Company. Related party transactions are reviewed at Audit Committee Meetings (which is held at least quarterly) prior to the consummation of the transaction. With respect to a related party transaction arising between Audit Committee meetings, the Chief Financial Officer may present it to the Audit Committee Chairman, who will review and may approve the related party transaction subject to ratification by the Audit Committee at the next scheduled meeting. Our Audit Committee shall approve only those transactions that, in light of known circumstances, are not inconsistent with the Company's best interest.

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Related Party Transactions

Mr. Robert Schreiber, Jr.

During March 2011, we entered into a lease with Lawrence Properties LLC, a company jointly owned by Robert Schreiber, Jr., the President of Schreiber, Yonley and Associates, and Mr. Schreiber's spouse. Mr. Schreiber is a member of our executive management team. The lease is for a term of five years starting June 1, 2011. Under the lease, we pay monthly rent of approximately \$11,400, which we believe is lower than costs charged by unrelated third party landlords. Additional rent will be assessed for any increases over the new lease commencement year for property taxes or assessments and property and casualty insurance premiums.

Mr. David Centofanti

Mr. David Centofanti serves as our Director of Information Services. For such services, he received total compensation in 2013 and 2012 of approximately \$163,000 and \$165,000, respectively. Mr. David Centofanti is the son of our Chief Executive Officer and Chairman of our Board, Dr. Louis F. Centofanti. We believe the compensation received by Mr. Centofanti for his technical expertise which he provides to the Company is competitive and comparable to compensation we would have to pay to an unaffiliated third party with the same technical expertise.

Christopher Leichtweis

The Company is obligated to make lease payments of approximately \$29,000 per month through June 2018, pursuant to a Lease Agreement, dated June 1, 2008 (the "Lease"), between Leichtweis Enterprises, LLC, as lessor, and Safety and Ecology Holdings Corporation ("SEHC"), as lessee. Leichtweis Enterprises, LLC, is owned by Mr. Christopher Leichtweis ("Leichtweis"), who was a Senior Vice President of the Company and President of SEC, prior to his voluntary termination and retirement from the Company effective May 24, 2013. The Lease covers SEC's principal offices in Knoxville, Tennessee.

Under an agreement of indemnity ("Indemnification Agreement"), SEC, Leichtweis and his spouse ("Leichtweis Parties"), jointly and severally, agreed to indemnify the individual surety with respect to contingent liabilities that may be incurred by the individual surety under certain of SEC's bonded projects. In addition, SEC agreed to indemnify Leichtweis Parties against judgments, penalties, fines, and expense associated with those SEC performance bonds that Leichtweis Parties have agreed to indemnify in the event SEC cannot perform, which has an aggregate bonded amount of approximately \$10,900,000 (which has been released/expired). The Indemnification Agreement provided by SEC to the Leichtweis Parties also provides for compensating the Leichtweis Parties at a rate of 0.75% of the value of bonds (60% having been paid previously and the balance at substantial completion of the contract). On February 14, 2013, the Company entered into a Settlement and Release Agreement and Amendment to Employment Agreement (the "Leichtweis Settlement"), in final settlement of certain claims made by us against Leichtweis in connection with the certain claims asserted by the Company against TNC subsequent to our acquisition of SEC on October 31, 2011. The Leichtweis Settlement terminated our obligation to pay the Leichtweis Parties a fee under the Indemnification Agreement.

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Employment Agreements

We have an employment agreement with each of Dr. Centofanti (our President and Chief Executive Officer), Ben Naccarato (our Chief Financial Officer), and James Blankenhorn (our Chief Operating Officer). Each employment agreement provides for annual base salaries, bonuses, and other benefits commonly found in such agreements. In addition, each employment agreement provides that in the event of termination of such officer without cause or termination by the officer for good reason (as such terms are defined in the employment agreement), the terminated officer shall receive payments of an amount equal to benefits that have accrued as of the termination but not yet paid, plus an amount equal to one year's base salary at the time of termination. In addition, the employment agreements provide that in the event of a change in control (as defined in the employment agreements), all outstanding stock options to purchase our Common Stock granted to, and held by, the officer covered by the employment agreement to be immediately vested and exercisable. On March 20, 2014, the Company accepted the resignation of Mr. James A. Blankenhorn, as Vice President and COO of the Company. The resignation was effective March 28, 2014. When Mr. Blankenhorn's resignation as the COO became effective, his employment agreement also terminated.

