

2020 ANNUAL REPORT



Dr. Centofanti, founder
of Perma-Fix, 1991



CELEBRATING 30 YEARS OF EXPERIENCE YOU CAN TRUST

1991-2021

TO OUR VALUED SHAREHOLDERS,

2020 was a transformative year for the Company, in which we achieved a number of important financial and operational milestones.

Most recently, we celebrated our 30th anniversary, reflecting our leadership in the field of nuclear and mixed waste treatment, nuclear services and health physics. Over these years, we have successfully developed and deployed solutions for a wide range of complex waste streams, while maintaining what we believe to be an impressive safety record. We operate four nuclear and mixed waste treatment facilities, housing some of the most advanced waste management technologies in the world. Through these facilities, we are able to provide comprehensive industrial, radioactive and mixed waste services nationwide. Our customers span government, industrial, medical and other commercial organizations across North America, Canada, and the European Union.

With total revenue for 2020 exceeding \$105 million, this is the best year we have reported since 2012, which was a period in time that was enhanced by the Obama-era stimulus program. Our 2020 EBITDA* performance of over \$5.1 million was our best since 2011. We generated solid revenue growth of 44% and achieved profitability for 2020 due to the steady expansion of our Services Segment in both the U.S. and Canada and our ability to maintain operations throughout the pandemic. The growth in our Services Segment was offset by weakness in our Treatment Segment, as previously disclosed, due in large part to the impact of the COVID-19 pandemic.

Looking ahead, we believe our sales pipeline for projects in the Services Segment remains robust. With hundreds of millions of dollars in bids currently submitted within the last quarter and awaiting award, we believe we have a 6-month forecast of over \$100 million in procurements and task orders to be bid.

We are rapidly advancing several initiatives within the Treatment Segment that we believe have the potential to significantly enhance our revenues, while establishing increased market share and large backlog for waste processing. In particular, we believe we are making continued progress at Hanford regarding contracting decisions and opportunities to leverage our advanced capabilities to solve large-scale waste management problems at the site. This includes our Test Bed Initiative, or TBI, which continues to offer a supplemental alternative to the U.S. Department of Energy to assist in the large waste tank disposition project at Hanford.

Although we continue to face some pandemic-related challenges, we remain optimistic about our growth strategy for 2021, which includes continued expansion of our plants and broadening our base of clients for nuclear services. We look forward to continuing our mission of ensuring a clean and safe environment for future generations. I would like to thank our shareholders, employees and Board of Directors for their ongoing support. We will keep you updated on our progress as developments unfold.

Sincerely,



Mark Duff
President and Chief Executive Officer



*See definition of EBITDA and adjusted EBITDA and reconciliation of the EBITDA and adjusted EBITDA numbers to income (loss) from continuing operations under GAAP and certain forward-looking statements in the "Corporate Information" section.

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, 2020

☐ 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:

<u>Title of each class</u>	<u>Trading Symbol</u>	<u>Name of each exchange on which registered</u>
Common Stock, \$.001 Par Value	PESI	NASDAQ Capital Markets
Preferred Stock Purchase Rights		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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the Registrant was required to submit and post such files).

☒ Yes ☐ No

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

Large accelerated filer ☐ Accelerated filer ☐ Non-accelerated filer ☒ Smaller reporting company ☒ Emerging growth company ☐

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

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☐

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, 2020), was approximately \$72,649,482. For the purposes of this calculation, all directors and executive officers of the Registrant (as indicated in Item 12) have been deemed to be affiliates. Such determination should not be deemed an admission that such directors and executive officers, are, in fact, affiliates of the Registrant. The Company's Common Stock is listed on the NASDAQ Capital Markets.

As of February 18, 2021, there were 12,165,734 shares of the registrant's Common Stock, \$.001 par value, outstanding.

Documents incorporated by reference: None

PERMA-FIX ENVIRONMENTAL SERVICES, INC.

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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 1990, is an environmental and environmental technology know-how company.

The principal element of our business strategy consists of upgrading our facilities within our Treatment Segment to increase efficiency and modernize and expand treatment capabilities to meet the changing markets associated with the waste management industry. Within our Services Segment, we continue to revitalize and expand our business development programs to further increase competitive procurement effectiveness and broaden the market penetration within both the commercial and government sectors. The Company remains focused on expansion into both commercial and international markets to supplement government spending in the United States of America (“USA”), from which a significant portion of the Company’s revenue is derived. This includes new services, new customers and increased market share in our current markets.

Our majority-owned subsidiary, Perma-Fix Medical S.A. and its wholly-owned subsidiary, Perma-Fix Medical Corporation (“PFM Corporation” – a Delaware corporation) (together known as “PF Medical” or our “Medical Segment”) which is currently involved on a limited basis in the research and development (“R&D”) of the Company’s medical isotope production technology, has not generated any revenue and has substantially reduced R&D costs and activities due to the need for capital to fund these activities. The Company anticipates that the Medical Segment will not resume full R&D activities until the necessary capital is obtained through its own credit facility or additional equity raise, or obtains partners willing to provide funding for its R&D.

COVID-19 Pandemic

The spread of COVID-19 in early 2020 continues to result in significant volatility in the U.S. and international markets. We continue to closely monitor the impact of the COVID-19 pandemic on all aspects of our business. Since the start of the pandemic, we have experienced delays in waste shipment from certain customers within our Treatment Segment directly related to the impact of COVID-19 including generator shutdowns and limited sustained operations, along with other factors. However, we expect to see a gradual return in waste receipts from these customers starting in the first half of 2021 as they accelerate operations. Within our Services Segment, all of the projects that were previously shutdown in late March 2020 due to the pandemic recommenced starting in late June 2020 as stay-at-home orders and certain other restrictions resulting from the pandemic were lifted.

Since the outbreak of COVID-19, we have remained focused on keeping our employees working and, at the same time, focusing on protecting the health and wellbeing of our employees and the communities in which we operate while assuring the continuity of our business operations.

Our management team has proactively implemented our business continuity and safety plans and has taken a variety of measures to ensure the ongoing availability of our waste treatment and remediation services, while taking health and safety measures, including separating employee and customer contact, social distancing between employees, implementing enhanced cleaning and hygiene protocols in all of our facilities, and implementing remote work policies, when necessary.

The situation surrounding COVID-19 continues to remain fluid and volatile. The potential for a material impact on our business increases the longer COVID-19 impacts the level of economic activities in the United States and globally as our customers may further continue to delay waste shipments and projects may shut down again. For this reason, we cannot reasonably estimate with any degree of certainty the future impact COVID-19 may have on our results of operations, financial position, and liquidity during the next twelve months.

For a more detailed discussion of the impact of COVID-19 on the Company’s results of operations, please

see “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations” – “Results of Operations” and “Liquidity and Capital Resources.”

Segment Information and Foreign and Domestic Operations and Sales

The Company has three reportable segments. In accordance with Financial Accounting Standards Board (“FASB”) 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 decision maker “(CODM)” to make decisions about resources to be allocated and assess its performance; and
- for which discrete financial information is available.

TREATMENT SEGMENT reporting includes:

- nuclear, low-level radioactive, mixed (waste containing both hazardous and low-level radioactive waste), hazardous and non-hazardous waste treatment, processing and disposal services primarily through four uniquely licensed (Nuclear Regulatory Commission or state equivalent) and permitted (U.S. Environmental Protection Agency (“EPA”) or state equivalent) treatment and storage facilities as follow: Perma-Fix of Florida, Inc. (“PFF”), Diversified Scientific Services, Inc., (“DSSI”), Perma-Fix Northwest Richland, Inc. (“PFNWR”) and Oak Ridge Environmental Waste Operations Center (“EWOC” – See below for further information of this facility); and
- R&D activities to identify, develop and implement innovative waste processing techniques for problematic waste streams.

In 2020, we expanded our low-level radioactive waste processing and treatment capability within our Treatment Segment through the addition of our EWOC facility. The EWOC facility serves primarily as a multi-disciplinary equipment and component processing center for large component, size/volume reduction, sort/segregation, waste transload, and system operability testing. The ultimate objective of the facility will be receipt, preparation, packaging, and transportation of low-level radioactive waste to final disposal facilities (landfills, approved radiological waste repositories). Operations at the facility have been limited to date as we continue to complete transition of the site. No revenue was generated at EWOC in 2020.

For 2020, the Treatment Segment accounted for \$30,143,000, or 28.6%, of total revenue, as compared to \$40,364,000, or 54.9%, of total revenue for 2019. See “Dependence Upon a Single or Few Customers” for further details and a discussion as to our Segments’ contracts with government clients (domestic and foreign) or with others as a subcontractor to government clients.

SERVICES SEGMENT, which includes:

- Technical services, which include:
 - professional radiological measurement and site survey of large government and commercial installations using advanced methods, technology and engineering;
 - health physics services including health physicists, radiological engineers, nuclear engineers and health physics technicians support to government and private radioactive materials licensees;
 - integrated Occupational Safety and Health services including industrial hygiene (“IH”) assessments; hazardous materials surveys, e.g., exposure monitoring; lead and asbestos management/abatement oversight; indoor air quality evaluations; health risk and exposure assessments; health & safety plan/program development, compliance auditing and training services; and Occupational Safety and Health Administration (“OSHA”) citation assistance;
 - global technical services providing consulting, engineering (civil, nuclear, mechanical, chemical, radiological and environmental), project management, waste management, environmental, and decontamination and decommissioning (“D&D”) field, technical, and management personnel and services to commercial and government customers; and
 - waste management services to commercial and governmental customers.
- Nuclear services, which include:

- D&D of government and commercial facilities impacted with radioactive material and hazardous constituents including engineering, technology applications, specialty services, logistics, transportation, processing and disposal; and
- license termination support of radioactive material licensed and federal facilities over the entire cycle of the termination process: project management, planning, characterization, waste stream identification and delineation, remediation/demolition, final status survey, compliance demonstration, reporting, transportation, disposal and emergency response.
- A company owned equipment calibration and maintenance laboratory that services, maintains, calibrates, and sources (i.e., rental) health physics, IH and customized nuclear, environmental, and occupational safety and health (“NEOSH”) instrumentation.
- A company owned gamma spectroscopy laboratory for the analysis of oil and gas industry solids and liquids.

For 2020, the Services Segment accounted for \$75,283,000, or 71.4%, of total revenue, as compared to \$33,095,000, or 45.1%, of total revenue for 2019. See “Dependence Upon a Single or Few Customers” for further details and a discussion as to our Segments’ contracts with government clients (domestic and foreign) or with others as a subcontractor to government clients.

MEDICAL SEGMENT (see a discussion of our Medical Segment above under “Company Overview and Principal Products and Services”).

Our Treatment and Services Segments provide services to research institutions, commercial companies, public utilities, and governmental agencies (domestic and foreign), 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 corporate office is located at 8302 Dunwoody Place, Suite 250, Atlanta, Georgia 30350.

Foreign Revenue

Our consolidated revenue for 2020 and 2019 included approximately \$5,550,000, or 5.3%, and \$5,488,000, or 7.5%, respectively, from Canadian customers (including revenues generated by our Perma-Fix of Canada, Inc. (“PF Canada”) subsidiary).

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 our waste activities. We are dependent on our permits and licenses discussed below in order to operate our businesses. 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. 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 Resource Conservation and Recovery Act (“RCRA”) Part B permit, Toxic Substances Control Act (“TSCA”) authorization, Restricted RX Drug Distributor-Destruction license, biomedical, 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 EPA Approval.

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.

EWOC, located in Oak Ridge, Tennessee, operates a low-level radioactive waste material processing facility. Radioactive material processing is authorized under radioactive material licenses issued by the State of Tennessee Department of Environmental and Conservation, Division of radiological health.

The combination of RCRA Part B hazardous waste permits, TSCA authorizations, and radioactive material licenses held by the Company and its subsidiaries comprising our Treatment Segment is very difficult to obtain for a single facility and make this Segment unique.

We believe that 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, we believe such would allow companies to enter into these markets and provide greater competition.

Backlog

Our Treatment Segment 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. At December 31, 2020, our Treatment Segment had a backlog of approximately \$7,631,000, as compared to approximately \$8,506,000 at December 31, 2019. 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 quarters.

Dependence Upon a Single or Few Customers

Our Treatment and Services Segments have significant relationships with the U.S and Canadian governmental authorities. A significant amount of our revenues from our Treatment and Services Segments are generated indirectly as subcontractors for others who are prime contractors to government authorities, particularly the U.S Department of Energy (“DOE”) and U.S. Department of Defense (“DOD”) or directly as the prime contractor to government authorities. The contracts that we are a party to with others as subcontractors to the U.S federal government or directly with the U.S federal government generally provide that the government may terminate or renegotiate the contracts on 30 days’ notice, at the government's election. The contracts/task order agreements that we are a party to with Canadian governmental authorities generally provide that the government authorities may terminate the contracts/task order agreements at any time for any reason for convenience. Our inability to continue under existing contracts that we have with the U.S federal government and Canadian government authorities (directly or indirectly as a subcontractor) or significant reductions in the level of governmental funding in any given year could have a material adverse impact on our operations and financial condition.

We performed services relating to waste generated by government clients (domestic and foreign (primarily Canadian)), either indirectly for others as a subcontractor to government entities or directly as a prime contractor to government entities, representing approximately \$96,582,000, or 91.6%, of our total revenue during 2020, as compared to \$59,985,000, or 81.7%, of our total revenue during 2019.

Revenue generated by us as a subcontractor to a customer for a remediation project performed for a government entity (the “DOE”) within our Services Segment in 2020 and 2019 accounted for approximately \$41,011,000 or 38.9% and \$8,529,000 or 11.6% (included in revenues generated relating to government clients above) of our total revenue for 2020 and 2019, respectively. This remediation project included among other things, decontamination support of a building. As work progressed throughout stages of this project in 2020, additional contaminations were regularly discovered which resulted in approvals for

additional work to be performed under this project. This project is expected to be completed by the first half of 2021.

As our revenues are project/event based where the completion of one contract with a specific customer may be replaced by another contract with a different customer from year to year, we do not believe the loss of one specific customer from one year to the next will generally have a material adverse effect on our operations and financial condition.

Competitive Conditions

The Treatment Segment's largest competitor is EnergySolutions ("ES") which operates treatment facilities in Oak Ridge, TN and Erwin, TN and disposal facilities for low level radioactive waste in Clive, UT and Barnwell, SC. Waste Control Specialists ("WCS"), which has licensed disposal capabilities for low level radioactive waste in Andrews, TX, is also a competitor in the treatment market with increasing market share. These two competitors also provide us with options for disposal of our treated nuclear waste. The Treatment Segment treats and disposes of DOE generated waste largely at DOE owned sites. Our Treatment Segment currently solicits business primarily on a North America basis with both government and commercial clients; however, we continue to focus on emerging international markets for additional work.

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 project specification being bid on and the different specialty skill sets of each bidder for which our Services Segment competes, especially projects subject to the governmental bid process. We also have the ability to prime federal government small business procurements (small business set asides). Based on past experience, we believe that large businesses are more willing to team with small businesses in order to be part of these often-substantial procurements. 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 three remediation projects, which are currently in progress relating to our Perma-Fix of Dayton, Inc. ("PFD"), Perma-Fix of Memphis, Inc. ("PFM"), and Perma-Fix South Georgia, Inc. ("PFSG") subsidiaries, which are all included within our discontinued operations. These remediation projects principally entail the removal/remediation of contaminated soil and, in most cases, the remediation of surrounding ground water. These remediation activities are closely reviewed and monitored by the applicable state regulators.

At December 31, 2020, we had total accrued environmental remediation liabilities of \$854,000. At December 31, 2020, \$744,000 of the total accrued environmental liabilities was recorded as current.

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 properties, 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 (“R&D”)

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. Our competitors also devote resources to R&D and many such competitors have greater resources at their disposal than we do.

Governmental Regulation

Environmental companies, such as us, and their customers are subject to extensive and evolving environmental laws and regulations by a number of federal, 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 companies, such as us, that treat, store or dispose of 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 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 Department of Health (with the USNRC oversight), Office of Radiation Control, regulates the licensing and radiological program of the PFF facility; the State of Tennessee (with the USNRC oversight), Tennessee Division of Radiological Health, regulates

licensing and the radiological program of the DSSI facility and the EWOC facility; and the State of Washington (with the USNRC oversight) Department of Health, regulates licensing and the radiological operations of the PFNWR facility.

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 TSCA. 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”).

Risk Related to COVID-19

COVID-19 could result in material adverse effects on our business, financial position, results of operations and cash flows.

The extent of the impact of the COVID-19 pandemic on our business is uncertain and difficult to predict, as the responses to the pandemic continue to evolve rapidly. Since the latter part of the second quarter of 2020, all of the projects within our Services Segment that were previously shutdown have restarted as stay-at-home orders and certain other restrictions resulting from the pandemic were lifted. Within our Treatment Segment, we continue to experience delays in waste shipment from certain customers directly related to the impact of COVID-19 including generator shutdowns and limited sustained operations, along with other factors. However, we expect to see a gradual return in waste receipts from these customers starting in the first half of 2021 as they accelerate operations. COVID-19 disruption could have a material adverse effect on our business as our customers could curtail and reduce capital and overall spending.

The severity of the impact the COVID-19 pandemic on our business will depend on a number of factors, including, but not limited to, the duration and severity of the pandemic, the extent and severity of the impact on our customers, the impact on governmental programs and budgets, distribution of COVID-19 vaccines, the rate at which people are inoculated with the vaccines, and how quickly and to what extent normal economic and operating conditions resume, all of which are uncertain and cannot be predicted with any accuracy or confidence at this time. Our future results of operations and liquidity could be adversely impacted by continued delays in waste shipments and/or the recurrence of project work shut downs as well as potential partial/full shutdown of any of our facilities due to COVID-19.

Risks Relating to our Business and 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.

We maintain finite risk insurance policies and bonding mechanisms 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. 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.

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 Treatment and Services Segments' revenues are generated through various government contracts or subcontracts (domestic and foreign (primarily Canadian)). Our revenues from governmental contracts and subcontracts relating to governmental facilities within our segments were approximately \$96,582,000, or 91.6%, and \$59,985,000, or 81.7%, of our consolidated revenues for 2020 and 2019, 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 U.S federal government are terminable, or subject to renegotiation, by the applicable governmental agency on 30 days notice, at the option of the governmental agency. The contracts/task order agreements that we are a party to with Canadian governmental authorities generally provide that the government authorities may terminate the contracts/task order agreements at any time for any reason for convenience. 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 hazardous waste and nuclear services with outside vendors, including us.

A variety of factors may cause our existing or future customers (including government clients) to reduce or halt their spending on hazardous waste and 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 government to approve necessary budgets, or to reduce the amount of the budget necessary, to fund remediation sites, including DOE and DOD sites;
- civic opposition to or changes in government policies regarding nuclear operations;
- a reduction in demand for nuclear generating capacity; or
- failure to perform under existing contracts, directly or indirectly, with the government.

These events could result in or cause government clients to terminate or cancel existing contracts involving us to treat, store or dispose of contaminated waste and/or to perform remediation projects, at one or more of government sites. 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, reductions in government funding or other events beyond our control (such as the continued impact of COVID-19) 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, without limitation, 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, and/or the continued impact resulting from COVID-19. During economic downturns, large budget deficits that the federal government and many states are experiencing, and other events beyond our control, including, but not limited to the impact from COVID-19, the ability of private and government entities to spend on waste services, including nuclear services, may decline significantly. Our operations depend, in large part, upon 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 flow.

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 similar significant projects could have an adverse effect on our business and results of operations.

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 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 nuclear waste. Currently, there are only three disposal sites, each site having different owners, for our low-level radioactive waste we receive from non-governmental sites, allowing us to take advantage of the pricing competition between the three sites. If any 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 have limited remaining site to dispose of our nuclear waste. With limited 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 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.

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, international (primarily Canada currently) and regional firms with nuclear and/or hazardous waste 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 under-represented minority contractors. Although we believe we have 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. For international business, which we continue to focus on, there are additional competitors, many from within the country the work is to be performed, making winning work in foreign countries more challenging. Competition places downward pressure on our contract prices and profit margins. If we are unable to meet these competitive challenges, we could lose market share and experience an overall reduction in our profits.

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.

Our revenues may be earned under contracts that are fixed-price or maximum 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 laws or labor conditions, weather delays, cost of raw materials, our suppliers' or subcontractors' inability to perform, and/or other events beyond our control, such as the impact of the Coronavirus, 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 and support facility closure requirements.

We are often required to provide performance bonds to customers under certain of our 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. In addition, we provide bonds to support financial assurance in the event of facility closure pursuant to state requirements. 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.

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.

Risks Related to Laws and Regulations

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 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.

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 environmental 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 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;
- 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.

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.

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 ("PAA") 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 PAA was extended through 2025 by the Energy Policy Act of 2005.

Under certain conditions, the PAA's indemnification provisions may not apply to our processing of radioactive waste at governmental facilities, and may 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 PAA 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.

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

If any of our permits, other intangible assets, and tangible assets becomes impaired, we may be required to record significant charges to earnings.

Under accounting principles generally accepted in the United States ("U.S. GAAP"), we review our intangible and tangible assets for impairment when events or changes in circumstances indicate the carrying value may not be recoverable. Our permits are tested for impairment at least annually. Factors that may be considered a change in circumstances, indicating that the carrying value of our permit, other intangible assets, and tangible 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. We may be required, in the future, to record impairment charges in our financial statements, in which any impairment of our permit, other intangible assets, and tangible assets is determined. Such impairment charges could negatively impact our results of operations.

Breach of any of the covenants in our credit facility could result in a default, triggering repayment of outstanding debt under the credit facility and the termination of our 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. In the past, when we failed to meet our minimum quarterly fixed charge coverage ratio ("FCCR") requirement, our lender has either waived these instances of non-compliance or provided certain amendments to our FCCR requirements which enabled us to meet our quarterly FCCR requirements. Additionally, our lender has in the past waived our quarterly FCCR testing requirements. If we fail to meet any of our financial covenants going forward, including the minimum quarterly FCCR requirement, and our lender does not further waive the non-compliance or further revise our covenant requirement so that we are in compliance, our lender could accelerate the payment of our borrowings under our credit facility and terminate our credit facility. In such event, we may not have sufficient liquidity to repay our debt under our credit facility and other indebtedness.

Our debt and borrowing availability under our credit facility could adversely affect our operations.

At December 31, 2020, our aggregate consolidated debt was approximately \$6,729,000, which included our PPP Loan balance of approximately \$5,318,000. We have applied for loan forgiveness on the entire PPP Loan balance which is subject to the review and approval of our lender and the SBA. Our Second Amended and Restated Revolving Credit, Term Loan and Security Agreement dated May 8, 2020 provides for a total credit facility commitment of approximately \$19,742,000, consisting of a \$18,000,000 revolving line of credit and a term loan balance of approximately \$1,742,000. 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 reduced by outstanding standby letters of credit and any borrowing reduction that our lender may impose from time to time. At December 31, 2020, we had no borrowing under the revolving part of our credit facility and borrowing availability of up to an additional \$14,220,000. 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, to refinance indebtedness, and borrow under our credit facility 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 indebtedness could limit our financial and operating activities, and adversely affect our ability to incur additional debt to fund future needs.

As a result of our indebtedness, we could, among other things, be:

- required 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 at all;
- 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 ability to continue our operations depends on our ability to generate profitable operations or complete equity

or debt financings to increase our capital.

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

We have approximately \$14,264,000 and \$71,316,000 in net operating loss carryforwards for federal and state income tax purposes, respectively, which will expire in various amounts starting in 2021 if not used against future federal and state income tax liabilities, respectively. Approximately \$12,199,000 of our federal net operating loss carryforwards were generated after December 31, 2017 and thus do not expire. 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.

Our Paycheck Protection Loan (“PPP Loan”) may be audited

In April 2020, we received a PPP Loan under the CARES Act in the amount of approximately \$5,666,000 which had a principal balance of approximately \$5,318,000 at December 31, 2020. We are aware that PPP loans in excess of \$2,000,000 may be subject to being audited by the appropriate governmental authority. If our PPP Loan is audited, it is currently unknown how our PPP Loan could be affected by an audit. An audit could result, among other things, in us being required to return all or a portion of our PPP Loan.

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. At December 31, 2020, we had 12,153,897 shares of Common Stock outstanding.

In addition, at December 31, 2020, we had outstanding options to purchase 658,400 shares of our Common Stock at exercise prices ranging from \$2.79 to \$7.29 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 without prior approval from our lender.

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 our Common Stock or the availability of shares of our 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.

Our Preferred Share Rights Plan may adversely affect our stockholders.

The Company adopted a Preferred Share Purchase Rights Plan ("Rights Plan") dated May 2018. As part of the Rights Plan, the Company's Board of Directors ("Board") declared a dividend distribution of one Preferred Share Purchase Right ("Right") on each outstanding share of the Company's Common Stock to stockholders of record on May 12, 2018. The Rights Plan is designed to assure that all of the Company's shareholders receive fair and equal treatment in the event of any proposed takeover of the Company and to guard against partial tender abusive tactics to gain control of the Company. The Rights Plan, as amended, is to terminate the earliest of (1) close of business on May 2, 2021, (2) the time at which the Rights are redeemed, (3) the time at which the Rights are exchange, or (4) closing of any merger or acquisition of the Company which has been approved by the Board prior to any person becoming such an acquiring person.

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

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

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

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

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

The Rights will cause substantial dilution to a person or group that attempts to acquire us on terms not approved by our Board. The Rights should not interfere with any merger or other business combination approved by our Board.

General Risk Factors

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. 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.

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.

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.

Systems failures, interruptions or breaches of security and other cyber security risks could have an adverse effect on our financial condition and results of operations.

We are subject to certain operational risks to our information systems. Because of efforts on the part of computer hackers and cyberterrorists to breach data security of companies, we face risk associated with potential failures to adequately protect critical corporate, customer and employee data. As part of our business, we develop and retain confidential data about us and our customers, including the U.S. government. We also rely on the services of a variety of vendors to meet our data processing and communications needs.

Despite our implemented security measures and established policies, we cannot be certain that all of our systems are entirely free from vulnerability to attack or other technological difficulties or failures or failures on the part of our employees to follow our established security measures and policies. Information security risks have increased significantly. Our technologies, systems, and networks may become the target of cyber-attacks, computer viruses, malicious code, or information security breaches that could result in the unauthorized release, gathering, monitoring, misuse, loss or destruction of our or our customers' confidential, proprietary and other information and the disruption of our business operations. A security breach could adversely impact our customer relationships, reputation and operation and result in violations of applicable privacy and other laws, financial loss to us or to our customers or to our employees, and litigation exposure. While we maintain a system of internal controls and procedures, any breach, attack, or failure as discussed above could have a material adverse impact on our business, financial condition, and results of operations or liquidity.

There is also an increasing attention on the importance of cybersecurity relating to infrastructure. This creates the potential for future developments in regulations relating to cybersecurity that may adversely impact us, our customers and how we offer our services to our customers.

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 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.

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, management to assess annually the effectiveness of our internal control over financial reporting. If we are unable to maintain adequate internal control over financial reporting or effectively remediate any material weakness identified in internal control over financial reporting, there is a reasonable possibility that a misstatement of our annual or interim financial statements will not be prevented or detected in a timely manner. If we cannot produce reliable financial reports, investors could lose confidence in our reported financial information, the market price of our common stock could decline significantly, and our business, financial condition, and reputation could be harmed.

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 17,120,061 (which include shares issuable under outstanding options to purchase 658,400 shares of our Common Stock and shares issuable under an outstanding warrant to purchase 60,000 shares of our Common Stock) shares of our Common Stock and 2,000,000 shares of our Preferred Stock as of December 31, 2020 (which includes 50,000 shares of our Preferred Stock reserved for issuance under our new preferred share rights plan discussed below). These unissued shares could be used by our management to make it more difficult for, and thereby discourage an attempt to acquire control of us.

ITEM 1B. UNRESOLVED STAFF COMMENTS

Not Applicable.

ITEM 2. PROPERTIES

Our principal executive office is in Atlanta, Georgia. Our Business Center is located in Oak Ridge, Tennessee. Our Treatment Segment facilities are located in Gainesville, Florida; Kingston, Tennessee; Richland, Washington; and Oak Ridge, Tennessee. All of the properties where these facilities operate on are held by our senior lender as collateral for our credit facility with the exception of the property at Oak Ridge, Tennessee which is leased with an option to purchase. Our Services Segment maintains offices, which are all leased properties. We maintain properties in Valdosta, Georgia and Memphis, Tennessee, which are all non-operational and are included within our discontinued operations.

The Company currently leases properties in the following locations for operations and administrative functions within our Treatment and Services Segments, including our corporate office and Business Center:

Location	Square Footage (SF)/ Acreage (AC)	Expiration of Lease
Oak Ridge, TN (Business Center)	14,932 SF	May 1, 2022
Oak Ridge, TN (Services)	5,000 SF	September 30, 2021
Blaydon On Tyne, England (Services)	1,000 SF	Monthly
New Brighton, PA (Services)	3,558 SF	June 30, 2022
Newport, KY (Services)	1,566 SF	Monthly
Pembroke, Ontario, Canada (Services)	800 SF	Monthly
Atlanta, GA (Corporate)	6,499 SF	July 31, 2024
Oak Ridge, TN (Treatment)	8.7 AC, including 17,400 SF	October 1, 2021

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

See “Part II” – “Item 8 - Financial Statements and Supplementary Data” – “Notes to Consolidated Financial Statements” – “Note 14 – Commitments and Contingencies” – “Legal Matters” for a discussion of our legal proceedings.

ITEM 4. MINE SAFETY DISCLOSURE

Not Applicable.

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.

		2020		2019	
		Low	High	Low	High
Common Stock	1 st Quarter	\$ 3.82	\$ 9.50	\$ 2.50	\$ 3.94
	2 nd Quarter	4.76	6.54	3.40	4.46
	3 rd Quarter	5.94	7.40	3.10	4.77
	4 th Quarter	5.80	7.13	4.30	9.98

At February 12, 2021, there were approximately 137 stockholders of record of our Common Stock. The actual number of our stockholders is greater than this number, and includes beneficial owners whose shares are held in “street name” by banks, brokers, and other nominees.

Since our inception, we have not paid any cash dividends on our Common Stock and have no dividend policy. Our loan agreement dated May 8, 2020 prohibits us from paying any cash dividends on our Common Stock without prior approval from our lender. We do not anticipate paying cash dividends on our outstanding Common Stock in the foreseeable future.

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 2020.

We adopted a preferred share rights plan (the “Rights Plan”), as amended, which is designed to protect us against certain creeping acquisitions, open market purchases, and certain mergers and other combinations with acquiring companies. The Rights Plan is to terminate at the earliest of (1) close of business on May 2, 2021 (the “Final Expiration Date”), (2) the time at which the Rights are redeemed, (3) the time at which the Rights are exchange, or (4) closing of any merger or acquisition of the Company approved by the Board prior to any person becoming acquiring person.

See Item 1A. - Risk Factors – “Our Preferred Share Rights Plan may adversely affect our stockholders” as to further discussion relating to the terms of our Rights Plan in addition to its termination date.

See Note 7 “Capital Stock, Stock Plans, Warrants, and Stock Based Compensation” in Part II, Item 8, “Financial Statements and Supplementary Data” and “Equity Compensation Plans” in Part III, Item 12, “Security Ownership of Certain Beneficial Owners and Management and Related Stockholders Matter” for securities authorized for issuance under equity compensation plans which are incorporated herein by reference.

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” (“MD&A”) may be deemed “forward-looking statements” within the meaning of Section 27A of the Act, 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, the accounts of our wholly-owned subsidiaries, the accounts of our majority-owned Polish subsidiary, and the account of a variable interest entity for which we are the primary beneficiary, 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.

COVID-19 Impact

Since the outbreak of COVID-19 in early part of 2020, we have remained focused on keeping our employees working and, at the same time, focusing on protecting the health and wellbeing of our employees and the communities in which we operate while assuring the continuity of our business operations.

Our management team has proactively implemented our business continuity and safety plans and has taken a variety of measures to ensure the ongoing availability of our waste treatment and remediation services, while taking health and safety measures, including separating employee and customer contact, social distancing between employees, implementing enhanced cleaning and hygiene protocols in all of our facilities, and implementing remote work policies, when necessary.

The COVID-19 pandemic presents potential new risks to our business and results in significant volatility in the U.S. and international markets. We continue to closely monitor the impact of the COVID-19 pandemic on all aspects of our business. Starting in late March 2020, our operations were impacted by the shutdown of a number of projects and the delays of certain waste shipments. Since the latter part of the second quarter of 2020, all of the projects that were previously shutdown within our Services Segment restarted as stay-at-home orders and certain other restrictions resulting from the pandemic were lifted. Despite the shutdown of certain projects for part of 2020, revenues generated within our Services Segment in 2020 exceeded our revenue generated in 2019 by approximately \$42,188,000. We continue to experience delays in waste shipments from certain customers within our Treatment Segment directly related to the impact of COVID-19 including generator shutdowns and limited sustained operations, along with other factors. However, we expect to see a gradual return in waste receipts from these customers starting in the first half of 2021 as they accelerate operations. As the impact of COVID-19 remains fluid, the uncertainty in waste receipt shipments may impact our results of operations for the first quarter of 2021 and potentially the second quarter of 2021. The potential for a material impact on our business increases the longer COVID-19 impacts the level of economic activities in the United States and globally as our customers may continue to delay waste shipments and project work may shut down again. For this reason, we cannot reasonably estimate with any degree of certainty the future impact COVID-19 may have on our results of operations, financial position, and liquidity during the next twelve months.

At this time, we believe we have sufficient liquidity on hand to continue business operations during the next twelve months. At December 31, 2020, our borrowing availability under our revolving credit facility was approximately \$14,220,000 which was based on a percentage of eligible receivables and subject to certain reserves and included our cash on hand of approximately \$7,924,000. In April 2020, we entered into a promissory note (“PPP Loan”) with our credit facility lender in the amount of approximately \$5,666,000 under the Paycheck Protection Program (“PPP”) that was established under the Coronavirus Aid, Relief, and Economic Security Act (the “CARES Act” - see “CARES Act – PPP Loan” under “Liquidity and Capital Resources” below for a discussion of the PPP Loan). During the third quarter of 2020, we repaid approximately \$348,000 of the PPP Loan resulting from clarification in the loan calculation at the time of the loan origination. On October 5, 2020, we applied for forgiveness on the entire PPP Loan balance as permitted under the program, which is subject to the review and approval of our lender and Small Business Administration (“SBA”). Proceeds from the PPP Loan have allowed us to avoid having to furlough or layoff certain eligible employees as a result of the COVID-19 pandemic, although there are no assurances that such will not be required going forward. We continue to assess reducing operating costs during this volatile time, which include curtailing capital expenditures, eliminating non-essential expenditures and implementing a hiring freeze as needed. We elected to defer payment of our share of social security taxes as permitted under the CARES Act, as amended (see “CARES Act – Deferral of Employment Tax Deposits” within this MD&A for a discussion of this deferral). Based on our current projection, we believe that we will be able to meet the current covenant requirements under our loan agreement for the next twelve months despite the impact of COVID-19.

We are closely monitoring our customers’ payment performance. However, since a significant portion of our revenues is derived from government related contracts, we do not expect our accounts receivable collections to be materially impacted due to COVID-19.

Review

Revenue increased \$31,967,000 or 43.5% to \$105,426,000 for the twelve months ended December 31, 2020 from \$73,459,000 for the corresponding period of 2019. The increase was entirely within our Services Segment where revenue increased \$42,188,000 or 127.5% from increased projects and the sizable value of certain projects. Our Treatment Services revenue decreased by \$10,221,000 or 25.3% primarily due to delays in waste shipments from certain customers resulting from the impact of COVID-19 as discussed above. The delays in waste shipments were also partly attributed to the transition of new prime contractors at certain DOE sites which resulted in delays in waste shipments to us as subcontractors under certain contracts. Additionally, lower averaged price waste from revenue mix contributed to the decrease in revenue within the Treatment Segment. Gross profit increased \$309,000 or 2.0% due to the increase in revenues in the Services Segment. Selling, General, and Administrative (“SG&A”) expenses decreased by approximately \$88,000 or 0.7% for the twelve months ended December 31, 2020 as compared to the

corresponding period of 2019. At December 31, 2020, we had working capital of approximately \$3,672,000 as compared to working capital of \$26,000 at December 31, 2019. Our working capital at December 31, 2020 included the classification of approximately \$3,191,000 of the outstanding PPP Loan balance of \$5,318,000 as “Current portion of long-term debt” on our Consolidated Balance Sheets. As previously discussed, we have applied for forgiveness on repayment of the entire PPP Loan balance which is subject to the review and approval of our lender and the SBA.

Business Environment and Outlook

Our Treatment and Services Segments’ business continues to be heavily dependent on services that we provide to governmental clients directly as the contractor or indirectly as a subcontractor. We believe demand for our services will continue to be subject to fluctuations due to a variety of factors beyond our control, including, without limitation, the economic conditions, the manner in which the applicable government will be required to spend funding to remediate various sites, and/or the impact resulting from COVID-19 as discussed above. In addition, our governmental contracts and subcontracts relating to activities at governmental sites in the United States are generally subject to termination or renegotiation on 30 days’ notice at the government’s option, and our governmental contracts/task orders with the Canadian government authorities allow the authorities to terminate the contract/task orders at any time for convenience. Significant reductions in the level of governmental funding or specifically mandated levels for different programs that are important to our business could have a material adverse impact on our business, financial position, results of operations and cash flows. As previously disclosed, our Medical Segment has substantially reduced its R&D costs and activities due to the need for capital to fund such activities. We anticipate that our Medical Segment will not resume full R&D activities until it obtains the necessary funding through obtaining its own credit facility or additional equity raise or obtaining new partners willing to fund its R&D activities. If the Medical Segment is unable to raise the necessary capital, the Medical Segment could be required to further reduce, delay or eliminate its R&D program.

We are continually reviewing methods to raise additional capital to supplement our liquidity requirements, when needed, and reducing our operating costs. We continue to aggressively bid on various contracts, including potential contracts within the international markets.

Results of Operations

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

Summary - Years Ended December 31, 2020 and 2019

Below are the results of continuing operations for years ended December 31, 2020 and 2019 (amounts in thousands):

<u>(Consolidated)</u>	2020	%	2019	%
Net revenues	\$ 105,426	100.0	\$ 73,459	69.7
Cost of goods sold	89,533	84.9	57,875	78.8
Gross profit	15,893	15.1	15,584	21.2
Selling, general and administrative	11,774	11.2	11,862	16.1
Research and development	762	.7	750	1.0
Loss on disposal of property and equipment	29	—	3	—
Income from operations	3,328	3.2	2,969	4.0
Interest income	140	.1	337	.5
Interest expense	(398)	(.4)	(432)	(.6)
Interest expense – financing fees	(294)	(.3)	(208)	(.3)
Other	211	.2	223	.3
Loss on extinguishment of debt	(27)	—	—	—
Income from continuing operations before taxes	2,960	2.8	2,889	3.9
Income tax (benefit) expense	(189)	(.2)	157	.2
Income from continuing operations	<u>\$ 3,149</u>	<u>3.0</u>	<u>\$ 2,732</u>	<u>3.7</u>

Revenue

Consolidated revenues increased \$31,967,000 for the year ended December 31, 2020 compared to the year ended December 31, 2019, as follows:

(In thousands)	2020	% Revenue	2019	% Revenue	Change	% Change
<u>Treatment</u>						
Government waste	\$ 21,234	20.1	\$ 27,277	37.1	\$ (6,043)	(22.2)
Hazardous/non-hazardous ⁽¹⁾	5,072	4.8	6,376	8.7	(1,304)	(20.5)
Other nuclear waste	3,837	3.6	6,711	9.1	(2,874)	(42.8)
Total	<u>30,143</u>	<u>28.6</u>	<u>40,364</u>	<u>54.9</u>	<u>(10,221)</u>	<u>(25.3)</u>
<u>Services</u>						
Nuclear	73,458	69.7	30,371	41.4	43,087	141.9
Technical	1,825	1.7	2,724	3.7	(899)	(33.0)
Total	<u>75,283</u>	<u>71.4</u>	<u>33,095</u>	<u>45.1</u>	<u>42,188</u>	<u>127.5</u>
Total	<u>\$ 105,426</u>	<u>100.0</u>	<u>\$ 73,459</u>	<u>100.0</u>	<u>\$ 31,967</u>	<u>43.5</u>

¹⁾ Includes wastes generated by government clients of \$1,976,000 and \$2,422,000 for the twelve months ended December 31, 2020 and 2019, respectively.

Treatment Segment revenue decreased \$10,221,000 or 25.3 % for the twelve months ended December 31, 2020 over the same period in 2019. The revenue decrease was primarily due to lower revenue generated from lower waste volume resulting from waste shipment delays since late March 2020 from certain of our customers due to the impact of COVID-19 including generator shutdowns and limited sustained operations. The delays in waste shipments were also partly attributed to the transition of new prime contractors at certain DOE sites which resulted in delays in waste shipments to us as subcontractors under certain contracts. Additionally, lower averaged price waste from revenue mix contributed to the decrease in revenue. Our Services Segment revenue increased \$42,188,000 or 127.1% due to the increase in number of projects and the sizeable value of certain projects. Our Services Segment experienced this increase in revenue despite a number of our projects being shut down starting in late March 2020 due to COVID-19. These projects did not restart until the latter part of the second quarter of 2020. Our Services Segment revenues are project based; as such, the scope, duration and completion of each project vary. As a result, our Services Segment revenues are subject to differences relating to timing and project value.

Cost of Goods Sold

Cost of goods sold increased \$31,658,000 for the year ended December 31, 2020, as compared to the year ended December 31, 2019, as follows:

(In thousands)	2020	% Revenue	2019	% Revenue	Change
Treatment	\$ 24,652	81.8	\$ 28,116	69.7	\$ (3,464)
Services	64,881	86.2	29,759	89.9	35,122
Total	<u>\$ 89,533</u>	<u>84.9</u>	<u>\$ 57,875</u>	<u>78.8</u>	<u>\$ 31,658</u>

Cost of goods sold for the Treatment Segment decreased approximately \$3,464,000 or 12.3%. Treatment Segment costs of goods sold for the twelve months ended December 31, 2019 included additional closure costs recorded in the amount of \$330,000 for our East Tennessee Materials and Energy Corporation ("M&EC") facility due to finalization of closure requirements in connection with the closure of the facility. Excluding the closure costs recorded in 2019, Treatment Segment cost of goods sold decreased \$3,134,000 or 11.3% primarily due to the decrease in revenue. Excluding the closure costs recorded in 2019, Treatment Segment variable costs decreased by approximately \$3,516,000 primarily due to lower disposal, transportation, material and supplies and outside services costs. Our overall fixed costs were higher by approximately \$382,000 resulting from the following: maintenance expenses were higher by \$280,000; regulatory expenses were higher by approximately \$190,000; depreciation expenses were higher by approximately \$219,000 primarily due to more financed leases; general expenses were lower by

approximately \$61,000 in various categories; salaries and payroll costs were lower by approximately \$175,000; and travel expenses were lower by approximately \$71,000 due to restrictions implemented resulting from COVID-19. Services Segment cost of goods sold increased \$35,122,000 or 118.0% primarily due to increased revenue as discussed above. The increase in cost of goods sold within our Services Segment was primarily due to higher salaries and payroll costs, travel, and outside services expenses totaling approximately \$31,068,000, higher material and supplies, regulatory and disposal costs totaling approximately \$3,312,000, and higher general expenses of \$742,000 in various categories. Payroll costs within our Services Segment included higher expenses for project related incentives. Included within cost of goods sold is depreciation and amortization expense of \$1,555,000 and \$1,301,000 for the twelve months ended December 31, 2020, and 2019, respectively.

Gross Profit

Gross profit for the year ended December 31, 2020 was \$309,000 higher than 2019 as follows:

(In thousands)	2020	% Revenue	2019	% Revenue	Change
Treatment	\$ 5,491	18.2	\$ 12,248	30.3	\$ (6,757)
Services	10,402	13.8	3,336	10.1	7,066
Total	<u>\$ 15,893</u>	15.1	<u>\$ 15,584</u>	21.2	<u>\$ 309</u>

Treatment Segment gross profit decreased \$6,757,000 or 55.2% and gross margin decreased to 18.2% from 30.3%. Excluding the additional closure costs of \$330,000 recorded in the twelve months ended December 31, 2019 in connection with the closure of our M&EC facility as discussed above, gross profit decreased \$7,087,000 or 56.3% and gross margin decreased to 18.2% from 31.2% primarily due to lower revenue from lower waste volume and lower averaged price waste from revenue mix. In the Services Segment, gross profit increased \$7,066,000 or 211.8% and gross margin increased from 10.1% to 13.8% primarily due to the increase in revenue. Our overall Services Segment gross margin is impacted by our current projects which are competitively bid on and will therefore, have varying margin structures.

SG&A

SG&A expenses decreased \$88,000 for the year ended December 31, 2020 as compared to the corresponding period for 2019 as follows:

(In thousands)	2020	% Revenue	2019	% Revenue	Change
Administrative	\$ 5,537	—	\$ 5,395	—	\$ 142
Treatment	3,819	12.7	3,955	9.8	(136)
Services	2,418	3.2	2,512	7.6	(94)
Total	<u>\$ 11,774</u>	11.2	<u>\$ 11,862</u>	16.1	<u>\$ (88)</u>

The increase in Administrative SG&A was primarily due to the following: general expenses were higher by approximately \$84,000 in various categories; director stock option expenses were higher by approximately \$75,000 due to options granted to new directors in addition to higher fair value of options granted to re-elected directors; outside services expenses were higher by approximately \$16,000 resulting from more consulting/subcontract matters; depreciation expenses were higher by approximately \$14,000; salaries and payroll costs were higher by approximately \$13,000; and travel expenses were lower by approximately \$60,000 due to restrictions implemented resulting from the impact of COVID-19. Treatment SG&A was lower primarily due to the following: travel expenses were lower by approximately \$109,000 due to restrictions implemented resulting from the impact of COVID-19; general expenses were lower by \$123,000 in various categories which included lower trade show expenses of \$122,000 resulting from the cancellation of certain trade shows due to impact of COVID-19; and salaries and payroll costs were higher by approximately \$96,000. Services Segment SG&A was lower primarily due to the following: travel expenses were lower by approximately \$119,000 due to restrictions implemented resulting from the impact of COVID-19; bad debt expenses were lower by approximately \$432,000 as certain customer accounts which we had previously reserved for were collected in 2020 and additional bad debt expenses were recorded in

2019 for a certain account receivable which was determined not to be collectible at December 31, 2019; and salaries and payroll costs were higher by approximately \$457,000. Included in SG&A expenses is depreciation and amortization expense of \$41,000 and \$41,000 for the twelve months ended December 31, 2020 and 2019, respectively.