The Company also had an employment agreement with Christopher Leichtweis (the "Leichtweis Employment Agreement"), containing substantially the terms described above with respect to the employment agreements of Messrs. Centofanti, Naccarato and Blankenhorn. On May 14, 2013, the Company entered into a Separation and Release Agreement with Mr. Leichtweis, which terminated Mr. Leichtweis' employment with the Company and his position as an officer of the Company effective May 24, 2013, and voided the Leichtweis Employment Agreement (except for the "Confidentiality of Trade Secrets and Business Information ("Section 7") clause). Leichtweis' termination was not "for cause" by the Company nor "for good reason" by Mr. Leichtweis (as defined in the Leichtweis Employment Agreement). See "EXECUTIVE COMPENSATION--Employment Agreements" elsewhere in this Form 10-K for further information on termination of the Leichtweis Employment Agreement.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

Audit Fees

The aggregate fees and expenses billed by BDO USA, LLP ("BDO"), our independent registered public accounting firm, for professional services rendered for the audit of the Company's annual financial statements for the fiscal years ended December 31, 2013 and 2012, for the reviews of the financial statements included in the Company's Quarterly Reports on Form 10-Q for those fiscal years, and for review of documents filed with the Securities and Exchange Commission for those fiscal years were approximately \$399,000 and \$746,000, respectively. Audit fees for 2012 included approximately \$110,000 in fees and expenses incurred in connection with the restatement to the financial statements included in our 2012 Form 10-K/A filed with the Securities and Exchange Commission on December 12, 2013. Audit fees for 2013 and 2012 also include approximately \$0 and \$140,000, respectively, in fees related to the audits of internal control over financial reporting.

Audit-Related Fees

The aggregate fees and expenses billed by BDO for audit-related services for the fiscal years ended December 31, 2013 and 2012 totaled approximately \$28,000 and \$18,000, respectively. Fees for 2013 and 2012 were for the audits of the Company's 401(k) Plan.

Tax Fees

BDO was not engaged to provide tax services to the Company for the fiscal years ended December 31, 2013 and 2012.

All Other Fees

The aggregate fees billed by BDO for all other services totaled approximately \$69,000 and \$25,000 for the fiscal years ended December 31, 2013 and 2012, respectively. The fee for 2013 was for business interruption consulting services related to insurance claims for our Perma-Fix of South Georgia, Inc. facility which suffered a fire in August 2013. The

fee for 2012 was for consulting services related to the Company's compensation plans.

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The Audit Committee of the Company's Board of Directors has considered whether BDO's provision of the services described above for the fiscal years ended December 31, 2013 and 2012 is compatible with maintaining its independence.

Engagement of the Independent Auditor

The Audit Committee approves in advance all engagements with BDO and any members of the BDO Seidman Alliance network of firms to perform audit or non-audit services for us. All services under the headings Audit Fees, Audit Related Fees, Tax Fees, and All Other Fees were approved by the Audit Committee pursuant to paragraph (c)(7)(i)(C) of Rule 2-01 of Regulation S-X of the Exchange Act. The Audit Committee's pre-approval policy provides as follows:

The Audit Committee will review and pre-approve on an annual basis all audits, audit-related, tax and other services, along with acceptable cost levels, to be performed by BDO and any member of the BDO Seidman Alliance network of firms, and may revise the pre-approved services during the period based on later determinations. Pre-approved services typically include: Audits, quarterly reviews, regulatory filing requirements, consultation on new accounting and disclosure standards, employee benefit plan audits, reviews and reporting on management's internal controls and specified tax matters.

Any proposed service that is not pre-approved on the annual basis requires a specific pre-approval by the Audit Committee, including cost level approval.