R&D

R&D expenses increased \$12,000 for the year ended December 31, 2020 as compared to the corresponding period of 2019 as follows:

(In thousands)	2020	2019	Change
Administrative	\$ 76	\$ 23	\$ 53
Treatment	243	401	(158)
Services	132	12	132
PF Medical	311	314	(3)
Total	<u>\$ 762</u>	<u>\$ 750</u>	<u>\$ 12</u>

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

Interest Income

Interest income decreased by approximately \$197,000 for the twelve months ended December 31, 2020 as compared to the corresponding period of 2019. The decrease was primarily due to lower interest earned on the finite risk sinking funds from lower interest rate. The decrease in interest income was also attributed to lower interest earned from lower finite risk sinking fund balance resulting from the release of \$5,000,000 in finite risk sinking funds by AIG Specialty Insurance Company (“AIG”) to us at the end of July 2019 in connection with the closure of our M&EC facility. The \$5,000,000 in finite sinking funds represented a partial release of the total collateral held under our finite risk insurance policy.

Interest Expense

Interest expense decreased by approximately \$34,000 for the twelve months ended December 31, 2020 as compared to the corresponding period of 2019 primarily due to lower interest expense from our declining term loan balance outstanding and lower interest rate. Also, interest expense was lower from accelerated declining loan balance outstanding resulting from payments of principal on the \$2,500,000 loan that we entered into with Robert Ferguson on April 1, 2019. This loan was paid-in-full by us by the end December 2020. The overall decrease in interest expense was partially offset by higher interest expense from more finance leases and interest accrued for the PPP Loan (see “Liquidity and Capital Resources – Financing Activities” and “The CARES Act – PPP Loan” for further information of these loans).

Interest Expense- Financing Fees

Interest expense-financing fees increased approximately \$86,000 for the twelve months ended December 31, 2020 as compared to the corresponding period of 2019. The increase was primarily due to debt discount/debt issuance costs amortized as financing fees in connection with the issuance of our Common Stock and a purchase Warrant as consideration for us receiving the \$2,500,000 loan from Robert Ferguson which was paid off early by us at the end of December 2020.

Income Taxes

We had income tax benefit of \$189,000 and income tax expense of \$157,000 for continuing operations for the years ended December 31, 2020 and 2019, respectively. The Company’s effective tax rates were approximately 6.4% and 5.4% for the twelve months ended December 31, 2020 and 2019, respectively. The tax benefit for the year ended December 31, 2020 resulted primarily from state tax true-ups related to our amended tax returns and a reduction in the naked credit deferred tax liabilities (“DTL”) resulting from a reduction in estimated state apportionment percentage.

Discontinued Operations

Our discontinued operations consist of all our subsidiaries included in our Industrial Segment which encompasses subsidiaries divested in 2011 and prior and three previously closed locations.

Our discontinued operations had no revenue for the twelve months ended December 31, 2020 and 2019. We incurred net losses of \$412,000 and \$547,000 for our discontinued operations for the twelve months ended December 31, 2020 and 2019, respectively (net of taxes of \$0 for each period). The losses incurred for each period were primarily due to the administration and continued monitoring of our discontinued operations. Our net loss for the year ended December 31, 2019 also included an increase of approximately \$50,000 in remediation reserve for our Perma-Fix of Memphis (“PFM”) subsidiary due to reassessment of the remediation reserve.

Liquidity and Capital Resources

Our cash flow requirements during 2020 were primarily financed by our operations, credit facility availability, and the PPP Loan that we received under the CARES Act as discussed below (see “CARES Act – PPP Loan”). We generated approximately \$7,867,000 of cash from our continuing operations. Subject to the impact of COVID-19 as discussed above, our cash flow requirements for the next twelve months will consist primarily of general working capital needs, scheduled principal payments on our debt obligations, remediation projects, and planned capital expenditures. We plan to fund these requirements from our operations, credit facility availability, and cash on hand which was approximately \$7,924,000 at December 31, 2020. We continue to explore all sources of increasing our capital to supplement our liquidity requirements, when needed, and to improve our revenue and working capital. We are continually reviewing operating costs and reviewing the possibility of further reducing operating costs and non-essential expenditures to bring them in line with revenue levels, when necessary. At this time, we believe that our cash flows from operations, our available liquidity from our credit facility, and our cash on hand should be sufficient to fund our operations for the next twelve months. However, due to the uncertainty of COVID-19, there are no assurances such will be the case in the events that certain of our customers continue to delay waste shipments and/or elect to shut down projects again due to COVID-19. As previously disclosed, our Medical Segment substantially reduced its R&D costs and activities due to the need for capital to fund such activities. We continue to seek various sources of potential funding for our Medical Segment. We anticipate that our Medical Segment will not resume full R&D activities until it obtains the necessary funding through obtaining its own credit facility or additional equity raise or obtaining new partners willing to fund its R&D activities. If the Medical Segment is unable to raise the necessary capital, the Medical Segment could be required to further reduce, delay or eliminate its R&D program.

The following table reflects the cash flow activity for the year ended December 31, 2020 and the corresponding period of 2019:

(In thousands)	2020	2019
Cash provided by (used in) operating activities of continuing operations	\$ 7,867	\$ (4,023)
Cash used in operating activities of discontinued operations	(499)	(660)
Cash used in investing activities of continuing operations	(1,711)	(1,533)
Cash provided by investing activities of discontinued operations	118	121
Cash provided by financing activities of continuing operations	1,892	992
Effect of exchange rate changes on cash	6	19
Increase (decrease) in cash and finite risk sinking fund (restricted cash)	<u>\$ 7,673</u>	<u>\$ (5,084)</u>

At December 31, 2020, we were in a positive cash position with no revolving credit balance. At December 31, 2020, we had cash on hand of approximately \$7,924,000, which included account balances of our foreign subsidiaries totaling approximately \$377,000. At December 31, 2020, we had finite risk sinking funds (restricted cash) of approximately \$11,446,000, which represents cash held as collateral under our financial assurance policy.

Operating Activities

Accounts receivable, net of allowances for doubtful accounts, totaled \$9,659,000 at December 31, 2020, a decrease of \$3,519,000 from the December 31, 2019 balance of \$13,178,000. The decrease was primarily due to timing of invoicing which was reflective of the increase in our unbilled receivables and timing of our accounts receivable collection. We provide a variety of payment terms to our customers; therefore, our accounts receivable are impacted by these terms and the related timing of accounts receivable collections. The amount of our accounts receivables and collection could be materially impacted the longer COVID-19 persists.

Accounts payable, totaled \$15,382,000 at December 31, 2020, an increase of \$6,105,000 from the December 31, 2019 balance of \$9,277,000. The increase in accounts payable was attributed to an increase in costs within our Services Segment resulting from the significant increase in revenue. Additionally, our accounts payable are impacted by the timing of payments as we are continually managing payment terms with our vendors to maximize our cash position throughout all segments.

We had working capital of \$3,672,000 (which included working capital of our discontinued operations) at December 31, 2020, as compared to working capital of \$26,000 at December 31, 2019. The improvement in our working capital was primarily due to the proceeds that we received from the PPP Loan under the Paycheck Protection Program (see “PPP Loan” under “CARES Act” below for a discussion of this loan) and the increase in our unbilled receivables from the significant increase in revenues within our Services Segment. The improvement in our working capital was partially offset by the increase in our accounts payable. Additionally, at December 31, 2020, we classified approximately \$3,191,000 of the outstanding PPP Loan balance of \$5,318,000 as “Current portion of long-term debt” on our Consolidated Balance Sheets. We have applied for forgiveness on repayment of the entire PPP Loan balance which is subject to the review and approval of our lender and the SBA.

Investing Activities

During 2020, our purchases of capital equipment totaled approximately \$2,598,000, of which \$883,000 was subject to financing, with the remaining funded from cash from operations and our credit facility. We have budgeted approximately \$2,000,000 for 2021 capital expenditures primarily for our Treatment and Services Segments to maintain operations and regulatory compliance requirements and support revenue growth. Certain of these budgeted projects may either be delayed until later years or deferred altogether. We plan to fund our capital expenditures from cash from operations and/or financing. The initiation and timing of projects are also determined by financing alternatives or funds available for such capital projects.

Financing Activities

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

Payment of annual rate of interest due on the revolving credit under the Revised Loan Agreement was at prime (3.25% at December 31, 2020) plus 2% and the term loan at prime plus 2.5%.

On May 8, 2020, we entered into a Second Amended and Restated Revolving Credit, Term Loan and Security Agreement (the “New Loan Agreement”) with PNC, replacing our previous Revised Loan Agreement with PNC. The New Loan Agreement provides us with the following credit facility:

- up to \$18,000,000 revolving credit facility, subject to the amount of borrowings based on a percentage of eligible receivables and subject to certain reserves; and

- a term loan of \$1,741,818, which requires monthly installments of \$35,547.

The New Loan Agreement terminates as of May 15, 2024, unless sooner terminated.

Similar to our Revised Loan Agreement, the New Loan Agreement requires us to meet certain customary financial covenants, including, among other things, a minimum Tangible Adjusted Net Worth requirement of \$27,000,000 at all times; maximum capital spending of \$6,000,000 annually; and a minimum fixed charge coverage ratio ("FCCR") requirement of 1.15:1.

Under the New Loan Agreement, payment of annual rate of interest due on the credit facility is as follows:

- revolving credit at prime plus 2.50% or London InterBank Offer Rate ("LIBOR") plus 3.50% and the term loan at prime plus 3.00% or LIBOR plus 4.00%. We can only elect to use the LIBOR interest payment option after we become compliant with meeting the minimum FCCR of 1.15:1; and
- Upon the achievement of a FCCR of greater than 1.25:1, we have the option of paying an annual rate of interest due on the revolving credit at prime plus 2.00% or LIBOR plus 3.00% and the term loan at prime plus 2.50% or LIBOR plus 3.50%. We met this FCCR in each of the quarters of 2020. Upon meeting the FCCR of 1.25:1, this interest payment option will remain in place in the event that our future FCCR falls below 1.25:1.

Under the LIBOR option of interest payment noted above, a LIBOR floor of 0.75% shall apply in the event that LIBOR falls below 0.75% at any point in time.

Pursuant to the New Loan Agreement, we may terminate the New Loan Agreement upon 90 days' prior written notice upon payment in full of our obligations under the New Loan Agreement. We have agreed to pay PNC 1.0% of the total financing in the event we pay off our obligations on or before May 7, 2021 and 0.5% of the total financing if we pay off our obligations after May 7, 2021 but prior to or on May 7, 2022. No early termination fee shall apply if we pay off our obligations under the New Loan Agreement after May 7, 2022.

At December 31, 2020, the borrowing availability under our revolving credit was approximately \$14,220,000, based on our eligible receivables and includes a reduction in borrowing availability of approximately \$3,026,000 from outstanding standby letters of credit.

Our credit facility under our Revised and New Loan Agreement with PNC contains certain financial covenant requirements, along with customary representations and warranties. A breach of any of these financial covenant requirements, 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. We met our financial covenant requirements in 2020, including our quarterly FCCR requirements. We expect to meet our financial covenant requirements in the next twelve months; however, if we fail to meet any of our financial covenant requirements and our lender does not waive the non-compliance or revise our covenant so that we are in compliance, our lender could accelerate the repayment of borrowings under our credit facility and terminate our credit facility. In the event that our lender accelerates the payment of our borrowings and terminate our credit facility, we may not have sufficient liquidity to repay our debt under our credit facility and other indebtedness.

As previously disclosed, on April 1, 2019, we completed a lending transaction with Robert Ferguson (the "Lender"), whereby we borrowed from the Lender the sum of \$2,500,000 pursuant to the terms of a Loan and Security Purchase Agreement and promissory note (the "Loan"). The Lender is a shareholder of ours and also serves as a consultant to us in connection with our Test Bed Initiative ("TBI") at our Perma-Fix Northwest Richland, Inc. ("PFNWR") subsidiary. The proceeds from the Loan were used for general working capital purposes. The Loan is unsecured, with a term of two years with interest payable at a fixed interest rate of 4.00% per annum. The Loan provides for monthly payments of accrued interest only during

the first year of the Loan, with the first interest payment due May 1, 2019 and monthly payments of approximately \$208,333 in principal plus accrued interest starting in the second year of the Loan. The Loan also allows for prepayment of principal payments over the term of the Loan without penalty with such prepayment of principal payments to be applied to the second year of the loan payments at our discretion. In December 2020, the Loan was paid-in-full. In connection with this capital raise transaction described above and consideration for us receiving the Loan, we issued a Warrant (the “Warrant”) to the Lender to purchase up to 60,000 shares of our Common Stock at an exercise price of \$3.51 per share, which was the closing bid price for a share of our Common Stock on NASDAQ.com immediately preceding the execution of the Loan and Warrant. The Warrant expires on April 1, 2024 and remains outstanding at December 31, 2020. As further consideration for this capital raise transaction relating to the Loan, we also issued 75,000 shares of its Common Stock to the Lender. The fair value of the Warrant and Common Stock and the related closing fees incurred from the transaction totaled approximately \$398,000 and was recorded as debt discount/debt issuance costs which has been fully amortized as interest expense – financing fees. The 75,000 shares of Common Stock, the Warrant and the 60,000 shares of Common Stock that may be purchased under the Warrant were and will be issued in a private placement that was and will be exempt from registration under Rule 506 and/or Sections 4(a)(2) and 4(a)(5) of the Securities Act of 1933, as amended (the “Act”) and bear a restrictive legend against resale except in a transaction registered under the Act or in a transaction exempt from registration thereunder.

The CARES Act

PPP Loan

On April 14, 2020, we entered into a promissory note with PNC, our credit facility lender, in the amount of approximately \$5,666,000 under the PPP (the “PPP Loan”). The PPP was established under the CARES Act and is administered by the SBA. On June 5, 2020, the Paycheck Protection Program Flexibility Act of 2020 (“Flexibility Act”) was signed into law which amended the CARES Act. The note evidencing the PPP Loan contains events of default relating to, among other things, payment defaults, breach of representations and warranties, and provisions of the promissory note. During the third quarter of 2020, we repaid approximately \$348,000 of the PPP Loan to PNC resulting from clarification in the loan calculation at the time of the loan origination.

Under the terms of the Flexibility Act, we can apply for and be granted forgiveness for all or a portion of the PPP Loan. Such forgiveness will be determined, subject to limitations, based on the use of loan proceeds by us for eligible payroll costs, mortgage interest, rent and utility costs and the maintenance of employee and compensation levels for the covered period (which is defined as a 24 week period, beginning April 14, 2020, the date in which proceeds from the PPP Loan was disbursed to us by PNC). At least 60% of such forgiven amount must be used for eligible payroll costs. On October 5, 2020, we applied for forgiveness on repayment of the loan balance as permitted under the program, which is subject to the review and approval of our lender and the SBA. If all or a portion of the PPP Loan is not forgiven, all or the remaining portion of the loan will be for a term of two years but can be prepaid at any time prior to maturity without any prepayment penalties. The annual interest rate on the PPP Loan is 1.0% and no payments of principal or interest are due until the date that the SBA remits the loan forgiveness amount to our lender. While our PPP Loan currently has a two year maturity, the Flexibility Act permits us to request a five year maturity with our lender. At December 31, 2020, we have not received a determination on potential forgiveness on any portion of the PPP Loan balance; therefore, we have classified approximately \$3,191,000 of the PPP Loan balance as “Current portion of long-term debt,” on our Consolidated Balance Sheets, which was based on payment of the PPP Loan starting in July 2021 (10 months from end of our covered period) in accordance with the terms of our PPP Loan agreement.

Deferral of Employment Tax Deposits

The CARES Act, as amended by the Flexibility Act, provides employers the option to defer the payment of an employer’s share of social security taxes beginning on March 27, 2020 through December 31, 2020, with 50% of the amount of social security taxes deferred to become due on December 31, 2021 with the remaining 50% due on December 31, 2022. We elected to defer such taxes starting in mid-April 2020. At December 31, 2020, we deferred payment of approximately \$1,252,000 in our share of social security taxes, of which approximately \$626,000 is included in “Other long-term liabilities,” with the remaining balance included in “Accrued expenses” within current liabilities in the Company’s Consolidated Balance Sheets.

Off Balance Sheet Arrangements

From time to time, we are required to post standby letters of credit and various bonds to support contractual obligations to customers and other obligations, including facility closures. At December 31, 2020, the total amount of standby letters of credit outstanding totaled approximately \$3,026,000 and the total amount of bonds outstanding totaled approximately \$46,388,000. We also provide closure and post-closure requirements through a financial assurance policy for certain of our Treatment Segment facilities through AIG. At December 31, 2020, the closure and post-closure requirements for these facilities were approximately \$19,651,000.

Critical Accounting Policies and Estimates

Our consolidated financial statements are prepared based upon the selection and application of accounting principles generally accepted in the United States of America (“US GAAP”), which may require us to make estimates, judgments and assumptions that affect amounts reported in our financial statements and accompanying notes. The accounting policies below are those we believe affect the more significant estimates and judgments used in preparation of our financial statements. Our other accounting policies are described in the accompanying notes to our consolidated financial statements of this Form 10-K (see “Item 8 – Financial Statements and Supplementary Data” – “Notes to Consolidated Financial Statements” – “Note 2 – Summary of Significant Accounting Policies”):

Intangible Assets. Intangible assets consist primarily of the recognized value of the permits required to operate our business. We continually monitor the propriety of the carrying amount of our permits to determine whether current events and circumstances warrant adjustments to the carrying value.

Indefinite-lived intangible assets are not amortized but are reviewed for impairment annually as of October 1, or when events or changes in the business environment indicate that the carrying value may be impaired. If the fair value of the asset is less than the carrying amount, we perform a quantitative test to determine the fair value. The impairment loss, if any, is measured as the excess of the carrying value of the asset over its fair value. Significant judgments are inherent in these analyses and include assumptions for, among other factors, forecasted revenue, gross margin, growth rate, operating income, timing of expected future cash flows, and the determination of appropriate long-term discount rates.

Impairment testing of our permits related to our Treatment reporting unit as of October 1, 2020 and 2019 resulted in no impairment charges.

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 as of October 1. 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.

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. ARO’s 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, we 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 and are included in cost of goods sold in the Consolidated Statements of Operations. 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 and are capitalized and charged as depreciation expense, in accordance with our depreciation policy.

Recent Accounting Pronouncements

See “Item 8 – Financial Statements and Supplementary Data” – “Notes to Consolidated Financial Statements” – “Note 2 – Summary of Significant Accounting Policies” for the recent accounting pronouncements that have been adopted during the year ended December 31, 2020, or will be adopted in future periods.

Known Trends and Uncertainties

Economic Conditions. Our business continues to be heavily dependent on services that we provide to governmental clients, primarily as subcontractors for others who are prime contractors to government authorities (particularly the U.S Department of Energy and U.S. Department of Defense) or directly as the prime contractor. We believe demand for our services will continue to be subject to fluctuations due to a variety of factors beyond our control, including the economic conditions and the manner in which the government entity will be required to spend funding to remediate various sites. In addition, our U.S. governmental contracts and subcontracts relating to activities at governmental sites are generally subject to termination or renegotiation on 30 days notice at the government’s option. The TOAs with the Canadian government generally provide that the government may terminate a TOA at any time for convenience. Significant reductions in the level of governmental funding or specifically mandated levels for different programs that are important to our business could have a material adverse impact on our business, financial position, results of operations and cash flows.

Significant Customers. Our Treatment and Services Segments have significant relationships with the U.S and Canadian governmental authorities through contracts entered into indirectly as subcontractors for others who are prime contractors or directly as the prime contractor to government authorities. Our inability to continue under existing contracts that we have with the U.S government and Canadian government authorities (directly or indirectly as a subcontractor) or significant reductions in the level of governmental funding in any given year could have a material adverse impact on our operations and financial condition.

We performed services relating to waste generated by government clients (domestic and foreign (primarily Canadian)), either directly as a prime contractor or indirectly for others as a subcontractor to government entities, representing approximately \$96,582,000, or 91.6%, of our total revenue during 2020, as compared to \$59,985,000, or 81.7%, of our total revenue during 2019.

Revenue generated by us as a subcontractor to a customer for a remediation project performed for a government entity (the “DOE”) within our Services Segment in 2020 and 2019 accounted for approximately \$41,011,000 or 38.9% and \$8,529,000 or 11.6% (included in revenue generated relating to government clients above) of our total revenue for 2020 and 2019, respectively. This remediation project included among other things, decontamination support of a building. As work progressed throughout stages of this project in 2020, additional contaminations were regularly discovered which resulted in approval for additional work to be performed under this project. This project is expected to be completed by the first half of 2021.

As our revenues are project/event based where the completion of one contract with a specific customer may be replaced by another contract with a different customer from year to year, we do not believe the loss of one specific customer from one year to the next will generally have a material adverse effect on our operations and financial condition.

COVID-19 Impact. The extent of the impact of the COVID-19 pandemic on our business is uncertain and difficult to predict, as the responses to the pandemic continue to evolve rapidly. Since the latter part of the second quarter of 2020, all of the projects within our Services Segment that were previously shutdown have restarted as stay-at-home orders and certain other restrictions resulting from the pandemic were lifted. Within our Treatment Segment, we continue to experience delays in waste shipment from certain customers directly related to the impact of COVID-19 including generator shutdowns and limited sustained operations, along with other factors. However, we expect to see a gradual return in waste receipts from these customers

starting in the first half of 2021 as they accelerate operations. COVID-19 disruption could have a material adverse effect on our business as our customers could curtail and reduce capital and overall spending.

The severity of the impact the COVID-19 pandemic on our business will depend on a number of factors, including, but not limited to, the duration and severity of the pandemic, the extent and severity of the impact on our customers, the impact on governmental programs and budgets, distribution of COVID-19 vaccines, the rate at which people are inoculated with the vaccines, and how quickly and to what extent normal economic and operating conditions resume, all of which are uncertain and cannot be predicted with any accuracy or confidence at this time. Our future results of operations and liquidity could be adversely impacted by continued delays in waste shipments and/or the recurrence of project work shut downs as well as potential partial/full shutdown of any of our facilities due to COVID-19.

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.

We have three remediation projects, which are currently in progress relating to our Perma-Fix of Dayton, Inc. ("PFD"), PFM and Perma-Fix of South Georgia, Inc. ("PFSG") subsidiaries, all within our discontinued operations. These remediation projects principally entail the removal/remediation of contaminated soil and, in most cases, the remediation of surrounding ground water. The remediation activities are closely reviewed and monitored by the applicable state regulators. 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, 2020, we had total accrued environmental remediation liabilities of \$854,000, a decrease of \$73,000 from the December 31, 2019 balance of \$927,000. The decrease represents payments made on remediation projects for our PFSG and PFD subsidiaries. At December 31, 2020, \$744,000 of the total accrued environmental liabilities was recorded as current.

Related Party Transactions

David Centofanti

David Centofanti serves as our Vice President of Information Systems. For such position, he received annual compensation of \$181,000 and \$177,000 for 2020 and 2019, respectively. David Centofanti is the son of Dr. Louis Centofanti, our Executive Vice President ("EVP") of Strategic Initiatives and a member of our Board of Directors ("Board"). We believe the compensation received by David Centofanti for his technical expertise which he provides to us is competitive and comparable to compensation we would have to pay to an unaffiliated third party with the same technical expertise.

Employment Agreements

We entered into an employment agreement with each of Mark Duff, President and Chief Executive Officer ("CEO"), Dr. Louis Centofanti, EVP of Strategic Initiatives, Ben Naccarato, Chief Financial Officer ("CFO"), Andrew Lombardo, EVP of Nuclear and Technical Services, and Richard Grondin, EVP of Waste Treatment Operations, with each employment agreement dated July 22, 2020 (each employment agreement referred to as the "New Employment Agreement"). We had entered into an employment agreement with each of Mark Duff, Dr. Louis Centofanti and Ben Naccarato on September 8, 2017 which each of the

employment agreement was terminated effective July, 22, 2020 upon the execution of the New Employment Agreement with Mark Duff, Dr. Louis Centofanti and Ben Naccarato.