The Audit Committee may delegate pre-approval authority to one or more of the Audit Committee members. The delegated member must report to the Audit Committee, at the next Audit Committee meeting, any pre-approval decisions made.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULE

The following documents are filed as a part of this report:

(a)(1) Consolidated Financial Statements

See Item 8 for the Index to Consolidated Financial Statements.

(a)(2) Financial Statement Schedule

Schedules are not required, are not applicable or the information is set forth in the consolidated financial statements or notes thereto.

(a)(3) Exhibits

The Exhibits listed in the Exhibit Index are filed or incorporated by reference as a part of this report.



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SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Perma-Fix Environmental Services, Inc.

By/s/ Dr. Louis F. Centofanti    Date April 15, 2014  
Dr. Louis F. Centofanti  
Chairman of the Board  
Chief Executive Officer

By/s/ Ben Naccarato                      Date April 15, 2014  
Ben Naccarato  
Chief Financial Officer and  
Chief Accounting Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in capacities and on the dates indicated.

By/s/ Dr. Louis F. Centofanti              Date April 15, 2014  
Dr. Louis F. Centofanti, Director

By/s/ John M. Climaco                      Date April 15, 2014  
John M. Climaco, Director

By/s/ Dr. Gary Kugler                      Date April 15, 2014  
Dr. Gary Kugler, Director

By/s/ Jack Lahav                              Date April 15, 2014  
Jack Lahav, Director

By/s/ Joe R. Reeder                         Date April 15, 2014  
Joe R. Reeder, Director

By/s/ Larry M. Shelton                      Date April 15, 2014  
Larry M. Shelton, Director

By/s/ Charles E. Young                      Date April 15, 2014  
Charles E. Young, Director

By/s/ Mark A. Zwecker                      Date April 15, 2014  
Mark A. Zwecker, Director

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EXHIBIT INDEX

Exhibit  
No. Description

- 2.1 Agreement and Plan of Merger dated April 27, 2007, by and among Perma-Fix Environmental Services, Inc., Nuvotec USA, Inc., Pacific EcoSolutions, Inc. and PESI Transitory, Inc., which is incorporated by reference from Exhibit 2.1 to the Company's Form 8-K, filed May 3, 2007. The Company will furnish supplementally a copy of any omitted exhibits or schedule to the Commission upon request.
- 2.2 First Amendment to Agreement and Plan of Merger, dated June 13, 2007, by and among Perma-Fix Environmental Services, Inc., Nuvotec USA, Inc., Pacific EcoSolutions, Inc., and PESI Transitory, Inc., which is incorporated by reference from Exhibit 2.2 to the Company's Form 8-K, filed June 19, 2007. The Company will furnish supplementally a copy of any omitted exhibits or schedule to the Commission upon request.