Each New Employment Agreement is effective for three years from July 22, 2020 (the “Initial Term”) unless earlier terminated by the Company or by the executive officer. At the end of the Initial Term of each New Employment Agreement, each New Employment Agreement will automatically be extended for one additional year, unless at least six months prior to the expiration of the Initial Term, we or the executive officer provides written notice not to extend the terms of the New Employment Agreement. Each New Employment Agreement provides for annual base salary, performance bonuses (as provided in the Management Incentive Plan (“MIP”) as approved by our Compensation and Stock Option Committee (the “Compensation Committee”) and Board) and other benefits commonly found in such agreement.

Pursuant to each New Employment Agreement, if the executive officer’s employment is terminated due to death/disability or for cause (as defined in the agreements), we will pay to the executive officer or to his estate an amount equal to the sum of any unpaid base salary and accrued unused vacation time through the date of termination and any benefits due to the executive officer under any employee benefit plan (the “Accrued Amounts”) plus any performance compensation payable pursuant to the MIP with respect to the fiscal year immediately preceding the date of termination.

If the executive officer terminates his employment for “good reason” (as defined in the agreements) or is terminated by us without cause (including any such termination for “good reason” or without cause within 24 months after a Change in Control (as defined in the agreement)), we will pay the executive officer the Accrued Amounts, two years of full base salary, and two times the performance compensation (under the MIP) earned with respect to the fiscal year immediately preceding the date of termination provided the performance compensation earned with respect to the fiscal year immediately preceding the date of termination has not been paid. If performance compensation earned with respect to the fiscal year immediately preceding the date of termination has been made to the executive officer, the executive officer will be paid an additional year of the performance compensation earned with respect to the fiscal year immediately preceding the date of termination. If the executive terminates his employment for a reason other than for good reason, we will pay to the executive an amount equal to the Accrued Amounts plus any performance compensation payable pursuant to the MIP with respect to the fiscal year immediately preceding the date of termination.

If there is a Change in Control (as defined in the agreements), all outstanding stock options to purchase common stock held by the executive officer will immediately become exercisable in full commencing on the date of termination through the original term of the options. In the event of the death of an executive officer, all outstanding stock options to purchase common stock held by the executive officer will immediately become exercisable in full commencing on the date of death, with such options exercisable for the lesser of the original option term or twelve months from the date of the executive officer’s death. In the event an executive officer terminates his employment for “good reason” or is terminated by the Company without cause, all outstanding stock options to purchase common stock held by the executive officer will immediately become exercisable in full commencing on the date of termination, with such options exercisable for the lesser of the original option term or within 60 days from the date of the executive’s date of termination. Severance benefits payable with respect to a termination (other than Accrued Amounts) shall not be payable until the termination constitutes a “separation from service” (as defined under Treasury Regulation Section 1.409A-1(h)).

MIPs

On January 16, 2020, our Board and the Compensation Committee approved individual MIP for each Mark Duff, CEO and President, Ben Naccarato, EVP and CFO, Dr. Louis Centofanti, EVP of Strategic Initiatives and Andy Lombardo, who was appointed by our Board to the position of EVP of Nuclear and Technical Services and an executive officer of the Company on January 16, 2020. Mr. Lombardo previously held the position of Senior Vice President (“SVP”) of Nuclear and Technical Services. Additionally, on July 22, 2020, our Board and our Compensation Committee approved a MIP for Richard Grondin who was appointed by our Board to the position of EVP of Waste Treatment Operations and an executive officer of the Company. Mr. Grondin previously held the position of Vice President of Western Operations within our

Treatment Segment. Each of the MIPs is effective January 1, 2020 and applicable for year ended December 31, 2020. Each MIP provides guidelines for the calculation of annual cash incentive-based compensation, subject to Compensation Committee oversight and modification. Each MIP awards cash compensation based on achievement of performance thresholds, with the amount of such compensation established as a percentage of the executive's 2020 annual base salary. The potential target performance compensation ranges from 5% to 150% of the base salary for the CEO (\$17,220 to \$516,600), 5% to 100% of the base salary for the CFO (\$14,000 to \$280,000), 5% to 100% of the base salary for the EVP of Strategic Initiatives (\$11,667 to \$233,336), 5% to 100% of the base salary for the EVP of Nuclear and Technical Services (\$14,000 to \$280,000) and 5% to 100% (\$12,000 to \$240,000) of the base salary for the EVP of Waste Treatment Operations. The total incentive compensation earned under the 2020 MIPs for the executive officers was approximately \$419,000 and is payable on or about 90 days after year-end, or sooner, based on finalization of our audited financial statements for 2020 in accordance to the MIPs.

On January 21, 2021, our Board and the Company Compensation Committee approved individual MIP for the calendar year 2021 for each CEO, EVP and CFO, EVP of Strategic Initiatives, EVP of Nuclear and Technical Services and EVP of Waste Treatment Operations. Each of the MIPs is effective January 1, 2021 and applicable for year 2021. Each MIP provides guidelines for the calculation of annual cash incentive-based compensation, subject to Compensation Committee oversight and modification. Each MIP awards cash compensation based on achievement of performance thresholds, with the amount of such compensation established as a percentage of the executive's 2021 annual base salary at the time of the approval of the MIP. The potential target performance compensation ranges from 5% to 150% of the base salary for the CEO (\$17,220 to \$516,600), 5% to 100% of the base salary for the CFO (\$14,000 to \$280,000), 5% to 100% of the base salary for the EVP of Strategic Initiatives (\$11,667 to \$233,336), 5% to 100% of the base salary for the EVP of Nuclear and Technical Services (\$14,000 to \$280,000) and 5% to 100% (\$12,000 to \$240,000) of the base salary for the EVP of Waste Treatment Operations.

Salary

On January 16, 2020, the Board, with the approval of the Compensation Committee approved the following salary increase for the Company's executive officers effective January 1, 2020:

- Annual base salary for Mark Duff, CEO and President, was increased to \$344,400 from \$287,000.
- Annual base salary for Ben Naccarato, who was promoted to EVP and CFO from VP and CFO, was increased to \$280,000 from \$235,231; and
- Annual base salary for Andy Lombardo, who was appointed to the position of EVP of Nuclear and Technical Services as discussed above, was increased to \$280,000 from \$258,662, which was the annual base salary that Mr. Lombardo earned as SVP of Nuclear and Technical Services and prior to his appointment as an executive officer of the Company by the Board.

Additionally, as a result of Richard Grondin's appointment by the Board to the position of EVP of Waste Treatment and an executive officer on July 22, 2020, his annual salary was increased from \$208,000 as Vice President of Western Operations within our Treatment Segment to \$240,000, effective July 22, 2020.

In February 2021, the Compensation Committee approved an annual salary cost of living adjustment of approximately 2.3% to take into effect April 1, 2021 for each of our executive officers.

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;
- reductions in the level of government funding in future years;
- R&D activity and necessary capital of our Medical Segment;
- business strategy;
- reducing operating costs and non-essential expenditures;
- ability to meet loan agreement covenant requirements;
- cash flow requirements;
- accounts receivable impact;
- sufficient liquidity to continue business;
- PPP Loan forgiveness;
- furlough or layoff eligible employees;
- future results of operations and liquidity;
- effect of economic disruptions on our business;
- curtail capital expenditures;
- government funding for our services;
- may not have liquidity to repay debt if our lender accelerates payment of our borrowings;
- manner in which the applicable government will be required to spend funding to remediate various sites;
- funding operations;
- fund capital expenditures from cash from operations and/or financing;
- impact from COVID-19;
- completion of material contract;
- gradual return in waste shipments;
- fund remediation expenditures for sites from funds generated internally;
- collection of accounts receivables;
- compliance with environmental regulations;
- potential effect of being a PRP;
- potential sites for violations of environmental laws and remediation of our facilities;
- continuation of contracts with federal government;
- loss of contracts;
- permitting and licensing requirements;
- partial or full shutdown of any of our facilities;
- liability from Tetra Tech claims;
- shutdown of projects and continued waste shipments delays by clients; and
- R&D costs.

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

- general economic conditions;
- contract bids, including international markets;
- material reduction in revenues;
- inability 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 government agencies (domestic and foreign) or subcontracts involving government agencies (domestic or foreign), or reduction in amount of waste delivered to the Company under the contracts or subcontracts;
- renegotiation of contracts involving government agencies (domestic and foreign);
- 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;
- impact of the COVID-19;
- audit of our PPP Loan;
- new governmental regulations;
- lender refuses to waive non-compliance or revise our covenant so that we are in compliance; and
- risk factors contained in Item 1A of this report.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Index to Consolidated Financial Statements

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Financial Statement Schedules

In accordance with the rules of Regulation S-X, schedules are not submitted because they are not applicable to or required by the Company.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

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

Opinion on the financial statements

We have audited the accompanying consolidated balance sheets of Perma-Fix Environmental Services, Inc. (a Delaware corporation) and subsidiaries (the “Company”) as of December 31, 2020 and 2019, the related consolidated statements of operations, comprehensive income, stockholders’ equity, and cash flows for the years then ended, and the related notes (collectively referred to as the “financial statements”). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2020 and 2019, 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.

Basis for opinion

These financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (“PCAOB”) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting 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.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical audit matters

Critical audit matters are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. We determined that there are no critical audit matters.

/s/ GRANT THORNTON LLP

We have served as the Company’s auditor since 2014.

Atlanta, Georgia
March 29, 2021

PERMA-FIX ENVIRONMENTAL SERVICES, INC.
CONSOLIDATED BALANCE SHEETS
As of December 31,

(Amounts in Thousands, Except for Share and Per Share Amounts)	2020	2019
ASSETS		
Current assets:		
Cash	\$ 7,924	\$ 390
Accounts receivable, net of allowance for doubtful accounts of \$404 and \$487, respectively	9,659	13,178
Unbilled receivables	14,453	7,984
Inventories	610	487
Prepaid and other assets	3,967	2,983
Current assets related to discontinued operations	22	104
Total current assets	<u>36,635</u>	<u>25,126</u>
Property and equipment:		
Buildings and land	20,139	19,967
Equipment	22,090	20,068
Vehicles	457	410
Leasehold improvements	23	23
Office furniture and equipment	1,413	1,418
Construction-in-progress	1,569	1,609
Total property and equipment	<u>45,691</u>	<u>43,495</u>
Less accumulated depreciation	<u>(27,908)</u>	<u>(26,919)</u>
Net property and equipment	17,783	16,576
Property and equipment related to discontinued operations	81	81
Operating lease right-of-use assets	2,287	2,545
Intangibles and other long term assets:		
Permits	8,922	8,790
Other intangible assets - net	875	1,065
Finite risk sinking fund (restricted cash)	11,446	11,307
Other assets	890	989
Other assets related to discontinued operations	—	36
Total assets	<u>\$ 78,919</u>	<u>\$ 66,515</u>

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

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

As of December 31,

(Amounts in Thousands, Except for Share and per Share Amounts)	2020	2019
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 15,382	\$ 9,277
Accrued expenses	6,381	6,118
Disposal/transportation accrual	1,220	1,156
Deferred revenue	4,614	5,456
Accrued closure costs - current	75	84
Current portion of long-term debt	3,595	1,300
Current portion of operating lease liabilities	273	244
Current portion of finance lease liabilities	525	471
Current liabilities related to discontinued operations	898	994
Total current liabilities	<u>32,963</u>	<u>25,100</u>
Accrued closure costs	6,290	5,957
Deferred tax liabilities	471	590
Long-term debt, less current portion	3,134	2,580
Long-term operating lease liabilities, less current portion	2,070	2,342
Long-term finance lease liabilities, less current portion	662	466
Other long-term liabilities	626	—
Long-term liabilities related to discontinued operations	252	244
Total long-term liabilities	<u>13,505</u>	<u>12,179</u>
Total liabilities	46,468	37,279
Commitments and Contingencies (Note 14)		
Stockholders' Equity:		
Preferred Stock, \$.001 par value; 2,000,000 shares authorized, no shares issued and outstanding	—	—
Common Stock, \$.001 par value; 30,000,000 shares authorized; 12,161,539 and 12,123,520 shares issued, respectively; 12,153,897 and 12,115,878 shares outstanding, respectively	12	12
Additional paid-in capital	108,931	108,457
Accumulated deficit	(74,455)	(77,315)
Accumulated other comprehensive loss	(207)	(211)
Less Common Stock in treasury, at cost; 7,642 shares	(88)	(88)
Total Perma-Fix Environmental Services, Inc. stockholders' equity	<u>34,193</u>	<u>30,855</u>
Non-controlling interest	(1,742)	(1,619)
Total stockholders' equity	<u>32,451</u>	<u>29,236</u>
Total liabilities and stockholders' equity	<u>\$ 78,919</u>	<u>\$ 66,515</u>

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

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

(Amounts in Thousands, Except for Per Share Amounts)	2020	2019
Net revenues	\$ 105,426	\$ 73,459
Cost of goods sold	<u>89,533</u>	<u>57,875</u>
Gross profit	15,893	15,584
Selling, general and administrative expenses	11,774	11,862
Research and development	762	750
Loss on disposal of property and equipment	<u>29</u>	<u>3</u>
Income from operations	3,328	2,969
Other income (expense):		
Interest income	140	337
Interest expense	(398)	(432)
Interest expense-financing fees	(294)	(208)
Other	211	223
Loss on debt extinguishment of debt	<u>(27)</u>	<u>—</u>
Income from continuing operations before taxes	2,960	2,889
Income tax (benefit) expense	<u>(189)</u>	<u>157</u>
Income from continuing operations, net of taxes	3,149	2,732
Loss from discontinued operations, net of taxes of \$0	<u>(412)</u>	<u>(541)</u>
Net income	2,737	2,191
Net loss attributable to non-controlling interest	<u>(123)</u>	<u>(124)</u>
Net income attributable to Perma-Fix Environmental Services, Inc. common stockholders	\$ <u>2,860</u>	\$ <u>2,315</u>
Net income (loss) per common share attributable to Perma-Fix Environmental Services, Inc. stockholders - basic:		
Continuing operations	\$.27	\$.24
Discontinued operations	<u>(.03)</u>	<u>(.05)</u>
Net income per common share	<u>\$.24</u>	<u>\$.19</u>
Net income (loss) per common share attributable to Perma-Fix Environmental Services, Inc. stockholders - diluted:		
Continuing operations	\$.26	\$.24
Discontinued operations	<u>(.03)</u>	<u>(.05)</u>
Net income per common share	<u>\$.23</u>	<u>\$.19</u>
Number of common shares used in computing net income (loss) per share:		
Basic	12,139	12,046
Diluted	12,347	12,060

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

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

(Amounts in Thousands)	2020	2019
Net Income	\$ <u>2,737</u>	\$ <u>2,191</u>
Other comprehensive income:		
Foreign currency translation adjustments	<u>4</u>	<u>3</u>
Total other comprehensive income	<u>4</u>	<u>3</u>
Comprehensive income	2,741	2,194
Comprehensive loss attributable to non-controlling interest	<u>(123)</u>	<u>(124)</u>
Comprehensive income attributable to Perma-Fix Environmental Services, Inc. common stockholders	\$ <u><u>2,864</u></u>	\$ <u><u>2,318</u></u>

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

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	Common	Accumulated Other	Non-controlling	Accumulated	Total
	Shares	Amount	Paid-In	Stock Held	Comprehensive	Interest in	Deficit	Stockholders'
			Capital	In Treasury	Loss	Subsidiary		Equity
Balance at December 31, 2018	<u>11,944,215</u>	<u>\$ 12</u>	<u>\$ 107,548</u>	<u>\$ (88)</u>	<u>\$ (214)</u>	<u>\$ (1,495)</u>	<u>\$ (79,630)</u>	<u>\$ 26,133</u>
Net income (loss)	—	—	—	—	—	(124)	2,315	2,191
Foreign currency translation	—	—	—	—	3	—	—	3
Issuance of Common Stock for services	71,905	—	241	—	—	—	—	241
Stock-Based Compensation	—	—	179	—	—	—	—	179
Issuance of Common Stock with debt	75,000	—	263	—	—	—	—	263
Issuance of warrant with debt	—	—	93	—	—	—	—	93
Issuance of Common Stock upon exercise of options	32,400	—	133	—	—	—	—	133
Balance at December 31, 2019	<u>12,123,520</u>	<u>\$ 12</u>	<u>\$ 108,457</u>	<u>\$ (88)</u>	<u>\$ (211)</u>	<u>\$ (1,619)</u>	<u>\$ (77,315)</u>	<u>\$ 29,236</u>
Net income (loss)	—	—	—	—	—	(123)	2,860	2,737
Foreign currency translation	—	—	—	—	4	—	—	4
Issuance of Common Stock for services	34,135	—	232	—	—	—	—	232
Stock-Based Compensation	—	—	236	—	—	—	—	236
Issuance of Common Stock upon exercise of options	3,884	—	6	—	—	—	—	6
Balance at December 31, 2020	<u>12,161,539</u>	<u>\$ 12</u>	<u>\$ 108,931</u>	<u>\$ (88)</u>	<u>\$ (207)</u>	<u>\$ (1,742)</u>	<u>\$ (74,455)</u>	<u>\$ 32,451</u>

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

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

(Amounts in Thousands)	2020	2019
Cash flows from operating activities:		
Net income	\$ 2,737	\$ 2,191
Less: loss on discontinued operations, net of taxes of \$0 (Note 9)	(412)	(541)
Income from continuing operations	3,149	2,732
Adjustments to reconcile net income from continuing operations to cash provided by (used in) operating activities:		
Depreciation and amortization	1,596	1,342
Interest on finance lease with purchase option	9	3
Loss on extinguishment of debt	27	—
Amortization of debt issuance/debt discount costs	294	208
Deferred tax (benefit) expense	(119)	4
(Recovery of) provision for bad debt reserves	(101)	386
Loss on disposal of property and equipment	29	3
Issuance of common stock for services	232	241
Stock-based compensation	236	179
Changes in operating assets and liabilities of continuing operations:		
Accounts receivable	3,620	(5,829)
Unbilled receivables	(6,469)	(4,879)
Prepaid expenses, inventories and other assets	1,147	923
Accounts payable, accrued expenses and unearned revenue	4,217	664
Cash provided by (used in) continuing operations	7,867	(4,023)
Cash used in discontinued operations	(499)	(660)
Cash provided by (used in) operating activities	7,368	(4,683)
Cash flows from investing activities:		
Purchases of property and equipment (net)	(1,715)	(1,535)
Proceeds from sale of property and equipment	4	2
Cash used in investing activities of continuing operations	(1,711)	(1,533)
Cash provided by investing activities of discontinued operations	118	121
Cash used in investing activities	(1,593)	(1,412)
Cash flows from financing activities:		
Borrowing on revolving credit	102,788	59,333
Repayments of revolving credit borrowings	(103,109)	(59,651)
Proceeds from issuance of long-term debt	5,666	2,500
Proceeds from finance leases	—	405
Principal repayment of finance lease liabilities	(615)	(272)
Principal repayments of long term debt	(2,759)	(1,344)
Payment of debt issuance costs	(85)	(112)
Proceeds from issuance of common stock upon exercise of options	6	133
Cash provided by financing activities of continuing operations	1,892	992
Effect of exchange rate changes on cash	6	19
Increase (decrease) in cash and finite risk sinking fund (restricted cash) (Note 2)	7,673	(5,084)
Cash and finite risk sinking fund (restricted cash) at beginning of period (Note 2)	11,697	16,781
Cash and finite risk sinking fund (restricted cash) at end of period (Note 2)	\$ 19,370	\$ 11,697
Supplemental disclosure:		
Interest paid	\$ 366	\$ 422
Income taxes paid	70	245
Non-cash investing and financing activities:		
Equipment purchase subject to finance lease	856	393
Equipment purchase subject to financing	27	—
Issuance of Common Stock with debt	—	263
Issuance of Warrant with debt	—	93

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

PERMA-FIX ENVIRONMENTAL SERVICES, INC.
Notes to Consolidated Financial Statements
December 31, 2020 and 2019

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 three 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
- R&D activities to identify, develop and implement innovative waste processing techniques for problematic waste streams.

In 2020, we expanded our low-level radioactive waste processing and treatment capability within our Treatment Segment through the addition of our Oak Ridge Environmental Waste Operations Center (“EWOC”) facility. The EWOC facility serves primarily as a multi-disciplinary equipment and component processing center for large component, size/volume reduction, sort/segregation, waste transload, and system operability testing. The ultimate objective will be receipt, preparation, packaging, and transportation of low-level radioactive waste to final disposal facilities (landfills, approved radiological waste repositories). Operations at the facility have been limited to date as we continue to complete transition of the site. No revenue was generated at EWOC in 2020.

SERVICES SEGMENT, which includes:

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

MEDICAL SEGMENT, which includes: R&D of the Company’s medical isotope production technology by our majority-owned Polish subsidiary, Perma-Fix Medical (“PF Medical” or the “Medical Segment”). The Company’s Medical Segment has not generated any revenue as it remains in the R&D stage and has

substantially reduced its R&D costs and activities due to the need for capital to fund these activities. All costs incurred by the Medical Segment are reflected within R&D in the accompanying consolidated financial statements.

The Company's continuing operations consist of the operations of our subsidiaries/facilities as follow: Diversified Scientific Services, Inc. ("DSSI"), Perma-Fix of Florida, Inc. ("PFF"), Perma-Fix of Northwest Richland, Inc. ("PFNWR"), Safety & Ecology Corporation ("SEC"), Perma-Fix Environmental Services UK Limited ("PF UK Limited"), Perma-Fix of Canada, Inc. ("PF Canada"), PF Medical, East Tennessee Materials & Energy Corporation ("M&EC") (facility closure completed in 2019), EWOC and Perma-Fix ERRG, a variable interest entity ("VIE") for which we are the primary beneficiary (See "Note 19 - Variable Interest Entities ("VIE") for a discussion of this VIE).

The Company's discontinued operations (see Note 9) consist of operations of all our subsidiaries included in our Industrial Segment which encompasses subsidiaries divested in 2011 and prior and three previously closed locations.

NOTE 2

SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Principles of Consolidation

The Company's consolidated financial statements include our accounts, those of our wholly-owned subsidiaries, our majority-owned Polish subsidiary, Perma-Fix Medical and Perma-Fix ERRG, a VIE for which we are the primary beneficiary as discussed above, after elimination of all significant intercompany accounts and transactions.

Use of Estimates

The Company prepares financial statements in conformity with accounting standards generally accepted in U.S. GAAP, which may require estimates of future cash flows 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. Due to the inherent uncertainty involved in making estimates, actual results could differ from those estimates.

Cash and Finite Risk Sinking Fund (Restricted Cash)

At December 31, 2020, the Company had cash on hand of approximately \$7,924,000, which included account balances of our foreign subsidiaries totaling approximately \$377,000. At December 31, 2019, the Company had cash on hand of approximately \$390,000, which reflected primarily account balances of our foreign subsidiaries totaling approximately \$388,000. At December 31, 2020 and 2019, the Company had finite risk sinking funds of approximately \$11,446,000 and \$11,307,000, respectively, which represented cash held as collateral under the Company's financial assurance policy (see "Note 14 – Commitment and Contingencies – Insurance" for a discussion of this fund).

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. The Company regularly reviews all accounts receivable balances that exceed 60 days from the invoice date and based on an assessment of current credit worthiness, estimates 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 historical experience that allows us to calculate the total allowance required. Once the Company has 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 from senior management based on required approval thresholds.

The following table sets forth the activity in the allowance for doubtful accounts for the years ended December 31, 2020 and 2019 (in thousands):

	Year Ended December 31,	
	2020	2019
Allowance for doubtful accounts - beginning of year	\$ 487	\$ 105
(Recovery of) provision for bad debt reserve	(101)	386
Recovery of write-off (write-off)	18	(4)
Allowance for doubtful accounts - end of year	<u>\$ 404</u>	<u>\$ 487</u>

Unbilled Receivables

Unbilled receivables are generated by differences between invoicing timing and our over time revenue recognition methodology used for revenue recognition purposes. As major processing and contract completion phases are completed and the costs are incurred, the Company recognizes the corresponding percentage of revenue. Within our Treatment Segment, the facilities 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 which include: 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 the facilities have processed waste but prior to our release of waste for disposal. The tasks relating to these delays can take months to complete but are generally completed within twelve months.

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, the Company has 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 net realizable value with cost determined by the first-in, first-out method.

Disposal and Transportation Costs

The Company accrues 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 for the transportation and disposal accruals.

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 improvements, which extend the useful lives of the assets, are capitalized.

Certain property and equipment expenditures are financed through leases. Amortization of financed leased assets is computed using the straight-line method over the estimated useful lives of the assets. At December

31, 2020, assets recorded under finance leases were \$2,285,000 less accumulated depreciation of \$291,000, resulting in net fixed assets under finance leases of \$1,994,000. At December 31, 2019, assets recorded under finance leases were \$1,410,000 less accumulated depreciation of \$71,000, resulting in net fixed assets under finance leases of \$1,339,000. These assets are recorded within net property and equipment on the Consolidated Balance Sheets.

Long-lived assets, such as property, plant and equipment, 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.

Our depreciation expense totaled approximately \$1,357,000 and \$1,086,000 in 2020 and 2019, respectively.

Leases

The Company accounts for leases in accordance with Financial Accounting Standards Board's ("FASB") Accounting Standards Update ("ASU") 2016-02, "Leases (Topic 842)." At the inception of an arrangement, the Company determines if an arrangement is, or contains, a lease based on facts and circumstances present in that arrangement. Lease classifications, recognition, and measurement are then determined at the lease commencement date.

The Company's operating lease right-of-use ("ROU") assets and operating lease liabilities represent primarily leases for office and warehouse spaces used to conduct our business. These leases have remaining terms of approximately 3 to 9 years which include one or more options to renew. The Company includes renewal options in valuing its ROU assets and liabilities when it determines that it is reasonably certain to exercise these renewal options. As most of our operating leases do not provide an implicit rate, the Company uses its incremental borrowing rate as the discount rate when determining the present value of the lease payments. The incremental borrowing rate is determined based on the Company's secured borrowing rate, lease terms and current economic environment. Some of our operating leases include both lease (rent payments) and non-lease components (maintenance costs such as cleaning and landscaping services). The Company has elected the practical expedient to account for lease component and non-lease component as a single component for all leases under ASU 2016-02. Lease expense for operating leases is recognized on a straight-line basis over the lease term.

Finance leases primarily consist of processing and transport equipment used by our facilities' operations. Our finance leases also include a building with land for our waste treatment operations. The Company's finance leases generally have initial terms between one to six years and some of the leases include options to purchase the underlying assets at fair market value at the conclusion of the lease term. The lease for the building and land has a term of two years with an option to buy at the end of the lease term, which the Company is reasonably certain to exercise. See "Property and Equipment" above for assets recorded under financed leases. Borrowing rates for our finance leases are either explicitly stated in the lease agreements or implicitly determined from available terms in the lease agreements.

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

Capitalized Interest

The Company's policy is to capitalize interest cost incurred on debt during the construction of projects for its use. A reconciliation of our total interest cost to "Interest Expense" as reported on our Consolidated Statements of Operations for 2020 and 2019 is as follows:

(Amounts in Thousands)	2020	2019
Interest cost capitalized	\$ —	\$ 29
Interest cost charged to expense	398	432
Total interest	<u>\$ 398</u>	<u>\$ 461</u>

Intangible Assets

Intangible assets consist primarily of the recognized value of the permits required to operate our business. Indefinite-lived intangible assets are not amortized but are reviewed for impairment annually as of October 1, or when events or changes in the business environment indicate that the carrying value may be impaired. If the fair value of the asset is less than the carrying amount, a quantitative test is performed to determine the fair value. The impairment loss, if any, is measured as the excess of the carrying value of the asset over its fair value. Judgments and estimates are inherent in these analyses and include assumptions for, among other factors, forecasted revenue, gross margin, growth rate, operating income, timing of expected future cash flows, and the determination of appropriate long-term discount rates. Impairment testing of our indefinite-lived permits related to our Treatment reporting unit as of October 1, 2020 and 2019 resulted in no impairment charges.

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 as of October 1. Definite-lived intangible assets are also tested for impairment whenever events or changes in circumstances suggest impairment might exist.

R&D

Operational innovation and technical know-how are 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. The Company conducts research internally and also through collaborations with other third parties. R&D 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 new technology and are charged to expense when incurred in accordance with ASC Topic 730, "Research and Development." The Company's R&D expenses included approximately \$311,000 and \$314,000 for the years ended December 31, 2020 and 2019, respectively, incurred by our Medical Segment.

Accrued Closure Costs and ARO

Accrued closure costs represent our estimated environmental liability to clean up our facilities, as required by our permits, in the event of closure. 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. ARO's 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 flows. Increases in the ARO liability due to passage of time impact net income as accretion expense, which is included in cost of goods sold. Changes in costs resulting from changes or expansion at the facilities require adjustment to the ARO liability and are capitalized and charged as depreciation expense, in accordance with the Company's depreciation policy.

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. 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.

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.

The Company reassesses 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 Currency

The Company's foreign subsidiaries include PF UK Limited, PF Canada and PF Medical. Assets and liabilities are translated to U.S. dollars at the exchange rate in effect at the balance sheet date and revenue and expenses at the average exchange rate for the period. Foreign currency translation adjustments for these subsidiaries are accumulated as a separate component of accumulated other comprehensive income (loss) in stockholders' equity. Gains and losses resulting from foreign currency transactions are recognized in the Consolidated Statements of Operations.

Concentration Risk

The Company performed services relating to waste generated by government clients (domestic and foreign (primarily Canadian)), either indirectly for others as a subcontractor to government entities or directly as a prime contractor, representing approximately \$96,582,000, or 91.6%, of our total revenue during 2020, as compared to \$59,985,000, or 81.7%, of our total revenue during 2019.

Revenue generated by the Company as a subcontractor to a customer for a remediation project performed for a government entity (the "DOE") within our Services Segment in 2020 and 2019 accounted for approximately \$41,011,000 or 38.9% and \$8,529,000 or 11.6% (included in revenues generated relating to government clients above) of the Company's total revenue for 2020 and 2019, respectively. This remediation project included among other things, decontamination support of a building. As work progressed throughout stages of this project in 2020, additional contaminations were regularly discovered which resulted in approval in additional work to be performed under this project. This project is expected to be completed by the first half of 2021.

As our revenues are project/event based where the completion of one contract with a specific customer may be replaced by another contract with a different customer from year to year, the Company does not believe the loss of one specific customer from one year to the next will generally have a material adverse effect on our operations and financial condition.

Financial instruments that potentially subject the Company to significant concentrations of credit risk consist principally of cash and accounts receivable. The Company maintains cash with high quality financial institutions, which may exceed Federal Deposit Insurance Corporation ("FDIC") insured amounts from time

to time. Concentration of credit risk with respect to accounts receivable is limited due to the Company's large number of customers and their dispersion throughout the United States as well as with the significant amount of work that we perform for the federal and Canadian government.

The Company had three government related customers whose total unbilled and net outstanding receivable balances represented 41.1%, 19.0% and 12.5% of the Company's total consolidated unbilled and net accounts receivable at December 31, 2020. The Company had two government related customers whose total unbilled and net outstanding receivable balances represented 12.5% and 34.3% of the Company's total consolidated unbilled and net accounts receivable at December 31, 2019.

Revenue Recognition and Related Policies

The Company recognizes revenue in accordance with FASB's ASC 606, "Revenue from Contracts with Customers." ASC 606 provides a single, comprehensive revenue recognition model for all contracts with customers. Under ASC 606, a five-step process is utilized in order to determine revenue recognition, depicting the transfer of goods or services to a customer at an amount that reflects the consideration it expects to receive in exchange for those goods or services. Under ASC 606, a performance obligation is a promise in a contract to transfer a distinct good or service to the customer and is the unit of account. A contract transaction price is allocated to each distinct performance obligation and recognized as revenues as the performance obligation is satisfied.

Treatment Segment Revenues:

Contracts in our Treatment Segment primarily have a single performance obligation as the promise to receive, treat and dispose of waste is not separately identifiable in the contract and, therefore, not distinct. Performance obligations are generally satisfied over time using the input method. Under the input method, the Company uses a measure of progress divided into major phases which include receipt (ranging from 9.0% to 50%), treatment/processing (ranging from 15% to 89%) and shipment/final disposal (ranging from 2% to 52%). As major processing phases are completed and the costs are incurred, the proportional percentage of revenue is recognized. Transaction price for Treatment Segment contracts are determined by the stated fixed rate per unit price as stipulated in the contract.

Services Segment Revenues:

Revenues for our Services Segment are generated from time and materials, cost reimbursement or fixed price arrangements:

The Company's primary obligation to customers in time and materials contracts relate to the provision of services to the customer at the direction of the customer. This provision of services at the request of the customer is the performance obligation, which is satisfied over time. Revenue earned from time and materials contracts is determined using the input method and is based on contractually defined billing rates applied to services performed and materials delivered.

The Company's primary performance obligation to customers in cost reimbursement contracts is to complete certain tasks and work streams. Each specified work stream or task within the contract is considered to be a separate performance obligation. The transaction price is calculated using an estimated cost to complete the various scope items to achieve the performance obligation as stipulated in the contract. An estimate is prepared for each individual scope item in the contract and the transaction price is allocated on a time and materials basis as services are provided. Revenue from cost reimbursement contracts is recognized over time using the input method based on costs incurred, plus a proportionate amount of fee earned.

Under fixed price contracts, the objective of the project is not attained unless all scope items within the contract are completed and all of the services promised within fixed fee contracts constitute a single performance obligation. Transaction price is estimated based upon the estimated cost to complete the overall project. Revenue from fixed price contracts is recognized over time using the output or input method. For the output method, revenue is recognized based on milestone attained on the project. For the input method, revenue is recognized based on costs incurred on the project relative to the total estimated costs of the project.

The majority of our revenue is derived from short term contracts with an original expected length of one year or less. Also, the nature of our contracts generally does not give rise to variable consideration.

Significant Payment Terms

Invoicing is based on schedules established in customer contracts. Payment terms vary by customers but are generally established at 30 days from invoicing.

Incremental Costs to Obtain a Contract

Costs incurred to obtain contracts with our customers are immaterial and as a result, the Company expenses (within selling, general and administration expenses (“SG&A”)) incremental costs incurred in obtaining contracts with our customer as incurred.

Remaining Performance Obligations

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

Within our Services Segment, there are service contracts which provide that the Company has a right to consideration from a customer in an amount that corresponds directly with the value to the customer of our performance completed to date. For those contracts, the Company has utilized the practical expedient in ASC 606-10-55-18, which allows the Company to recognize revenue in the amount for which we have the right to invoice; accordingly, the Company does not disclose the value of remaining performance obligations for those contracts.

Stock-Based Compensation

Stock-based compensation granted to employees are accounted for in accordance with ASC 718, “Compensation – Stock Compensation.” Stock-based payment transactions for acquiring goods and services from nonemployees are also accounted for under ASC 718. ASC 718 requires stock-based payments to employees and nonemployees, including grant of options, to be recognized in the Statement of Operations 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-based awards include the exercise price of the award, the expected term, the expected volatility of our stock over the stock-based award’s expected term, the risk-free interest rate over the award’s expected term, and the expected annual dividend yield. The Company accounts for forfeitures when they occur.

Comprehensive Income (Loss)

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

Income (Loss) Per Share

Basic income (loss) per share is calculated based on the weighted-average number of outstanding common shares during the applicable period. Diluted income (loss) per share is based on the weighted-average number of outstanding common shares plus the weighted-average number of potential outstanding common shares. In periods where they are anti-dilutive, such amounts are excluded from the calculations of dilutive earnings per share. Income (loss) per share is computed separately for each period presented.

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 (Level 1), accounts receivable, accounts payable, and debt obligations (Level 3). Credit is extended to customers based on an evaluation of a customer’s financial condition and, generally, collateral is not required. At December 31, 2020 and December 31, 2019, the fair value of the Company’s financial instruments approximated their carrying values. The fair value of the Company’s revolving credit and term loan approximate its carrying value due to the variable interest rate.

Recently Adopted Accounting Standards

In August 2018, the FASB issued ASU 2018-13, “Fair Value Measurement (Topic 820): Disclosure Framework - Changes to the Disclosure Requirements for Fair Value Measurement.” ASU 2018-13 improves the disclosure requirements on fair value measurements. ASU 2018-13 is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. The adoption of ASU No. 2018-13 by the Company effective January 1, 2020 did not have a material impact on the Company’s financial statements or disclosures.

In March 2020, the FASB issued ASU 2020-04, “Reference Rate Reform (“ASU 848”): Facilitation of the Effects of Reference Rate Reform on Financial Reporting.” ASU 2020-04 provides optional expedients and exceptions for applying U.S. GAAP to contract modifications and hedging relationships, subject to meeting certain criteria, that reference London Interbank Offered Rate (“LIBOR”) or another rate that is expected to be discontinued. The amendments in the ASU are effective for all entities as of March 12, 2020 through December 31, 2022. The adoption of ASU 2020-04 on March 12, 2020 by the Company did not have a material impact on the Company’s financial statements. The Company will continue to assess the potential impact of this ASU through the effective period.

Recently Issued Accounting Standards – Not Yet Adopted

In June 2016, the FASB issued ASU No. 2016-13, “Credit Losses (Topic 326) - Measurement of Credit Losses on Financial Instruments and subsequent amendments to the initial guidance: ASU 2018-19 “Codification Improvements to Topic 326, Financial Instruments - Credit Losses,” ASU 2019-04 “Codification Improvements to Topic 326, Financial Instruments - Credit Losses, Topic 815, Derivatives and Hedging, and Topic 825, Financial Instruments,” ASU 2019-05 “Financial Instruments - Credit Losses (Topic 326): Targeted Transition Relief,” ASU 2019-11 “Codification Improvements to Topic 326, Financial Instruments - Credit Losses” and ASU 2020-02, “Financial Instruments—Credit Losses (Topic 326) and Leases (Topic 842)” (collectively, “Topic 326”). Topic 326 introduces an approach, based on expected losses, to estimate credit losses on certain types of financial instruments and modifies the impairment model for available-for-sale debt securities. The new approach to estimating credit losses (referred to as the current expected credit losses model) applies to most financial assets measured at amortized cost and certain other instruments, including trade and other receivables and loans. Entities are required to apply the standard’s provisions as a cumulative-effect adjustment to retained earnings as of the beginning of the first reporting period in which the guidance is adopted. These ASUs are effective January 1, 2023 for the Company as a smaller reporting company. The Company had expected to early adopt theses ASUs effective January 1, 2020; however, due to the need for reallocation of the Company’s resources to manage COVID-19 related matters, the Company has deferred adoption of theses ASUs effective January 1, 2020 and expect to adopt these ASUs by January 1, 2023.

In December 2019, the FASB issued ASU No. 2019-12, “Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes,” which is intended to simplify various aspects related to accounting for income taxes. ASU 2019-12 removes certain exceptions to the general principles in Topic 740 and also clarifies and amends existing guidance to improve consistent application. This guidance is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2020, with early adoption permitted. This ASU is effective January 1, 2021 for the Company. The Company does not expect the adoption of this ASU will have a material impact on the Company’s financial statements.

In January 2020, the FASB issued ASU 2020-01, “Investments - Equity Securities (Topic 321), Investments - Equity Method and Joint Ventures (Topic 323), and Derivatives and Hedging (Topic 815), clarifying the Interactions between Topic 321, Topic 323, and Topic 815.” This guidance addresses accounting for the transition into and out of the equity method and provides clarification of the interaction of rules for equity securities, the equity method of accounting, and forward contracts and purchase options on certain types of securities. This standard is effective for fiscal years and interim periods within those fiscal years beginning after December 15, 2020. Early adoption is permitted. This ASU is effective January 1, 2021 for the Company. The Company does not expect the adoption of this ASU will have a material impact on the Company’s financial statements.

In August 2020, the FASB issued ASU No. 2020-06, “Debt – Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging – Contracts in Entity’s Own Equity.” ASU 2020-06 simplifies the accounting for convertible instruments by removing major separation models and removing certain settlement condition qualifiers for the derivatives scope exception for contracts in an entity’s own equity, and simplifies the related diluted net income per share calculation for both Subtopics. ASU 2020-06 is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2023, for the Company as a smaller reporting company. Early adoption is permitted, but no earlier than fiscal years beginning after December 15, 2020, including interim periods within those fiscal years. The Company is currently evaluating the impact of this ASU on its consolidated financial statements and disclosures.

In October 2020, the FASB issued ASU No 2020-10, “Codification Improvements.” ASU 2020-10 updates various codification topics by clarifying or improving disclosure requirements. ASU 2020-10 is effective for public entities for fiscal years beginning after December 15, 2020, with early adoption permitted. This ASU is effective January 1, 2021 for the Company. The Company does not expect the adoption of this ASU will have a material impact on the Company’s financial statements and disclosures.

NOTE 3

COVID-19 IMPACT

The COVID-19 pandemic that started in early part of 2020 continues to present potential new risks to our business and continues to result in significant volatility in the U.S. and international markets. The Company continues to closely monitor the impact of the COVID-19 pandemic on all aspects of our business. Starting in late March 2020, the Company’s operations were impacted by the shutdown of a number of projects and the delays of certain waste shipments. Since the latter part of the second quarter of 2020, all of the projects that were previously shutdown within our Services Segment restarted as stay-at-home orders and certain other restrictions resulting from the pandemic were lifted. Despite the shutdown of certain projects for part of 2020, revenues generated within our Services Segment in 2020 exceeded our revenue generated in 2019 by approximately \$42,188,000. The Company continues to experience delays in waste shipments from certain customers within our Treatment Segment directly related to the impact of COVID-19 including generator shutdowns and limited sustained operations, along with other factors. However, the Company expects to see a gradual return in waste receipts from these customers starting in the first half of 2021 as they accelerate operations. As the impact of COVID-19 remains fluid, the uncertainty in waste receipt shipments may impact our results of operations for the first quarter of 2021 and potentially the second quarter of 2021. The potential for a material impact on the Company’s business increases the longer COVID-19 impacts the level of economic activities in the United States and globally as our customers may continue to delay waste shipments and project work may shut down again. For this reason, we cannot reasonably estimate with any degree of certainty the future impact COVID-19 may have on our results of operations, financial position, and liquidity which may impact our ability to meet our financial covenant requirements under our credit facility.

The Company’s cash flow requirements during 2020 were primarily financed by our operations, credit facility availability, and proceeds from the PPP Loan (established under the CARES Act) that the Company entered into with its credit facility lender in April 2020 (see “Note 10 – Long Term Debt – PPP Loan” for further detail of this loan). At December 31, 2020, the Company had borrowing availability under its

revolving credit facility of approximately \$14,220,000 which was based on a percentage of eligible receivables and subject to certain reserves and included its cash on hand of approximately \$7,924,000. The Company's working capital at December 31, 2020 was approximately \$3,672,000 as compared to working capital of \$26,000 at December 31, 2019. Our working capital at December 31, 2020 included the classification of approximately \$3,191,000 of the outstanding PPP Loan balance of \$5,318,000 at December 31, 2020 as "Current portion of long-term debt" on our Consolidated Balance Sheets. We have applied for forgiveness on repayment of the entire PPP Loan balance which is subject to the review and approval of our lender and the SBA.

At this time, the Company believes it has sufficient liquidity on hand to fund cash flow requirements for the next twelve months which consist primarily of general working capital needs, scheduled principal payments on our debt obligations, remediation projects, and planned capital expenditures. The Company plans to fund these requirements from our operations, credit facility availability, and cash on hand. The Company is continually reviewing operating costs during this volatile time and is committed to further reducing operating costs to bring them in line with revenue levels, when necessary. These measures include curtailing capital expenditures, eliminating non-essential expenditures and implementing a hiring freeze as needed.

The Company is closely monitoring our customers' payment performance. However, as a significant portion of our revenues is derived from government related contracts, the Company does not expect its accounts receivable collections to be materially impacted due to COVID-19.

As previously disclosed, the Company's Medical Segment has not generated any revenue. The Company anticipates that its Medical Segment will not resume full R&D activities until it obtains the necessary funding through obtaining its own credit facility or additional equity raise or obtaining new partners willing to fund its R&D activities. If the Medical Segment is unable to raise the necessary capital, the Medical Segment could be required to further reduce, delay or eliminate its R&D program.

NOTE 4 REVENUE

Disaggregation of Revenue

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

Revenue by Contract Type (In thousands)

	Twelve Months Ended December 31, 2020			Twelve Months Ended December 31, 2019		
	Treatment	Services	Total	Treatment	Services	Total
Fixed price	\$ 30,143	\$ 8,970	\$ 39,113	\$ 40,364	\$ 12,162	\$ 52,526
Time and materials	—	66,313	66,313	—	20,788	20,788
Cost reimbursement	—	—	—	—	145	145
Total	<u>\$ 30,143</u>	<u>\$ 75,283</u>	<u>\$ 105,426</u>	<u>\$ 40,364</u>	<u>\$ 33,095</u>	<u>\$ 73,459</u>

Revenue by generator (In thousands)

	Twelve Months Ended December 31, 2020			Twelve Months Ended December 31, 2019		
	Treatment	Services	Total	Treatment	Services	Total
Domestic government	\$ 22,795	\$ 68,237	\$ 91,032	\$ 29,420	\$ 25,077	\$ 54,497
Domestic commercial	6,933	1,825	8,758	10,601	2,724	13,325
Foreign government	415	5,135	5,550	279	5,209	5,488
Foreign commercial	—	86	86	64	85	149
Total	<u>\$ 30,143</u>	<u>\$ 75,283</u>	<u>\$ 105,426</u>	<u>\$ 40,364</u>	<u>\$ 33,095</u>	<u>\$ 73,459</u>

Contract Balances

The timing of revenue recognition, billings, and cash collections results in accounts receivable and unbilled receivables (contract assets). The Company's contract liabilities consist of deferred revenues which

represents advance payment from customers in advance of the completion of our performance obligation.

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

(In thousands)		December 31, 2020	December 31, 2019	Year-to-date Change (\$)	Year-to-date Change (%)
Contract assets					
Account receivables, net of allowance	\$	9,659	\$ 13,178	\$ (3,519)	(26.7) %
Unbilled receivables - current		14,453	7,984	6,469	81.0 %
Contract liabilities					
Deferred revenue	\$	4,614	\$ 5,456	\$ (842)	(15.4) %

During the twelve months ended December 31, 2020 and 2019, the Company recognized revenue of \$8,094,000 and \$10,354,000, respectively, related to untreated waste that was in the Company's control as of the beginning of each respective year. Revenue recognized in each period related to performance obligations satisfied within the respective period.