- 2.3 Stock Purchase Agreement by and between Triumvirate Environmental, Inc., and Perma-Fix Environmental Services, Inc., dated June 13, 2011, which is incorporated by reference from Exhibit 2.1 to the Company's Form 10-Q for the quarter ended June 30, 2011. The Company will furnish supplementally a copy of any omitted exhibits or schedule to the Commission upon request.
- 2.4 Stock Purchase Agreement dated July 15, 2011, by and among Perma-Fix Environmental Services, Inc., Homeland Security Capital Corporation (now known as Timios National Corporation or "TNC"), and Safety and Ecology Holdings Corporation, which is incorporated by references from Exhibit 2.1 to the Company's Form 8-K filed on July 20, 2011.
- 2.5 Asset Purchase Agreement by and among Triumvirate Environmental, Inc., Triumvirate Environmental (Florida), Inc. and Perma-Fix Environmental Services, Inc., and Perma-Fix of Orlando, Inc., dated August 12, 2011 which was filed as Exhibit 99.1 to the Company's 8-K filed on August 17, 2011 and incorporated herein by reference..
- 2.6 Escrow Agreement, dated October 31, 2011, between the Company, Homeland Security Capital Corporation, and Suntrust Bank, which was filed as Exhibit 2.3 to the Company's 8-K filed on November 4, 2011 and incorporated herein by reference.
- 2.7 Letter Agreement (Net Working Capital Adjustments), dated October 31, 2011, between the Company, Safety & Ecology Holdings Corporation and Homeland Security Capital Corporation, which was filed as Exhibit 2.4 to the Company's 8-K filed on November 4, 2011 and incorporated herein by reference.
- 2.8 Letter Agreement (Escrow), dated October 31, 2011, between the Company, Safety & Ecology Holdings Corporation and Homeland Security Capital Corporation, which was filed as Exhibit 2.5 to the Company's 8-K filed on November 4, 2011 and incorporated herein by reference.
- 2.9 Letter Agreement (Note Prepayment), dated October 31, 2011, between the Company, Safety & Ecology Holdings Corporation and Homeland Security Capital Corporation, which was filed as Exhibit 2.6 to the Company's 8-K filed on November 4, 2011 and incorporated herein by reference.
- 3(i) Restated Certificate of Incorporation, as amended, of Perma-Fix Environmental Services, Inc., as incorporated by reference from Exhibit 3(i) to the Company's 2012 Form 10-K/A filed on December 12, 2013.
- 3(ii) Amended and Restated Bylaws, as amended, of Perma-Fix Environmental Services, Inc., as incorporated by reference from Exhibit 3(ii) to the Company's 2012 Form 10-K/A filed on December 12, 2013.
- 4.1 Specimen Common Stock Certificate as incorporated by reference from Exhibit 4.3 to the Company's Registration Statement, No. 33-51874.
- 4.2 Rights Agreement dated as of May 2, 2008 between the Company and Continental Stock Transfer & Trust Company, as Rights Agent, as incorporated by reference from Exhibit 4.1 to the Company's Form 8-K filed on May 8, 2008.
- 4.3 Letter Agreement dated September 29, 2008, between the Company and Continental Stock Transfer & Trust Company, as incorporated by reference from Exhibit 4.3 to the Company's Form 8-A/A filed on October 2, 2008.



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- Loan and Securities Purchase Agreement, dated August 2, 2013 between William N. Lampson, Robert L. Ferguson, and Perma-Fix Environmental Services, Inc. as incorporated by reference from Exhibit 4.4 to the Company Form 10-Q for quarter ended June 30, 2013, filed on August 8, 2013.
- Promissory Note dated August 2, 2013, between William N. Lampson, Robert L. Ferguson, and Perma-Fix Environmental Services, Inc. as incorporated by reference from Exhibit 4.5 to the Company Form 10-Q for quarter ended June 30, 2013, filed on August 8, 2013.
- Common Stock Purchase Warrant, dated August 2, 2013, for William N. Lampson, as incorporated by reference from Exhibit 4.6 to the Company Form 10-Q for quarter ended June 30, 2013, filed on August 8, 2013.
- Common Stock Purchase Warrant, dated August 2, 2013, for Robert L. Ferguson, as incorporated by reference from Exhibit 4.7 to the Company Form 10-Q for quarter ended June 30, 2013, filed on August 8, 2013.
- Non-negotiable Promissory Note issued by Perma-Fix Environmental Services, Inc., to Homeland Security Capital Corporation, dated October 31, 2011, which was filed as Exhibit 2.2 to the Company's 8-K filed on November 4, 2011 and incorporated herein by reference.
- Amended and Restated Revolving Credit, Term Loan and Security Agreement between Perma-Fix Environmental Services, Inc. and PNC Bank, National Association (as Lender and as Agent), dated October 31, 2011, which was filed as Exhibit 99.4 to the Company's 8-K filed on November 4, 2011.
- First Amendment to Amended and Restated Revolving Credit, Term Loan and Security Agreement, dated November 7, 2012, between the Company and PNC Bank, National Association, as incorporated by reference from exhibit 4.1 to the Company's Form 10-Q for the quarter ended September 30, 2012, filed on November 8, 2012.
- Second Amendment to Amended and Restated Revolving Credit, Term Loan and Security Agreement and Waiver, dated May 9, 2013, between the Company and PNC Bank, National Association, as incorporated by reference from Exhibit 4.1 to the Company's Form 10-Q for the quarter ended March 31, 2013, filed on May 10, 2013.
- Third Amendment to Amended and Restated Revolving Credit, Term Loan and Security Agreement between PNC Bank, National Association and Perma-Fix Environmental Services, Inc., dated August 2, 2013, as incorporated by reference from Exhibit 4.1 to the Company's Form 10-Q for the quarter ended June 30, 2013, filed on August 8, 2013.
- Third Amended, Restated and Substituted Revolving Credit Note between PNC Bank, National Association and Perma-Fix Environmental Services, Inc., dated August 2, 2013, as incorporated by reference from Exhibit 4.2 to the Company's Form 10-Q for the quarter ended June 30, 2013, filed on August 8, 2013.
- Subordination Agreement dated August 2, 2013 by and among William Lampson and Robert Ferguson and PNC Bank, National Association, as incorporated by reference from Exhibit 4.3 to the Company's Form 10-Q for the quarter ended June 30, 2013, filed on August 8, 2013.
- Letter, dated October 29, 2013, from NASDAQ Stock Market, regain compliance with Listing Rule 5550(a)(2), as incorporated by reference from Exhibit 4.15 to the Company's 2012 Form 10-K/A filed on December 12, 2013.
- Letter, dated November 14, 2013, from NASDAQ Stock Market, non-compliance with Listing Rule 5250(c)(1), as incorporated by reference from Exhibit 4.16 to the Company's 2012 Form 10-K/A filed on December 12, 2013.
- Fourth Amendment to Amended and Restated Revolving Credit, Term Loan and Security Agreement and Waiver between PNC Bank, National Association and Perma-Fix Environmental Services, Inc., dated April 14, 2014.
- 1993 Non-qualified Stock Option Plan as incorporated by reference from Exhibit 10.3 to the Company's Form 10-Q for the quarter ended June 30, 2010, filed on August 6, 2010.
- 401(K) Profit Sharing Plan and Trust of the Company as incorporated by reference from Exhibit 10.5 to the Company's Registration Statement, No. 33-51874.
- 2003 Outside Directors' Stock Plan of the Company as incorporated by reference from "Exhibit B" to the Company's Proxy Statement dated June 20, 2003.
- First Amendment to 2003 Outside Directors Stock Plan, as incorporated by reference from Appendix "A" to the Company's 2008 Proxy Statement dated July 3, 2008.