NOTE 5 LEASES

The components of lease cost for the Company's leases were as follows (in thousands):

	Twelve Months Ended December 31,	
	2020	2019
Operating Leases:		
Lease cost	\$ 456	\$ 456
Finance Leases:		
Amortization of ROU assets	220	63
Interest on lease liability	143	63
	363	126
Short-term lease rent expense	15	43
Total lease cost	\$ 834	\$ 625

The weighted average remaining lease term and the weighted average discount rate for operating and finance leases at December 31, 2020 was:

	Operating Leases	Finance Leases
Weighted average remaining lease terms (years)	8.0	3.5
Weighted average discount rate	8.0%	7.3%

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

	Operating Leases	Finance Leases
Weighted average remaining lease terms (years)	8.8	2.0
Weighted average discount rate	8.0%	9.3%

The following table reconciles the undiscounted cash flows for the operating and finance leases at December 31, 2020 to the operating and finance lease liabilities recorded on the balance sheet (in thousands):

		Operating Leases	Finance Leases
2021	\$	450	\$ 587
2022		458	271
2023		466	150
2024		342	146
2025		304	146
2025 and thereafter		1,154	18
Total undiscounted lease payments		3,174	1,318
Less: Imputed interest		(831)	(131)
Present value of lease payments	\$	2,343	\$ 1,187
Current portion of operating lease obligations	\$	273	\$ —
Long-term operating lease obligations, less current portion	\$	2,070	\$ —
Current portion of finance lease obligations	\$	—	\$ 525
Long-term finance lease obligations, less current portion	\$	—	\$ 662

Supplemental cash flow and other information related to our leases were as follows (in thousands):

	Twelve Months Ended December 31,	
	2020	2019
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flow from operating leases	\$ 442	\$ 434
Operating cash flow from finance leases	\$ 143	\$ 63
Financing cash flow from finance leases	\$ 615	\$ 272
ROU assets obtained in exchange for lease obligations for:		
Finance liabilities	\$ 874	\$ 893
Operating liabilities	\$ —	\$ 182

NOTE 6 PERMIT AND OTHER INTANGIBLE ASSETS

The following table summarizes changes in the carrying value of permits. No permit exists at our Services and Medical Segments.

Permit (amount in thousands)	Treatment
Balance as of December 31, 2018	\$ 8,443
PCB permit amortized ⁽¹⁾	(7)
Permit in progress	354
Balance as of December 31, 2019	8,790
Permit in progress	132
Balance as of December 31, 2020	\$ 8,922

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

Intangibles (amount in thousands)	Weighted Average Amortization Period (Years)	December 31, 2020			December 31, 2019		
		Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Patent	13	\$ 742	\$ (334)	\$ 408	\$ 760	\$ (358)	\$ 402
Software	3	418	(411)	7	414	(408)	6
Customer relationships	10	3,370	(2,910)	460	3,370	(2,713)	657
Permit	—	—	—	—	545	(545)	—
Total		\$ 4,530	\$ (3,655)	\$ 875	\$ 5,089	\$ (4,024)	\$ 1,065

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

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

Year	Amount (In thousands)
2021	199
2022	172
2023	132
2024	11
2025	11

Amortization expense recorded for definite-lived intangible assets was approximately \$239,000 and \$256,000, for the years ended December 31, 2020 and 2019, respectively.

NOTE 7

CAPITAL STOCK, STOCK PLANS, WARRANTS, AND STOCK BASED COMPENSATION

Stock Option Plans

The Company adopted the 2003 Outside Directors Stock Plan (the “2003 Plan”), which was approved by our stockholders at the Company’s July 29, 2003 Annual Meeting of Stockholders. Non-Qualified Stock Options (“NQSOs”) granted under the 2003 Plan generally have a vesting period of six months from the date of grant and a term of 10 years, with an exercise price equal to the closing trade price on the date prior to grant date. The 2003 Plan also provides for the issuance to each outside director a number of shares of the Company’s Common Stock in lieu of 65% or 100% (based on option elected by each director) of the fee payable to the eligible director for services rendered as a member of the Board. The number of shares issued is determined at 75% of the market value as defined in the plan (the Company recognizes 100% of the market value of the shares issued). The 2003 Plan, as amended, also provides for the grant of an NQSO to purchase up to 6,000 shares of our Common Stock for each outside director upon initial election to the Board, and the grant of an NQSO to purchase 2,400 shares of our Common Stock upon each re-election. The number of shares of the Company’s Common Stock authorized under the 2003 Plan is 1,100,000. At December 31, 2020, the 2003 Plan had available for issuance 218,577 shares.

The Company’s 2017 Stock Option Plan (“2017 Plan”) authorizes the grant of options to officers and employees of the Company, including any employee who is also a member of the Board, as well as to consultants of the Company. The 2017 Plan authorizes an aggregate grant of 1,140,000 NQSOs and ISOs, which includes a rollover of 140,000 shares that had remained available for issuance under the 2010 Stock Option Plan (“2010 Plan”) immediately upon the approval of the 2017 Plan and an increase of 600,000 shares to the 2017 Plan which was approved by the Company’s stockholders at the 2020 Annual Meeting of Stockholders held on July 22, 2020 (“2020 Annual Meeting”). Consultants of the Company can only be granted NQSOs. The term of each stock option granted under the 2017 Plan shall be fixed by the Compensation Committee, but no stock options will be exercisable more than ten years after the grant date, or in the case of an ISO granted to a 10% stockholder, five years after the grant date. The exercise price of any ISO granted under the 2017 Plan to an individual who is not a 10% stockholder at the time of the grant shall not be less than the fair market value of the shares at the time of the grant, and the exercise price of any ISO granted to a 10% stockholder shall not be less than 110% of the fair market value at the time of grant. The exercise price of any NQSOs granted under the plan shall not be less than the fair market value of the shares at the time of grant. At December 31, 2020, the 2017 Plan had available for issuance 647,500 shares.

Upon the approval of the 2017 Plan as discussed above, no further options remained available for issuance under the 2010 Plan. On September 29, 2020, the 2010 Plan expired; however, an option (ISO) issued under the 2010 Plan prior to the expiration of the 2010 Plan for the purchase of up to 50,000 shares of our

Common Stock at \$3.97 per share will remain in effect until the earlier of the exercise date by the optionee or the maturity date of May 15, 2022.

Stock Options to Employees and Outside Director

On February 4, 2020, the Company granted 6,000 NQSOs from the Company's 2003 Plan to a new director elected by the Company's Board to fill a vacancy on the Board. The options granted were for a contractual term of ten years with a vesting period of six months. The exercise price of the options was \$7.00 per share, which was equal to the Company's closing stock price per share the day preceding the grant date, pursuant to the 2003 Plan.

On July 22, 2020, the Company granted an aggregate of 12,000 NQSOs from the Company's 2003 Plan to five of the six re-elected directors at the Company's 2020 Annual Meeting. Dr. Louis F. Centofanti, the Company's EVP of Strategic Initiatives and also a Board member, was not eligible to receive options under the 2003 Plan as an employee of the Company, pursuant to the 2003 Plan. The NQSOs granted were for a contractual term of ten years with a vesting period of six months. The exercise price of the NQSO was \$6.70 per share, which was equal to our closing stock price the day preceding the grant date, pursuant to the 2003 Plan.

On August 10, 2020, the Company granted 6,000 NQSOs from the Company's 2003 Plan to a new director elected by the Company's Board to fill a vacancy on the Board. The options granted were for a contractual term of ten years with a vesting period of six months. The exercise price of the options was \$7.29 per share, which was equal to the Company's closing stock price per share the day preceding the grant date, pursuant to the 2003 Plan.

On January 17, 2019 the Company granted 105,000 ISOs from the 2017 Plan to certain employees, which included our executive officers as follows: 25,000 ISOs to our CEO; 15,000 ISOs to our CFO; and 15,000 ISOs to our EVP of Strategic Initiatives. The ISOs granted were for a contractual term of six years with one-fifth vesting annually over a five-year period. The exercise price of the ISO was \$3.15 per share, which was equal to the fair market value of the Company's Common Stock on the date of grant.

On July 25, 2019, the Company granted an aggregate of 12,000 NQSOs from the Company's 2003 Plan to five of the six re-elected directors at the Company's Annual Meeting of Stockholders held on July 25, 2019. Dr. Louis F. Centofanti (a Board member) was not eligible to receive options under the 2003 Plan as an employee of the Company, pursuant to the 2003 Plan. The NQSOs granted were for a contractual term of ten years with a vesting period of six months. The exercise price of the NQSO was \$3.31 per share, which was equal to our closing stock price the day preceding the grant date, pursuant to the 2003 Plan.

On August 29, 2019 the Company granted an aggregate of 12,500 ISOs from the 2017 Plan to certain employees. The ISOs granted were for a contractual term of six years with one-fifth vesting annually over a five-year period. The exercise price of the ISO was \$3.90 per share, which was equal to the fair market value of the Company's Common Stock on the date of grant.

During 2020, the Company issued 2,000 shares of its Common Stock resulting from the exercise of options from the Company's 2017 Plan for total proceeds of \$6,300. Additionally, the Company issued 1,884 shares of its Common Stock from cashless exercises of 8,000 and 2,500 options at \$3.60 per share and \$3.15 per share, respectively. The Company issued an aggregate of 32,400 shares of Common Stock in 2019 from exercises of options resulting in total proceed of approximately \$133,000.

The Company estimates fair value of stock options using the Black-Scholes valuation model. Assumptions used to estimate the fair value of stock options granted include the exercise price of the award, the expected term, the expected volatility of the Company's stock over the option's expected term, the risk-free interest rate over the option's expected term, and the expected annual dividend yield. The fair value of the options granted during 2020 and 2019 and the related assumptions used in the Black-Scholes option model used to value the options granted were as follows. No options were granted to employees in 2020:

	Employee Stock Option Granted
	2019
Weighted-average fair value per share	\$ 1.46
Risk -free interest rate ⁽¹⁾	1.40%-2.58%
Expected volatility of stock ⁽²⁾	48.67%-51.38%
Dividend yield	None
Expected option life ⁽³⁾	5.0 years

	Outside Director Stock Options Granted	
	2020	2019
Weighted-average fair value per share	\$ 4.66	\$ 2.27
Risk -free interest rate ⁽¹⁾	0.59%-1.61%	2.08%
Expected volatility of stock ⁽²⁾	55.83%-56.68%	54.28%
Dividend yield	None	None
Expected option life ⁽³⁾	10.0 years	10.0 years

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

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

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

The following table summarizes stock-based compensation recognized for fiscal years 2020 and 2019.

	Year Ended	
	2020	2019
Employee Stock Options	\$ 132,000	\$ 150,000
Director Stock Options	104,000	29,000
Total	<u>\$ 236,000</u>	<u>\$ 179,000</u>

At December 31, 2020, the Company has approximately \$274,000 of total unrecognized compensation costs related to unvested options for employee and directors. The weighted average period over which the unrecognized compensation costs are expected to be recognized is approximately 2.1 years.

Stock Options to Consultant

The Company granted a NQSO to Robert Ferguson on July 27, 2017 from the Company's 2017 Plan for the purchase of up to 100,000 shares of the Company's Common Stock ("Ferguson Stock Option") in connection with his work as a consultant to the Company's Test Bed Initiative ("TBI") at our PFNWR facility at an exercise price of \$3.65 per share, which was the fair market value of the Company's Common Stock on the date of grant. The term of the Ferguson Stock Option is seven years from the grant date. The vesting of the Ferguson Stock Option is subject to the achievement of three separate milestones by certain dates. On January 17, 2019, the Company's Compensation and Board approved an amendment to the Ferguson Stock Option whereby the vesting date for the second milestone for the purchase of up to 30,000 shares of the Company's Common Stock was extended to March 31, 2020 from January 27, 2019. On March 27, 2020, the Compensation Committee and the Board approved another amendment to the Ferguson Stock Option whereby the vesting date for the second milestone was further extended to December 31, 2021 from March 31, 2020 and the vesting date for the third milestone for the purchase of up to 60,000 shares of the Company's Common Stock was extended to December 31, 2022 from January 27, 2021. The 10,000 options under the first milestone were exercised by Robert Ferguson in May 2018. The Company has not recognized compensation costs (fair value of approximately \$262,000 at December 31, 2020) for the remaining 90,000 Ferguson Stock Option under the remaining two milestones since achievement of the performance obligation under each of the two remaining milestones is uncertain at December 31, 2020. All other terms of the Ferguson Stock Option remain unchanged.

Summary of Stock Option Plans

The summary of the Company's total plans as of December 31, 2020 and 2019, and changes during the period then ended are presented as follows:

	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value ⁽⁴⁾
Options outstanding January 1, 2020	681,300	\$ 3.84		
Granted	24,000	\$ 6.92		
Exercised	(12,500)	\$ 3.47		\$ 16,060
Forfeited/expired	(34,400)	\$ 5.52		
Options outstanding end of period ⁽¹⁾	658,400	\$ 3.87	3.5	\$ 1,426,143
Options exercisable at December 31, 2020 ⁽²⁾	356,400	\$ 3.99	3.3	\$ 732,163

	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value ⁽⁴⁾
Options outstanding January 1, 2019	616,000	\$ 4.23		
Granted	129,500	3.24		
Exercised	(32,400)	4.10		\$ 93,000
Forfeited/expired	(31,800)	8.68		
Options outstanding end of period ⁽³⁾	681,300	\$ 3.84	4.2	\$ 3,587,000
Options exercisable as of December 31, 2019 ⁽³⁾	286,800	\$ 4.28	3.8	\$ 1,383,000

⁽¹⁾ Options with exercise prices ranging from \$2.79 to \$7.29

⁽²⁾ Options with exercise prices ranging from \$2.79 to \$7.05

⁽³⁾ Options with exercise prices ranging from \$2.79 to \$8.40

⁽⁴⁾ The intrinsic value of a stock option is the amount by which the market value of the underlying stock exceeds the exercise price

The summary of the Company's nonvested options as of December 31, 2020 and changes during the period then ended are presented as follows:

	Shares	Weighted Average Grant-Date Fair Value
Non-vested options January 1, 2020	394,500	\$ 1.77
Granted	24,000	4.66
Vested	(96,500)	2.00
Forfeited	(20,000)	1.62
Non-vested options at December 31, 2020	302,000	\$ 1.94

Warrant

In connection with a \$2,500,000 loan that the Company executed April 1, 2019 with Mr. Robert Ferguson, the Company issued a Warrant to Mr. Ferguson for the purchase of up to 60,000 shares of our Common Stock at an exercise price of \$3.51 per share. The Warrant is exercisable six months from April 1, 2019 and expires on April 1, 2024 and remains outstanding at December 31, 2020 (see "Note 10 – Long Term Debt" for further information of this Warrant).

Common Stock Issued for Services

The Company issued a total of 34,135 and 71,905 shares of our Common Stock in 2020 and 2019, respectively, under our 2003 Plan to our outside directors as compensation for serving on our Board. As a member of the Board, 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. The Company recorded approximately \$250,000 and \$232,000 in compensation expense (included in SG&A expenses) for the twelve months ended December 31, 2020 and 2019, respectively, for the portion of director fees earned in the Company's Common Stock.

Shares Reserved

At December 31, 2020, the Company has reserved approximately 658,400 shares of our Common Stock for future issuance under all of the option arrangements.

NOTE 8

INCOME (LOSS) PER SHARE

The following table reconciles the income (loss) and average share amounts used to compute both basic and diluted loss per share:

(Amounts in Thousands, Except for Per Share Amounts)	Years Ended December 31,	
	2020	2019
Net income attributable to Perma-Fix Environmental Services, Inc., common stockholders:		
Income from continuing operations, net of taxes	\$ 3,149	\$ 2,732
Net loss attributable to non-controlling interest	(123)	(124)
Income from continuing operations attributable to Perma-Fix Environmental Services, Inc. common stockholders	\$ 3,272	\$ 2,856
Loss from discontinuing operations attributable to Perma-Fix Environmental Services, Inc. common stockholders	(412)	(541)
Net income attributable to Perma-Fix Environmental Services, Inc. common stockholders	<u>\$ 2,860</u>	<u>\$ 2,315</u>
Basic income per share attributable to Perma-Fix Environmental Services, Inc. common stockholders	<u>\$.24</u>	<u>\$.19</u>
Diluted income per share attributable to Perma-Fix Environmental Services, Inc. common stockholders	<u>\$.23</u>	<u>\$.19</u>
Weighted average shares outstanding:		
Basic weighted average shares outstanding	12,139	12,046
Add: dilutive effect of stock options	184	14
Add: dilutive effect of warrants	24	—
Diluted weighted average shares outstanding	<u>12,347</u>	<u>12,060</u>
Potential shares excluded from above weighted average share calculations due to their anti-dilutive effect include:		
Stock options	42	482
Warrant	—	60

NOTE 9

DISCONTINUED OPERATIONS

The Company's discontinued operations consist of all our subsidiaries included in our Industrial Segment which encompasses subsidiaries divested in 2011 and prior and three previously closed locations.

The Company incurred losses from discontinued operations of \$412,000 and \$541,000 for the years ended December 31, 2020 and 2019 (net of taxes of \$0 for each period), respectively. The loss for the year ended 2019 included an increase of approximately \$50,000 in remediation reserve for our PFM subsidiary due to reassessment of the remediation reserve. The remaining loss for each of the periods noted above was

primarily due to costs incurred in the administration and continued monitoring of our discontinued operations.

The following table presents the major class of assets of discontinued operations at December 31, 2020 and December 31, 2019. No assets and liabilities were held for sale at each of the periods noted.

(Amounts in Thousands)	December 31, 2020	December 31, 2019
Current assets		
Other assets	\$ 22	\$ 104
Total current assets	22	104
Long-term assets		
Property, plant and equipment, net ⁽¹⁾	81	81
Other assets	—	36
Total long-term assets	81	117
Total assets	<u>\$ 103</u>	<u>\$ 221</u>
Current liabilities		
Accounts payable	\$ 4	\$ 8
Accrued expenses and other liabilities	150	169
Environmental liabilities	744	817
Total current liabilities	898	994
Long-term liabilities		
Closure liabilities	142	134
Environmental liabilities	110	110
Total long-term liabilities	252	244
Total liabilities	<u>\$ 1,150</u>	<u>\$ 1,238</u>

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

The Company's discontinued operations included a note receivable in the original amount of approximately \$375,000 recorded in May 2016 resulting from the sale of property at our Perma-Fix of Michigan, Inc. ("PFMI") subsidiary. This note required 60 equal monthly installment payments by the buyer of approximately \$7,250 (which includes interest). On July 24, 2020, the purchaser of the property paid off the outstanding note receivable balance of approximately \$105,000.

Environmental Liabilities

The Company has three remediation projects, which are currently in progress relating to our PFD, PFM and PFSG (closed locations) subsidiaries. The Company divested PFD in 2008; however, the environmental liability of PFD was retained by the Company upon the divestiture of PFD. These remediation projects principally entail the removal/remediation of contaminated soil and, in most cases, the remediation of surrounding ground water. The remediation activities are closely reviewed and monitored by the applicable state regulators.

At December 31, 2020, we had total accrued environmental remediation liabilities of \$854,000, a decrease of \$73,000 from the December 31, 2019 balance of \$927,000. The decrease represents payments made on remediation projects for our PFSG and PFD subsidiaries. At December 31, 2020, \$744,000 of the total accrued environmental liabilities was recorded as current.

The current and long-term accrued environmental liabilities at December 31, 2020 are summarized as follows (in thousands).

	Current Accrual	Long-term Accrual	Total
PFD	\$ 17	\$ 60	\$ 77
PFM	\$ 50	15	65
PFSG	\$ 677	35	712
Total liability	<u>\$ 744</u>	<u>\$ 110</u>	<u>\$ 854</u>

NOTE 10 LONG-TERM DEBT

Long-term debt consists of the following at December 31, 2020 and December 31, 2019:

(Amounts in Thousands)	December 31, 2020	December 31, 2019
Revolving Credit facility dated May 8, 2020, borrowings based upon eligible accounts receivable, subject to monthly borrowing base calculation, balance due on May 15, 2024. Effective interest rate for 2020 and 2019 was 6.1% and 6.6%, respectively. ⁽¹⁾	\$ —	\$ 321
Term Loan dated May 8, 2020, payable in equal monthly installments of principal, balance due on May 15, 2024. Effective interest rate for 2020 and 2019 was 5.2% and 6.9%, respectively. ⁽¹⁾	1,388 ⁽²⁾	1,827 ⁽²⁾
Promissory Note dated April 1, 2019, payable in twelve monthly installments of interest only, starting May 1, 2019 followed with twelve monthly installments of approximately \$208 in principal plus accrued interest. Interest accrues at annual rate of 4.0%. ⁽³⁾	— ⁽⁴⁾	1,732 ⁽⁴⁾
Promissory Note dated April 14, 2020, balance subject to loan forgiveness. Interest accrues at annual rate of 1.0%. ⁽³⁾	5,318 ⁽⁵⁾	—
Note Payable dated June 10, 2020, payable in 36 monthly installments, starting in July 2020 at annual interest rate of \$5.64%.	23	—
Total debt	6,729	3,880
Less current portion of long-term debt	3,595 ⁽⁴⁾	1,300 ⁽⁴⁾
Long-term debt	\$ 3,134	\$ 2,580

⁽¹⁾ Our revolving credit facility is collateralized by our accounts receivable and our term loan is collateralized by our property, plant, and equipment. Effective July 1, 2019, monthly installment principal payment on the Term Loan was amended to approximately \$35,500 from approximately \$101,600. See “Revolving Credit and Term Loan Agreement” below for terms of the Company’s credit facility prior to the New Loan Agreement dated May 8, 2020.

⁽²⁾ Net of debt issuance costs of (\$105,000) and (\$92,000) at December 31, 2020 and December 31, 2019, respectively.

⁽³⁾ Uncollateralized note.

⁽⁴⁾ Net of debt discount/debt issuance costs of (\$0) and (\$248,000) at December 31, 2020 and December 31, 2019, respectively. The Promissory Note provided for prepayment of principal over the term of the Note without penalty. In 2019, the Company made total prepayment of principal of \$520,000 which was reflected in the current portion of the debt. In 2020, the outstanding principal balance of \$1,980,000 was paid-in-full of which of which \$416,000 was prepaid.

⁽⁵⁾ Entered into with the Company’s credit facility lender under the PPP under the CARES Act (see “PPP Loan” below for further information on this loan and its terms).

Revolving Credit and Term Loan Agreement

The Company entered into an Amended and Restated Revolving Credit, Term Loan and Security Agreement, dated October 31, 2011 (“Amended Loan Agreement”), with PNC National Association (“PNC”), acting as agent and lender. The Amended Loan Agreement had been amended from time to time since the execution of the Amended Loan Agreement. The Amended Loan Agreement, as subsequently amended (“Revised Loan Agreement”), provided the Company with the following credit facility with a maturity date of March 24, 2021: (a) up to \$12,000,000 revolving credit (“revolving credit”) and (b) a term loan (“term loan”) of approximately \$6,100,000. The maximum that the Company can borrow under the revolving credit was based on a percentage of eligible receivables (as defined) at any one time reduced by outstanding standby letters of credit and borrowing reductions that our lender may impose from time to time.

Payment of annual rate of interest due on the revolving credit under the Revised Loan Agreement was at prime (3.25% at December 31, 2020) plus 2% and the term loan at prime plus 2.5%.

On May 8, 2020, the Company entered into a Second Amended and Restated Revolving Credit, Term Loan and Security Agreement (the “New Loan Agreement”) with PNC, replacing our previous Revised Loan Agreement with PNC. The New Loan Agreement provides the Company with the following credit facility:

- up to \$18,000,000 revolving credit facility, subject to the amount of borrowings based on a percentage of eligible receivables and subject to certain reserves; and
- a term loan of \$1,741,818, which requires monthly installments of \$35,547.

The New Loan Agreement terminates as of May 15, 2024, unless sooner terminated.

Similar to our Revised Loan Agreement, the New Loan Agreement requires the Company to meet certain customary financial covenants, including, among other things, a minimum Tangible Adjusted Net Worth requirement of \$27,000,000 at all times; maximum capital spending of \$6,000,000 annually; and a minimum FCCR requirement of 1.15:1.