Second Amendment to 2003 Outside Directors Stock Plan, as incorporated by reference from Appendix “A” to the Company’ 2012 Proxy Statement dated August 6, 2012.

10.6 2004 Stock Option Plan of the Company as incorporated by reference from “Exhibit A” to the Company’s Proxy Statement dated June 21, 2004.

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- Consent Decree, dated December 12, 2007, between United States of America and Perma-Fix of Dayton, Inc., as incorporated by reference from Exhibit 10.29 to the Company's Form 10-K for the year ended December 31, 2007 filed with the SEC on April 1, 2008.
- Subcontract between CH2M Hill Plateau Remediation Company, Inc. ("CHPRC") and East Tennessee Materials & Energy Corporation, dated May 27, 2008., as incorporated by reference from Exhibit 10.4 to the company's Form 10-Q for the quarter ended June 30, 2010 filed on August 6, 2010.
- Consent Agreement dated September 26, 2008 between Perma-Fix Northwest Richland, Inc. and the U.S. Environmental Protection Agency, as incorporated by reference from Exhibit 10.1 to the Company's Form 10-Q for the quarter ended September 30, 2008 filed on November 10, 2008.
- Second Amendment to Agreement and Plan of Merger, dated November 18, 2008 by and among Perma-Fix Northwest, Inc., Perma-Fix Northwest Richland, Inc., Perma-Fix Environmental Services, Inc., and Robert L. Ferguson, an individual, and William N. Lampson, an individual, as Representatives, as incorporated by reference from Exhibit 10.1 to the Company's Form 8-K filed with the SEC on November 21, 2008.
- Third Amendment to Agreement and Plan of Merger; Second Amendment to Paying Agent Agreement, and Termination of Escrow Agreement, dated September 29, 2009 by and among Perma-Fix Northwest, Inc. (f/k/a Nuvotec USA, Inc.); Perma-Fix Northwest Richland, Inc. (f/n/a Pacific EcoSolutions, Inc.); Perma-Fix Environmental Services, Inc.; Nuvotrust Liquidation Trust; Nuvotrust Trustee, LLC; Robert L. Ferguson, William N. Lampson; Rettig Osborne Forgette, LLP; and The Bank of New York Company, Inc., which is incorporated by reference from Exhibit 99.1 to the Company's Form 8-K filed on October 5, 2009.
- Earn-Out Promissory Note, dated September 28, 2010, between the Company and Nuvotrust Northwest Liquidation Trust, as incorporated by reference from Exhibit 10.1 to the Company's Form 10-Q for quarter ended September 30, 2010, filed on November 5, 2010.
- 2010 Stock Option Plan of the Company as incorporated by reference from "Appendix A" to the Company's 2010 Proxy Statement dated August 20, 2010.
- Employment Agreement dated August 24, 2011 between Louis Centofanti, Chief Executive Officer, and Perma-Fix Environmental Services, Inc., which is incorporated by reference from Exhibit 99.1 to the Company's Form 8-K filed on August 30, 2011.
- Employment Agreement dated August 24, 2011 between Ben Naccarato, Chief Financial Officer, and Perma-Fix Environmental Services, Inc., which is incorporated by reference from Exhibit 99.2 to the Company's Form 8-K filed on August 30, 2011.
- Employment Agreement dated August 24, 2011 between Jim Blankenhorn, Chief Operating Officer, and Perma-Fix Environmental Services, Inc., which is incorporated by reference from Exhibit 99.3 to the Company's Form 8-K filed on August 30, 2011
- Employment Agreement between Perma-Fix Environmental Services, Inc. and Christopher Leichtweis, dated October 31, 2011, which was filed as Exhibit 99.1 to the Company's 8-K filed on November 4, 2011 and incorporated herein by reference.
- Management Incentive Plan for Christopher Leichtweis, dated November 1, 2011, which was filed as Exhibit 99.3 to the Company's 8-K filed on November 4, 2011 and incorporated herein by reference.
- Non-Qualified Stock Option Agreement between Perma-Fix Environmental Services, Inc. and Christopher Leichtweis, dated October 31, 2011, which was filed as Exhibit 99.2 to the Company's 8-K filed on November 4, 2011 and incorporated herein by reference.
- Indemnification Agreement, dated February 21, 2011, between Safety and Ecology Holdings Corporation, Safety and Ecology Corporation, Inc., and Christopher P. Leichtweis and Myra Leichtweis, which was filed as Exhibit 99.5 to the Company's 8-K filed on November 4, 2011 and incorporated herein by reference.
- Incentive Stock Option Agreement between Perma-Fix Environmental Services, Inc., and Mr. Jim Blankenhorn, which was filed as Exhibit 10.1 to the Company Form 10-Q for the quarter ended June 30, 2011 and incorporated herein by reference.