Under the New Loan Agreement, payment of annual rate of interest due on the credit facility is as follows:

- revolving credit at prime plus 2.50% or LIBOR plus 3.50% and the term loan at prime plus 3.00% or LIBOR plus 4.00%. The Company can only elect to use the LIBOR interest payment option after it becomes compliant with meeting the minimum FCCR of 1.15:1; and
- Upon the achievement of a FCCR of greater than 1.25:1, the Company has the option of paying an annual rate of interest due on the revolving credit at prime plus 2.00% or LIBOR plus 3.00% and the term loan at prime plus 2.50% or LIBOR plus 3.50%. The Company met this FCCR in each of the quarters in 2020. Upon meeting the FCCR of 1.25:1, this interest payment option will remain in place in the event that the Company’s future FCCR falls below 1.25:1.

Under the LIBOR option of interest payment noted above, a LIBOR floor of 0.75% shall apply in the event that LIBOR falls below 0.75% at any point in time.

Pursuant to the New Loan Agreement, the Company may terminate the New Loan Agreement upon 90 days’ prior written notice upon payment in full of our obligations under the New Loan Agreement. The Company has agreed to pay PNC 1.0% of the total financing in the event we pay off our obligations on or before May 7, 2021 and 0.5% of the total financing if we pay off our obligations after May 7, 2021 but prior to or on May 7, 2022. No early termination fee shall apply if we pay off our obligations under the New Loan Agreement after May 7, 2022.

In connection with New Loan Agreement, the Company paid its lender a fee of \$50,000 and incurred other direct costs of approximately \$35,000, which are being amortized over the term of the New Loan Agreement as interest expense-financing fees. As a result of the termination of the Revised Loan Agreement, the Company recorded approximately \$27,000 in loss on extinguishment of debt in accordance with ASC 470-50, “Debt – Modifications and Extinguishment.”

At December 31, 2020, the borrowing availability under our revolving credit was approximately \$14,220,000, based on our eligible receivables and includes a reduction in borrowing availability of approximately \$3,026,000 from outstanding standby letters of credit.

The Company’s credit facility under its Revised and New Loan Agreement with PNC contains certain financial covenants, along with customary representations and warranties. A breach of any of these financial covenants, unless waived by PNC, could result in a default under our credit facility allowing our lender to immediately require the repayment of all outstanding debt under our credit facility and terminate all commitments to extend further credit. The Company met its financial covenant requirements in 2020, including its quarterly FCCR requirements.

Loan and Securities Purchase Agreement, Promissory Note and Subordination Agreement

On April 1, 2019, the Company completed a lending transaction with Robert Ferguson (the “Lender”), whereby the Company borrowed from the Lender the sum of \$2,500,000 pursuant to the terms of a Loan and Security Purchase Agreement and promissory note (the “Loan”). The Lender is a shareholder of the Company and also serves as a consultant to the Company in connection with the Company’s TBI at its PFNWR subsidiary. Proceeds from the Loan were used for general working capital purposes. The Loan is unsecured, with a term of two years with interest payable at a fixed interest rate of 4.00% per annum. The Loan provides for monthly payments of accrued interest only during the first year of the Loan, with the first interest payment due May 1, 2019 and monthly payments of approximately \$208,333 in principal plus accrued interest starting in the second year of the Loan. The Loan also allows for prepayment of principal payments over the term of the Loan without penalty with such prepayment of principal payments to be applied to the second year of the loan payments at the Company’s discretion. In December 2020, the Loan was paid-in-full. In connection with this capital raise transaction described above and consideration for us receiving the Loan, the Company issued a Warrant (the “Warrant”) to the Lender to purchase up to 60,000 shares of our Common Stock at an exercise price of \$3.51 per share, which was the closing bid price for a share of our Common Stock on NASDAQ.com immediately preceding the execution of the Loan and Warrant. The Warrant expires on April 1, 2024 and remains outstanding at December 31, 2020. As further consideration for this capital raise transaction relating to the Loan, the Company also issued 75,000 shares of its Common Stock to the Lender. The fair value of the Warrant and Common Stock and the related closing fees incurred from the transaction totaled approximately \$398,000 and was recorded as debt discount/debt issuance costs which has been fully amortized as interest expense – financing fees. The 75,000 shares of Common Stock, the Warrant and the 60,000 shares of Common Stock that may be purchased under the Warrant were and will be issued in a private placement that was and will be exempt from registration under Rule 506 and/or Sections 4(a)(2) and 4(a)(5) of the Securities Act of 1933, as amended (the “Act”) and bear a restrictive legend against resale except in a transaction registered under the Act or in a transaction exempt from registration thereunder.

PPP Loan

On April 14, 2020, the Company entered into a promissory note with PNC, our credit facility lender, in the amount of approximately \$5,666,000 (“PPP Loan”) under the PPP. The PPP was established under the CARES Act and is administered by the SBA. On June 5, 2020, the Flexibility Act was signed into law which amended the CARES Act. The note evidencing the PPP Loan contains events of default relating to, among other things, payment defaults, breach of representations and warranties, and provisions of the promissory note. During the third quarter of 2020, the Company repaid approximately \$348,000 of the PPP Loan to PNC resulting from clarification made in the loan calculation at the time of the loan origination.

Under the terms of the Flexibility Act, the Company can apply for and be granted forgiveness for all or a portion of the PPP Loan. Such forgiveness will be determined, subject to limitations, based on the use of loan proceeds by the Company for eligible payroll costs, mortgage interest, rent and utility costs and the maintenance of employee and compensation levels for the covered period (which is defined as a 24 week period, beginning April 14, 2020, the date in which proceeds from the PPP Loan was disbursed to the Company by PNC). At least 60% of such forgiven amount must be used for eligible payroll costs. On October 5, 2020, the Company applied for forgiveness on repayment of the loan balance as permitted under the program, which is subject to the review and approval of our lender and the SBA. If all or a portion of the PPP Loan is not forgiven, all or the remaining portion of the loan will be for a term of two years but can be prepaid at any time prior to maturity without any prepayment penalties. The annual interest rate on the PPP Loan is 1.0% and no payments of principal or interest are due until SBA remits the loan forgiveness amount to our lender. While the Company’s PPP Loan currently has a two year maturity, the Flexibility Act permits the Company to request a five year maturity with our lender. At December 31, 2020, the Company has not received a determination on potential forgiveness on any portion of the PPP Loan balance; therefore, the Company has classified approximately \$3,191,000 of the PPP Loan balance as “Current portion of long-term debt,” on its Consolidated Balance Sheets, which was based on payment of the PPP Loan starting in July 2021 (10 months from end of our covered period) in accordance with the terms of our PPP Loan agreement.

The following table details the amount of the maturities of long-term debt maturing in future years at December 31, 2020 (excludes debt issuance costs of \$105,000).

Year ending December 31:

(In thousands)	2021	3,627
	2022	2,562
	2023	431
	2024	214
Total	\$	<u><u>6,834</u></u>

NOTE 11

ACCRUED EXPENSES

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

	2020	2019
Salaries and employee benefits	\$ 4,203	\$ 3,908
Accrued sales, property and other tax	589	793
Interest payable	50	17
Insurance payable	1,145	935
Other	394	465
Total accrued expenses	<u><u>\$ 6,381</u></u>	<u><u>\$ 6,118</u></u>

Accrued expenses for 2020 included a total of approximately \$419,000 in compensation expenses accrued under the 2020 Management Incentive Plans (“MIPs”) for our executives (see “Note 16 – Related Party Transactions – MIPs” for further discussion of the 2020 MIPs) in addition to a 2020 discretionary bonus of approximately \$27,000 payable to the Company’s EVP of Nuclear and Technical Services approved by the Company’s Compensation Committee. Accrued expenses for 2019 included an aggregate of approximately \$360,000 in compensation expenses accrued under 2019 MIPs for our executive officers and our SVP of Nuclear and Technical Services, which total amount was paid at the end of May 2020.

NOTE 12

ACCRUED CLOSURE COSTS AND 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. Changes to reported closure liabilities (current and long-term) for the years ended December 31, 2020 and 2019, were as follows:

Amounts in thousands	
Balance as of December 31, 2018	6,750
Accretion expense	320
Spending	(1,359)
Adjustment to closure liability	330
Balance as of December 31, 2019	<u><u>\$ 6,041</u></u>
Accretion expense	335
Spending	(11)
Balance as of December 31, 2020	<u><u>\$ 6,365</u></u>

The Company recorded an additional \$330,000 of closure costs and current closure liabilities in 2019 due to finalization of closure requirements for the Company’s M&EC facility. In 2019, the Company completed the closure and decommissioning activities of its M&EC facility in accordance with M&EC’s license and permit requirements.

The spending of approximately \$11,000 and \$1,359,000 in 2020 and 2019, respectively, was primarily for

the closure of the Company's M&EC facility. Closure liabilities of M&EC are classified as current in the Consolidated Balance Sheets for 2020 and 2019.

The reported closure asset or ARO, is reported as a component of "Net Property and equipment" in the Consolidated Balance Sheets at December 31, 2020 and 2019 with the following activity for the years ended December 31, 2020 and 2019:

Amounts in thousands	
Balance as of December 31, 2018	3,730
Amortization of closure and post-closure asset	(191)
Balance as of December 31, 2019	\$ 3,539
Amortization of closure and post-closure asset	(191)
Balance as of December 31, 2020	\$ 3,348

NOTE 13
INCOME TAXES

The components of income (loss) before income tax (benefit) expense by jurisdiction for continuing operations for the years ended December 31, consisted of the following (in thousands):

	2020	2019
United States	4,778	4,120
Canada	(1,391)	(735)
United Kingdom	(121)	(184)
Poland	(306)	(312)
Total income before tax (benefit) expense	\$ 2,960	\$ 2,889

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):

	2020	2019
Federal income tax expense - deferred	4	5
State income tax (benefit) expense - current	(70)	153
State income tax (benefit) expense - deferred	(123)	(1)
Total income tax (benefit) expense	\$ (189)	\$ 157

An overall reconciliation between the expected tax (benefit) expense using the federal statutory rate of 21% for each of the years ended 2020 and 2019 and the (benefit) expense for income taxes from continuing operations as reported in the accompanying Consolidated Statement of Operations is provided below (in thousands).

	2020	2019
Federal tax expense at statutory rate	\$ 622	\$ 607
State tax (benefit) expense, net of federal benefit	(192)	152
Change in deferred tax rates	(71)	106
Permanent items	126	54
Difference in foreign rate	(68)	(27)
Change in deferred tax liabilities	(256)	835
Other	117	(218)
Decrease in valuation allowance	(467)	(1,352)
Income tax (benefit) expense	<u>\$ (189)</u>	<u>\$ 157</u>

The global intangible low-taxed income (“GILTI”) provisions under the Tax Cuts and Jobs Act of 2017 (the “TCJA”) require the Company to include in its U.S. income tax return foreign subsidiary earnings in excess of an allowable return on the foreign subsidiary’s tangible assets. The Company has elected to account for GILTI tax in the period in which it is incurred, and therefore has not provided any deferred tax impacts of GILTI in its consolidated financial statements for the years ended December 31, 2020 and 2019. As the foreign subsidiaries are all in loss positions for 2020, there is no GILTI inclusion for the current year.

On March 27, 2020, the CARES Act was enacted and signed into law. The CARES Act included a number of income tax law changes, including modifications to the interest limitation under Internal Revenue Code (“IRC”) §163(j) and reinstatement of the ability to carry back net operating losses. The income tax items in the CARES Act did not have a material impact on the Company’s 2020 income tax provision.

The Company 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, 2020 and 2019 as follows (in thousands):

Deferred tax assets:	2020	2019
Net operating losses	\$ 8,662	\$ 9,391
Environmental and closure reserves	1,839	1,977
Lease liability	642	742
Other	1,734	1,295
Deferred tax liabilities:		
Depreciation and amortization	(3,447)	(3,211)
Goodwill and indefinite lived intangible assets	(471)	(590)
Right-of-use lease asset	(627)	(730)
481(a) adjustment	(209)	(336)
Prepaid expenses	(22)	(22)
	<u>8,101</u>	<u>8,516</u>
Valuation allowance	<u>(8,572)</u>	<u>(9,106)</u>
Net deferred income tax liabilities	<u>(471)</u>	<u>(590)</u>

In 2020 and 2019, the Company concluded that it was more likely than not that \$8,572,000 and \$9,106,000 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.

The Company has estimated net operating loss carryforwards (“NOLs”) for federal and state income tax purposes of approximately \$14,264,000 and \$71,316,000, respectively, as of December 31, 2020. The estimated consolidated federal and state NOLs include approximately \$2,455,000 and \$3,774,000, respectively, of our majority-owned subsidiary, PF Medical, which is not part of our consolidated group for tax purposes. These net operating losses can be carried forward and applied against future taxable income, if any, and expire in various amounts starting in 2021. Approximately \$12,199,000 of our federal NOLs

were generated after December 31, 2017 and thus do not expire. 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.

The tax years 2017 through 2020 remain open to examination by taxing authorities in the jurisdictions in which the Company operates.

No uncertain tax positions were identified by the Company for the years currently open under statute of limitations.

The Company had no federal income tax payable for the years ended December 31, 2020 and 2019.

NOTE 14

COMMITMENTS AND CONTINGENCIES

Hazardous Waste

In connection with our waste management services, the Company processes 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 at the disposal site, the Company could be a potentially responsible party for the costs of the cleanup notwithstanding any absence of fault on our part.

Legal Matters

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

During July 2020, Tetra Tech EC, Inc. ("Tetra Tech") filed a complaint in the United States District Court for the Northern District of California against CH2M Hill, Inc. ("CH2M") and four subcontractors of CH2M, including the Company ("Defendants"). The complaint alleges claims for negligence, negligent misrepresentation and equitable indemnification against all defendants related to alleged damages suffered by Tetra Tech in respect of certain draft reports prepared by defendants at the request of the U.S. Navy as part of an investigation and review of certain whistleblower complaints about Tetra Tech's environmental restoration at the Hunter's Point Naval Shipyard in San Francisco.

CH2M was hired by the Navy in 2016 to review Tetra Tech's work. CH2M subcontracted with environmental consulting and cleanup firms Battelle Memorial Institute, Cabrera Services, Inc., SC&A, Inc. and the Company to assist with the review, according to the complaint.

The complaint alleges that the subject draft reports were prepared negligently and in a biased manner, made public, and caused damage to Tetra Tech's reputation; triggering related lawsuits and costing it opportunities for both government and commercial contracts.

The Company has provided notice of this lawsuit to our insurance carrier. Our insurance carrier is providing a defense on our behalf in connection with this lawsuit, subject to a \$100,000 self-insured retention and the terms and limitations contained in the insurance policy.

On January 7, 2021 Defendants' motion to dismiss the complaint in its entirety was granted without prejudice, with leave to amend. Tetra Tech subsequently filed a First Amended Complaint ("FAC") and Defendants filed a motion to dismiss Tetra Tech's FAC. At this time, the Company continues to believe it does not have any liability to Tetra Tech.

Insurance

The Company has a 25-year finite risk insurance policy entered into in June 2003 (“2003 Closure Policy”) with AIG which provides financial assurance to the applicable states for our permitted facilities in the event of unforeseen closure. The 2003 Closure Policy, as amended, provides for a maximum allowable coverage of \$28,177,000 which includes available capacity to allow for annual inflation and other performance and surety bond requirements. Total coverage under the 2003 Closure Policy, as amended, was \$19,651,000 at December 31, 2020. At December 31, 2020 and December 31, 2019, finite risk sinking funds contributed by the Company related to the 2003 Closure Policy which is included in other long term assets on the accompanying Consolidated Balance Sheets totaled \$11,446,000 and \$11,307,000, respectively, which included interest earned of \$1,975,000 and \$1,836,000 on the finite risk sinking funds as of December 31, 2020 and December 31, 2019, respectively. Interest income for the year ended 2020 and 2019 was approximately \$139,000 and \$337,000, respectively. If the Company so elects, AIG is obligated to pay us an amount equal to 100% of the finite risk sinking fund account balance in return for complete release of liability from both us and any applicable regulatory agency using this policy as an instrument to comply with financial assurance requirements.

Letter of Credits and Bonding Requirements

From time to time, the Company is required to post standby letters of credit and various bonds to support contractual obligations to customers and other obligations, including facility closures. At December 31, 2020, the total amount of standby letters of credit outstanding was approximately \$3,026,000 and the total amount of bonds outstanding was approximately \$46,388,000.

NOTE 15

PROFIT SHARING PLAN

The Company 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. The Company, at its discretion, may make matching contributions of 25% based on the employee’s elective contributions. Company contributions vest over a period of five years. In 2020 and 2019, the Company contributed approximately \$594,000 and \$395,000 in 401(k) matching funds, respectively.

NOTE 16

RELATED PARTY TRANSACTIONS

David Centofanti

David Centofanti serves as our Vice President of Information Systems. For such position, he received annual compensation of \$181,000 and \$177,000 for 2020 and 2019, respectively. David Centofanti is the son of our EVP of Strategic Initiatives and a Board member.

Employment Agreements

The Company entered into an employment agreement with each of Mark Duff, President and CEO, Dr. Louis Centofanti, EVP of Strategic Initiatives, Ben Naccarato, EVP and CFO, Andrew Lombardo, EVP of Nuclear and Technical Services, and Richard Grondin, EVP of Waste Treatment Operations, with each employment agreement dated July 22, 2020 (each employment agreement referred to as the “New Employment Agreement”). The Company had entered into an employment agreement with each of Mark Duff, Dr. Louis Centofanti and Ben Naccarato on September 8, 2017 which each of the employment agreement was terminated effective July 22, 2020 upon the execution of the New Employment Agreement with Mark Duff, Dr. Louis Centofanti and Ben Naccarato.

Each New Employment Agreement is effective for three years from July 22, 2020 (the “Initial Term”) unless earlier terminated by the Company or by the executive officer. At the end of the Initial Term of each

New Employment Agreement, each New Employment Agreement will automatically be extended for one additional year, unless at least six months prior to the expiration of the Initial Term, we or the executive officer provides written notice not to extend the terms of the New Employment Agreement. Each New Employment Agreement provides for annual base salary, performance bonuses (as provided in the MIP as approved by our Compensation Committee and Board) and other benefits commonly found in such agreement.

Pursuant to each New Employment Agreement, if the executive officer's employment is terminated due to death/disability or for cause (as defined in the agreements), the Company will pay to the executive officer or to his estate an amount equal to the sum of any unpaid base salary and accrued unused vacation time through the date of termination and any benefits due to the executive officer under any employee benefit plan (the "Accrued Amounts") plus any performance compensation payable pursuant to the MIP with respect to the fiscal year immediately preceding the date of termination.

If the executive officer terminates his employment for "good reason" (as defined in the agreements) or is terminated by us without cause (including any such termination for "good reason" or without cause within 24 months after a Change in Control (as defined in the agreement)), the Company will pay the executive officer the Accrued Amounts, two years of full base salary, and two times the performance compensation (under the MIP) earned with respect to the fiscal year immediately preceding the date of termination provided the performance compensation earned with respect to the fiscal year immediately preceding the date of termination has not been paid. If performance compensation earned with respect to the fiscal year immediately preceding the date of termination has been made to the executive officer, the executive officer will be paid an additional year of the performance compensation earned with respect to the fiscal year immediately preceding the date of termination. If the executive terminates his employment for a reason other than for good reason, the Company will pay to the executive an amount equal to the Accrued Amounts plus any performance compensation payable pursuant to the MIP with respect to the fiscal year immediately preceding the date of termination.

If there is a Change in Control (as defined in the agreements), all outstanding stock options to purchase common stock held by the executive officer will immediately become exercisable in full commencing on the date of termination through the original term of the options. In the event of the death of an executive officer, all outstanding stock options to purchase common stock held by the executive officer will immediately become exercisable in full commencing on the date of death, with such options exercisable for the lesser of the original option term or twelve months from the date of the executive officer's death. In the event an executive officer terminates his employment for "good reason" or is terminated by the Company without cause, all outstanding stock options to purchase common stock held by the executive officer will immediately become exercisable in full commencing on the date of termination, with such options exercisable for the lesser of the original option term or within 60 days from the date of the executive's date of termination. Severance benefits payable with respect to a termination (other than Accrued Amounts) shall not be payable until the termination constitutes a "separation from service" (as defined under Treasury Regulation Section 1.409A-1(h)).

MIPs

On January 16, 2020, the Company's Board and the Compensation Committee approved individual MIP for each Mark Duff, CEO and President, Ben Naccarato, EVP and CFO, Dr. Louis Centofanti, EVP of Strategic Initiatives and Andy Lombardo, who was appointed by our Board to the position of EVP of Nuclear and Technical Services and an executive officer of the Company on January 16, 2020. Mr. Lombardo previously held the position of SVP of Nuclear and Technical Services. Additionally, on July 22, 2020, the Company's Board and the Compensation Committee approved a MIP for Richard Grondin who was appointed by the Board to the position of EVP of Waste Treatment Operations and an executive officer of the Company. Mr. Grondin previously held the position of Vice President of Western Operations within our Treatment Segment. Each of the MIPs is effective January 1, 2020 and applicable for year ended December 31, 2020. Each MIP provides guidelines for the calculation of annual cash incentive-based compensation, subject to Compensation Committee oversight and modification. Each MIP awards cash compensation based on achievement of performance thresholds, with the amount of such compensation established as a percentage of the executive's 2020 annual base salary. The potential target performance compensation ranges from 5%

to 150% of the base salary for the CEO (\$17,220 to \$516,600), 5% to 100% of the base salary for the CFO (\$14,000 to \$280,000), 5% to 100% of the base salary for the EVP of Strategic Initiatives (\$11,667 to \$233,336), 5% to 100% of the base salary for the EVP of Nuclear and Technical Services (\$14,000 to \$280,000) and 5% to 100% (\$12,000 to \$240,000) of the base salary for the EVP of Waste Treatment Operations.

Each of the three executives in 2019 (Mark Duff, Ben Naccarato, Dr. Louis Centofanti) also had a MIP for 2019 which also provided guidelines for the calculation of annual cash incentive-based compensation, similar to the 2020 MIPs discussed above. An aggregate of approximately \$271,000 in compensation expenses was earned under the MIPs for the Company's three executives for 2019 which was paid to the executives at the end of May 2020. Prior to being named an executive officer of the Company on January 16, 2020, Andy Lombardo had a MIP for 2019 as the SVP of Nuclear and Technical Services. Andy Lombardo earned approximately \$89,000 under the 2019 MIP which was also paid by the Company to him at the end of May 2020.

Salary

On January 16, 2020, the Board, with the approval of the Compensation Committee approved the following salary increase for the Company's NEO effective January 1, 2020:

- Annual base salary for Mark Duff, CEO and President, was increased to \$344,400 from \$287,000.
- Annual base salary for Ben Naccarato, who was promoted to EVP and CFO from VP and CFO, was increased to \$280,000 from \$235,231; and
- Annual base salary for Andy Lombardo, who was appointed to the position of EVP of Nuclear and Technical Services as discussed above, was increased to \$280,000 from \$258,662, which was the annual base salary that Mr. Lombardo earned as SVP of Nuclear and Technical Services and prior to his appointment as an executive officer of the Company by the Board.

Additionally, as a result of Mr. Grondin's appointment by the Board to the position of EVP of Waste Treatment and an executive officer on July 22, 2020, his annual salary was increased from \$208,000 as Vice President of Western Operations within our Treatment Segment to \$240,000, effective July 22, 2020.

NOTE 17

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 decision maker ("CODM") 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 three reporting segments, which include Treatment and Services Segments, which are based on a service offering approach; and Medical, whose primary purpose is the R&D of a medical isotope production technology. The Medical Segment has not generated any revenues and all costs incurred are reflected within R&D in the accompanying consolidated financial statements. As previously disclosed, the Medical Segment has substantially reduced its R&D costs and activities due to the need for capital to fund these activities. The Company anticipates that the Medical Segment will not resume full R&D activities until the necessary capital is obtained through its own credit facility or additional equity raise, or obtains partners willing to provide funding for its R&D. Our reporting segments exclude our corporate headquarter, business center and our discontinued operations (see "Note 9 – Discontinued Operations") which do not generate revenues.