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- Contract and Amendments entered into between Safety and Ecology Corporation and U.S. Department of Energy (Oak Ridge) dated March 30, 2010, incorporated by reference from Exhibit 10.38 to the Company's Form 10-K for the year ended December 31, 2011. CERTAIN INFORMATION WITHIN THIS EXHIBIT HAS BEEN OMITTED AS IT IS SUBJECT TO COMMISSION ORDER CF #28139 FOR WHICH A REQUEST BY THE COMPANY FOR AN EXTENSION FOR CONFIDENTIAL TREATMENT BY THE SECURITIES AND EXCHANGE COMMISSION UNDER THE FREEDOM OF INFORMATION ACT HAS BEEN FILED SEPARATELY WITH THE SECRETARY OF THE SECURITIES AND EXCHANGE COMMISSION.
- 10.22 2012 Incentive Compensation Plan for Chief Executive Officer, effective January 1, 2012, as incorporated by reference from Exhibit 10.1 to the Company's Form 8-K filed on July 18, 2012.
- 10.23 2012 Incentive Compensation Plan for Chief Financial Officer, effective January 1, 2012, as incorporated by reference from Exhibit 10.2 to the Company's Form 8-K filed on July 18, 2012.
- 10.24 2012 Incentive Compensation Plan for Chief Operating Officer, effective January 1, 2012, as incorporated by reference from Exhibit 10.3 to the Company's Form 8-K filed on July 18, 2012.
- 10.25 Amended Management Incentive Plan for Christopher Leichtweis, Senior Vice President, dated July 12, 2012, as incorporated by reference from Exhibit 10.4 to the Company's Form 8-K filed on July 18, 2012.
- 10.26 Settlement and Release Agreement dated as of February 12, 2013, by and between Perma-Fix Environmental Services, Inc. and Safety & Ecology Holdings Corporation, on the one hand, and Timios National Corporation, on the other hand, as incorporated by reference from Exhibit 99.1 to the Company's 8-K filed on February 15, 2013.
- 10.27 Settlement and Release Agreement and Amendment to Employment Agreement dated as of February 14, 2013, by and between Perma-Fix Environmental Services, Inc., Safety & Ecology Holdings Corporation and Safety and Ecology Corporation, on the one hand, and Christopher P. Leichtweis and Myra Leichtweis, on the other hand, as incorporated by reference from Exhibit 99.2 to the Company's 8-K filed on February 15, 2013.
- 10.28 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.
- 10.29 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.
- 10.30 Settlement and Release Agreement dated as of February 12, 2013, by and between Perma-Fix Environmental Services, Inc. and Safety & Ecology Holdings Corporation, on the one hand, and Timios National Corporation, on the other hand, as incorporated by reference from Exhibit 99.1 to the Company's 8-K filed on February 15, 2013.
- 10.31 Settlement and Release Agreement and Amendment to Employment Agreement dated as of February 14, 2013, by and between Perma-Fix Environmental Services, Inc., Safety & Ecology Holdings Corporation and Safety and Ecology Corporation, on the one hand, and Christopher P. Leichtweis and Myra Leichtweis, on the other hand, as incorporated by reference from Exhibit 99.2 to the Company's 8-K filed on February 15, 2013.
- 10.32 Separation and Release Agreement dated May 14, 2013 by and between Christopher Leichtweis and Perma-Fix Environmental Services, Inc., as incorporated by reference from Exhibit 99.1 to the Company's Form 8-K filed on May 17, 2013.
- 10.33 Consulting Services Agreement dated May 14, 2013 by and between Christopher Leichtweis and Perma-Fix Environmental Services, Inc., as incorporated by reference from Exhibit 99.2 to the Company's Form 8-K Filed on May 17, 2013.
- 10.34 2013 Incentive Compensation Plan for Chief Executive Officer, effective January 1, 2013, as incorporated by reference from Exhibit 10.1 to the Company's Form 8-K filed on June 12, 2013.
- 10.35 2013 Incentive Compensation Plan for Chief Financial Officer, effective January 1, 2013, as incorporated by reference from Exhibit 10.2 to the Company's Form 8-K filed on June 12, 2013.
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| 10.37       | 2013 Incentive Compensation Plan for Chief Operating Officer, effective January 1, 2013, as incorporated by reference from Exhibit 10.3 to the Company's Form 8-K filed on June 12, 2013. |
| <u>21.1</u> | List of Subsidiaries  |
| <u>23.1</u> | Consent of BDO USA, LLP   |
| <u>31.1</u> | Certification by Dr. Louis F. Centofanti, Chief Executive Officer of the Company pursuant to Rule 13a-14(a) or 15d-14(a).   |
| <u>31.2</u> | Certification by Ben Naccarato, Chief Financial Officer and Chief Accounting Officer of the Company pursuant to Rule 13a-14(a) or 15d-14(a).  |
| <u>32.1</u> | Certification by Dr. Louis F. Centofanti, Chief Executive Officer of the Company furnished pursuant to 18 U.S.C. Section 1350.  |
| <u>32.2</u> | Certification by Ben Naccarato, Chief Financial Officer and Chief Accounting 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*   |

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\*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.