The table below shows certain financial information of our reporting segments as of and for the years ended December 31, 2020 and 2019 (in thousands).

Segment Reporting as of and for the year ended December 31, 2020

	Treatment	Services	Medical	Segments Total	Corporate ⁽²⁾	Consolidated Total
Revenue from external customers	\$ 30,143	\$ 75,283	—	\$ 105,426 ^{(3) (4)}	\$ —	\$ 105,426
Intercompany revenues	1,493	25	—	1,518	—	—
Gross profit	5,491	10,402	—	15,893	—	15,893
Research and development	243	132	311	686	76	762
Interest income	1	—	—	1	139	140
Interest expense	(115)	(27)	—	(142)	(256)	(398)
Interest expense-financing fees	—	—	—	—	(294)	(294)
Depreciation and amortization	1,204	354	—	1,558	38	1,596
Segment income (loss) before income taxes	1,494	7,826	(311)	9,009	(6,049)	2,960
Income tax (benefit) expense	(264)	6	—	(258)	69	(189)
Segment income (loss)	1,758	7,820	(311)	9,267	(6,118)	3,149
Segment assets ⁽¹⁾	32,324	22,368 ⁽⁸⁾	17	54,709	24,210 ⁽⁵⁾	78,919
Expenditures for segment assets (net)	1,264	451	—	1,715	—	1,715 ⁽⁷⁾
Total debt	—	23	—	23	6,706	6,729 ⁽⁶⁾

Segment Reporting as of and for the year ended December 31, 2019

	Treatment	Services	Medical	Segments Total	Corporate ⁽²⁾	Consolidated Total
Revenue from external customers	\$ 40,364	\$ 33,095	—	\$ 73,459 ^{(3) (4)}	\$ —	\$ 73,459
Intercompany revenues	329	38	—	367	—	—
Gross profit	12,248	3,336	—	15,584	—	15,584
Research and development	401	12	314	727	23	750
Interest income	—	—	—	—	337	337
Interest expense	(129)	(23)	—	(152)	(280)	(432)
Interest expense-financing fees	—	—	—	—	(208)	(208)
Depreciation and amortization	999	318	—	1,317	25	1,342
Segment income (loss) before income taxes	7,973	795	(314)	8,454	(5,565)	2,889
Income tax expense	153	—	—	153	4	157
Segment income (loss)	7,820	795	(314)	8,301	(5,569)	2,732
Segment assets ⁽¹⁾	34,260	15,410 ⁽⁸⁾	16	49,686	16,829 ⁽⁵⁾	66,515
Expenditures for segment assets (net)	1,366	169	—	1,535	—	1,535 ⁽⁷⁾
Total debt	—	—	—	—	3,880	3,880 ⁽⁶⁾

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

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

(3) The Company performed services relating to waste generated by government clients (domestic and foreign (primarily Canadian)), either directly as a prime contractor or indirectly for others as a subcontractor to government entities, representing approximately 96,582,000 or 91.6% of total revenue for 2020 and \$59,985,000 or 81.7% of total revenue for 2019. The following reflects such revenue generated by our two segments:

	2020			2019		
	Treatment	Services	Total	Treatment	Services	Total
Domestic government	\$ 22,795	\$ 68,237	\$ 91,032	\$ 29,420	\$ 25,077	\$ 54,497
Foreign government	415	5,135	5,550	279	5,209	5,488
Total	\$ 23,210	\$ 73,372	\$ 96,582	\$ 29,699	\$ 30,286	\$ 59,985

(4) The following table reflects revenue based on customer location:

	2020	2019
United States	\$ 99,790	\$ 67,822
Canada	5,550	5,488
United Kingdom	86	149
Total	\$ 105,426	\$ 73,459

- (5) Amount includes assets from our discontinued operations of \$103,000 and \$221,000 at December 31, 2020 and 2019, respectively.
- (6) Net of debt discount/debt issuance costs of (\$105,000) and (\$340,000) for 2020 and 2019, respectively (see “Note 10 – “Long-Term Debt” for additional information).
- (7) Net of financed amount of \$883,000 and \$393,000 for the year ended December 31, 2020 and 2019, respectively.
- (8) Includes long-lived asset (net) for our PF Canada, Inc. subsidiary of \$33,000 and \$41,000 for the year ended December 31, 2020 and 2019, respectively.

NOTE 18**DEFERRAL OF EMPLOYMENT TAX DEPOSITS**

The CARES Act, as amended by the Flexibility Act which was signed into law on June 5, 2020, provides employers the option to defer the payment of an employer’s share of social security taxes beginning on March 27, 2020 through December 31, 2020 with 50% of the amount of social security taxes deferred to become due on December 31, 2021 with the remaining 50% due on December 31, 2022. The Company elected to defer such taxes starting in mid-April 2020. At December 31, 2020, the Company has deferred payment of approximately \$1,252,000 in its share of social security taxes, of which approximately \$626,000 is included in “Other long-term liabilities,” with the remaining balance included in “Accrued expenses” within current liabilities in the Company’s Consolidated Balance Sheets.

NOTE 19**VARIABLE INTEREST ENTITIES (“VIE”)**

On May 24, 2019, the Company and Engineering/Remediation Resources Group, Inc. (“ERRG”) entered into an unpopulated joint venture agreement for project work bids within the Company’s Services Segment. The joint venture is doing business as Perma-Fix ERRG, a general partnership. The Company has a 51% partnership interest in the joint venture and ERRG has a 49% partnership interest in the joint venture. Activities under Perma-Fix ERRG did not commence until the first quarter of 2020.

The Company determines whether joint ventures in which it has invested meet the criteria of a VIE at the start of each new venture and when a reconsideration event has occurred. A VIE is a legal entity that satisfies any of the following characteristics: (a) the legal entity does not have sufficient equity investment at risk; (b) the equity investors at risk as a group, lack the characteristics of a controlling financial interest; or (c) the legal entity is structured with disproportionate voting rights.

The Company consolidates a VIE if it is determined to be the primary beneficiary of the VIE. The primary beneficiary has both the power to direct the activities of the VIE that most significantly impact the entity’s economic performance and the obligation to absorb losses or the right to receive benefits from the VIE that could potentially be significant to the VIE.

Based on the Company’s evaluation of Perma-Fix ERRG and related agreements with Perma-Fix ERRG, the Company determined that Perma-Fix ERRG is a VIE in which we are the primary beneficiary. At December 31, 2020, Perma-Fix ERRG had total assets of \$2,723,000 and total liabilities of \$2,723,000 which are all recorded as current.

NOTE 20**SUBSEQUENT EVENTS**

Management evaluated events occurring subsequent to December 31, 2020 through March 29, 2021, the date these consolidated financial statements were available for issuance, and other than as noted below determined that no material recognizable subsequent events occurred.

MIPs

On January 21, 2021, the Company's Compensation Committee and the Board approved individual MIP for the calendar year 2021 for each CEO, EVP and CFO, EVP of Strategic Initiatives, EVP of Nuclear and Technical Services and EVP of Waste Treatment Operations. Each of the MIPs is effective January 1, 2021 and applicable for year 2021. Each MIP provides guidelines for the calculation of annual cash incentive-based compensation, subject to Compensation Committee oversight and modification. Each MIP awards cash compensation based on achievement of performance thresholds, with the amount of such compensation established as a percentage of the executive's 2021 annual base salary at the time of the approval of the MIP. The potential target performance compensation ranges from 5% to 150% of the base salary for the CEO (\$17,220 to \$516,600), 5% to 100% of the base salary for the CFO (\$14,000 to \$280,000), 5% to 100% of the base salary for the EVP of Strategic Initiatives (\$11,667 to \$233,336), 5% to 100% of the base salary for the EVP of Nuclear and Technical Services (\$14,000 to \$280,000) and 5% to 100% (\$12,000 to \$240,000) of the base salary for the EVP of Waste Treatment Operations.

Executive Officer Salary

In February 2021, the Company's Compensation Committee approved an annual salary cost of living adjustment of approximately 2.3% to take into effect April 1, 2021 for each of our executive officers.

Board Compensation

On January 21, 2021, the Company's Compensation Committee and the Board approved the following revision to the compensation of each non-employee Board member and the Board Committee(s) for which the Board member serves, effective January 1, 2021.

- each director is to be paid a quarterly fee of \$11,500 from \$8,000;
- the Chairman of the Board is to be paid an additional quarterly fee of \$8,750 from \$7,500;
- the Chairman of the Audit Committee is to be paid an additional quarterly fee of \$6,250 from \$5,500;
- the Chairman of each of the Compensation Committee, the Corporate Governance and Nominating Committee (the "Nominating Committee"), and the Strategic Advisory Committee (the "Strategic Committee") is to receive \$3,125 in quarterly fee. No such quarterly fee was previously paid. The Chairman of the Board is not eligible to receive a quarterly fee for serving as the Chairman of any the aforementioned Committees ;
- each Audit Committee member (excluding the Chairman of the Audit Committee) is to receive \$1,250 in quarterly fee; and
- each member of the Compensation Committee, the Nominating Committee, and the Strategic Committee is to receive a quarterly fee of \$500. Such fee is payable only if the member does not serve as the Chairman of the Audit Committee, the Nominating Committee, the Strategic Committee or as the Chairman of the Board.

Each non-employee Board member will continue to receive \$1,000 for each board meeting attendance and a \$500 fee for meeting attendance via conference call.

Each non-employee director may continue to elect to have either 65% or 100% of such fees payable in Common Stock under the 2003 Plan, with the balance, if any, payable in cash (see "Note 7 – Capital Stock, Stock Plans, Warrants, and Stock Based Compensation – Stock Option Plans" for a discussion of the 2003 Plan).

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(e) and 15d-15(e) 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, 2020.

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) and 15d-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 accounting principles generally accepted 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. 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. A control system, no matter how well designed, can provide only reasonable assurance with respect to financial statement preparation and presentation.

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.

Management, with the participation of our CEO and CFO, conducted an assessment of the effectiveness of internal control over financial reporting as of December 31, 2020 based on the framework in *Internal Control – Integrated Framework (2013)* 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, 2020.

This Form 10-K does not include an attestation report of the Company’s independent registered public accounting firm regarding internal control over financial reporting. Since the Company is not a large accelerated filer or an accelerated filer, 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 management’s report in this Form 10-K.

Changes in Internal Control over Financial Reporting

There was no other change in our internal control over financial reporting (as defined in

Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the fiscal quarter ended December 31, 2020 that have materially affected, or are reasonably likely to materially affect, our internal controls over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

DIRECTORS

The following table sets forth, as of the date of this Report, information concerning our Board of Directors (“Board”):

<u>NAME</u> ⁽¹⁾	<u>AGE</u>	<u>POSITION</u>
Dr. Louis F. Centofanti	76	Director; Executive Vice President (“EVP”) of Strategic Initiatives; President of Perma-Fix Medical (“PF Medical”)
Mr. Thomas P. Bostick ⁽¹⁾	64	Director
Mr. Joseph T. Grumski ⁽²⁾	59	Director
The Honorable Joe R. Reeder	73	Director
Mr. Larry M. Shelton	67	Chairman of the Board
The Honorable Zach P. Wamp	63	Director
Mr. Mark A. Zwecker	70	Director

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

⁽¹⁾ Mr. Bostick was unanimously elected by the Board effective August 10, 2020 to fill a Board vacancy.

⁽²⁾ Mr. Grumski was unanimously elected by the Board effective February 4, 2020 to fill a Board vacancy.

Director Information

Our directors and executive officers, their ages, the positions with us held by each of them, the periods during which they have served in such positions and a summary of their recent business experience are set forth below. Each of the biographies of the current directors listed below also contains information regarding such person's service as a director, business experience, director positions with other public companies held currently or at any time during the past five years, and the experience, qualifications, attributes and skills that our Board considered in nominating or appointing each of them to serve as one of our directors.

Dr. Louis F. Centofanti

Dr. Centofanti, the founder of the Company and a director of the Company since its inception in 1991, currently holds the position of EVP of Strategic Initiatives. Effective January 26, 2018, Dr. Centofanti was appointed to the position of President of PF Medical and no longer a member of the Supervisory Board of PF Medical (a position he had held since June 2, 2015). From March 1996 to September 8, 2017 and from February 1991 to September 1995, Dr. Centofanti held the position of President and Chief Executive Officer (“CEO”) of the Company. Dr. Centofanti served as Chairman of the Board from the Company’s inception in February 1991 until December 16, 2014. In January 2015, Dr. Centofanti was appointed by the U.S. Secretary of Commerce Penny Prizker to serve on the U.S. Department of Commerce’s Civil Nuclear Trade Advisory Committee (“CINTAC”). The CINTAC is composed of industry representatives from the civil nuclear industry and meets periodically throughout the year to discuss the critical trade issues facing the U.S. civil nuclear sector. From 1985 until joining the Company, Dr. Centofanti served as Senior Vice President (“SVP”) of USPCI, Inc., a large publicly-held hazardous waste management company, where he was responsible for managing the treatment, reclamation and technical groups within USPCI. In 1981, he

and Mark Zwecker, a current Board member of the Company, founded PPM, Inc. (later sold to USPCI), a hazardous waste management company specializing in treating PCB-contaminated oil. 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 and PPM, Inc., and as a senior executive 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's operations and his extensive knowledge of its history, coupled with his drive for innovation and excellence, positions Dr. Centofanti to optimize our role in this competitive, evolving market, and led the Board to conclude that he should serve as a director.

Mr. Thomas P. Bostick

Effective August 10, 2020, Mr. Bostick was unanimously elected by the Board to serve as a member of the Company's Board of Directors. Mr. Bostick is currently the CEO of Bostick Global Strategies, LLC, a position he has held since July 2016. Bostick Global Strategies, LLC provides strategic advisory support in the areas of Engineering, Environmental Sustainability, Human Resources, Biotechnology, Education, Executive Coaching, and Agile Project Management. In February 2021, Mr. Bostick was selected by U. S. Senator Jack Reed, Chairman of the Senate Armed Services Committee, to serve as a member of a new commission consisting of eight appointed individuals, tasked with renaming Confederate-named military bases and property. Mr. Bostick previously served as the Chief Operating Officer ("COO") and President of Intrexon Bioengineering from November 2017 to February 2020, a division of Intrexon Corporation (formerly NASDAQ: XON; now NASDAQ: PGEN). Intrexon Bioengineering addresses global challenges across food, agriculture, environmental, energy, and industrial fields by advancing biologically engineered solutions to improve sustainability and efficiency. As the COO and President of Intrexon Bioengineering, Mr. Bostick oversaw operations across the company's multiple technology divisions, driving efficiency and effectiveness in the application of the company's assets toward its development projects, and led a major restructuring of Intrexon Corporation. Mr. Bostick is a member of the board of HireVue, Inc., a privately-held company specializing in online video interviewing services for employers, and Streamside Systems, Inc., a privately-held, veteran-led company that provides services and solutions for global water resource problems. In October 2020, Mr. Bostick was appointed to the board of CSX Corporation (NASDAQ: CSX), a publicly-held rail transportation company, where in December 2020 he was appointed to serve as a member of both the Finance Committee and the Governance Committee. In addition to Mr. Bostick's service on the boards of for profit companies, he has since November 2016 also served on the board of American Corporate Partners, a 501(c)(3) nonprofit organization dedicated to assisting U.S. veterans in their transition from the armed services to the civilian workforce.

Mr. Bostick has also had a distinguished career in the U.S. military, retiring from the US Army in July 2016 with the rank of Lieutenant General. During his distinguished military career, he served as the 53rd U.S. Army Chief of Engineers and the Commanding General of the U.S. Army Corps of Engineers (USACE). As the senior military officer of the Army Corps of Engineers, General Bostick was responsible for overseeing and supervising most of the Nation's civil works infrastructure and military construction, hundreds of environmental protection projects, as well as managing 34,000 civilian employees and military personnel in over 110 countries around the world with a \$25 billion annual budget. As the Chief of Engineers, General Bostick led a \$5 billion recovery program after Superstorm Sandy.

Before his command of USACE, General Bostick served in a variety of command and staff assignments with the U.S. Army both in the U.S. and abroad, including as Deputy Chief of Staff, G-1, Personnel, U.S. Army; Commanding General, U.S. Army Recruiting Command; Assistant Division Commander, 1st Cavalry Division; Executive Officer to the Chief of Engineers; Executive Officer to the Army Chief of Staff; and Deputy Director of Operations for the National Military Command Center, J-3, the Joint Staff in the Pentagon.

General Bostick's military honors and decorations include the Distinguished Service Medal, the Defense Superior Service Medal, the Bronze Star, the Legion of Merit with two oak leaf clusters, the Defense Meritorious Service Medal, the Meritorious Service Medal with four oak leaf clusters, the Joint Service Commendation Medal, the Army Commendation Medal, the Army Achievement Medal with one oak leaf cluster, the Combat Action Badge, the U.S Parachutist badge, the Army Recruiter Badge, and the Ranger Tab.

As a White House Fellow, one of America's most prestigious programs for leadership and public service, General Bostick was a special assistant to the Secretary of Veterans Affairs. He graduated with a Bachelor of Science degree from the U.S. Military Academy at West Point and later returned to the Academy to serve as an Associate Professor of Mechanical Engineering. He holds Master's degrees in Civil Engineering and Mechanical Engineering from Stanford University and a Doctorate in Systems Engineering from George Washington University. He is a Member of the National Academy of Engineering and the National Academy of Construction.

Mr. Bostick's distinguished career in both the government and private sectors brings valuable experience and insight into solving complex issues domestically and globally. His extensive knowledge and problem-solving experiences enhance the Board's ability to address significant challenges in the nuclear market and led the Board to conclude that he should serve as a director.

Mr. Joseph T. Grumski

Effective February 4, 2020, Mr. Grumski was unanimously elected by the Board as a director to fill a vacancy on the Board. From May 2013 through March 2020, Mr. Grumski served as President and CEO and a board member of TAS Energy Inc. ("TAS"), a privately-held company that delivers efficient modular systems manufactured offsite and utilized in power, data centers, industrial and commercial applications. TAS has successfully managed over 400 projects in over 32 countries. In April 2020, TAS was acquired by Comfort Systems USA, Inc. (NYSE: FIX), and now operates as a wholly-owned subsidiary of that company. Comfort Systems USA, Inc. is a publicly-held company that provides mechanical and electrical contracting services in 139 locations in 114 cities throughout the United States. Mr. Grumski continues to serve as the President and CEO of TAS. From 1997 to February 2013, Mr. Grumski was employed with Science Applications International Corporation ("SAIC") (NYSE: SAIC), a publicly-held company that provides government services and information technology support. During his employment with SAIC, Mr. Grumski held various senior management positions, including the positions of President of SAIC's Energy, Environment & Infrastructure ("E2I") commercial subsidiary and General Manager of the E2I Business Unit. SAIC's E2I commercial subsidiary and Business Unit is comprised of approximately 5,200 employees performing over \$1.1 billion of services for federal, commercial, utility and state customers. Mr. Grumski's many accomplishments with SAIC included growing SAIC's \$300 million federal environmental business to a top ranked, \$1.1 billion business; receiving the National Safety Council "Industry Leader" award in 2009; and receiving highest senior executive performance rating three years in a row. Mr. Grumski began his career with Gulf Oil Company and has progressed through senior level engineering, operations management, and program management positions with various companies, including Westinghouse Electric Corporation and Lockheed Martin, Inc. Mr. Grumski received a B.S. in Mechanical Engineering from The University of Pittsburgh and a M.S in Mechanical Engineering from West Virginia University.

Mr. Grumski has had an extensive career in solving and overseeing solutions to complex issues involving both domestic and international concerns. In addition, his extensive experience in companies that provide services to the government sector as well as his experience in the commercial sector provide solid experience for the continuing growth of the Company's Treatment and Services Segment. Mr. Grumski's extensive knowledge and problem-solving experiences, executive operational leadership experience and governance experience enhance the Board's ability to address significant challenges in the nuclear market, and led the Board to conclude that he should serve as a director.

The Honorable Joe R. Reeder

Mr. Reeder, a director since 2003, is a principal shareholder in the law firm of Greenberg Traurig LLP, one of the nation's largest U.S.-based law firms, with 41 offices and 2,200 attorneys worldwide, for which Mr.

Reeder served as Shareholder-in-Charge of the law firm's Mid-Atlantic Region (1999-2008). His clientele includes celebrities, heads of state, sovereign nations, international corporations, and law firms. As the 14th Undersecretary of the U.S. Army (1993-97), Mr. Reeder also served three years as Chairman of the Panama Canal Commission's Board, overseeing a multibillion-dollar infrastructure program. For the past 18 years, he has served on the Canal's International Advisory Board. He has served on the boards of the National Defense Industry Association ("NDIA"), chairing NDIA's Ethics Committee, the Armed Services YMCA, the Marshall Legacy Institute, and many other private companies and charitable organizations. After successive 4-year appointments by Virginia Governors Mark Warner and Tim Kaine, Mr. Reeder served seven years as Chairman of two Commonwealth of Virginia military boards, and 10 years on the USO Board of Governors. Mr. Reeder was appointed by Governor Terry McAuliffe to the Virginia Military Institute's Board of Visitors (2014), and reappointed in 2018 by current Virginia Governor Ralph Northam. Mr. Reeder, who has been a television commentator on legal and national security issues, has consistently been named a Super Lawyer for Washington, D.C., most recently in 2020. Among other corporate positions, he's been a director since September 2005 for ELBIT Systems of America, LLC, a subsidiary of Elbit Systems Ltd. (NASDAQ: ESLT), a publicly-held company that provides product and system solutions focusing on defense, homeland security, and commercial aviation. Mr. Reeder served on the Washington First Bank ("WFB") board from 2004 to 2017, and, since January 2018, has served on the board of Sandy Spring Bancorp, Inc. (NASDAQ: SASR), which acquired WFB in January 2018. Since April 2018, Mr. Reeder has served on the Audit Committee of Sandy Spring Bancorp, Inc.

In May 2018 Mr. Reeder was appointed to the Advisory Council Bid Protest Committee to the United States Court of Federal Claims.

A West Point graduate who served in the 82nd Airborne Division after Ranger School, Mr. Reeder earned his J.D. from the University of Texas, and L.L.M. from Georgetown University.

Mr. Reeder's career has focused on solving and overseeing solutions to complex domestic and international issues. This experience has enhanced the Board's ability to address major challenges in the nuclear market, as well as day-to-day corporate challenges, which is why the Board values his service as a director.

Mr. Larry M. Shelton

Mr. Shelton, a director since July 2006, has also held the position of Chairman of the Board of the Company since December 16, 2014. Mr. Shelton served as the Chief Financial Officer ("CFO") of S K Hart Management, LLC, a private investment management company ("S K Hart Management"), from 1999 until August 2018. Mr. Shelton served as President of Pony Express Land Development, Inc. (an affiliate of SK Hart Management), a privately held land development company, from January 2013 until August 2017, and has served on its board since December 2005. Mr. Shelton served as Director and CFO of S K Hart Ranches (PTY) Ltd, a private South African Company involved in agriculture, from March 2012 to March 2020. Mr. Shelton continues to provide advisory services to S K Hart Ranches (PTY) Ltd. Mr. Shelton served as a member of the Supervisory Board of PF Medical from April 2014 to December 2016. Mr. Shelton has over 20 years of experience as an executive financial officer for several waste management companies, including as CFO of Envirocare of Utah, Inc. (now EnergySolutions, Inc. (1995-1999)), a privately held nuclear waste services company, and as CFO of USPCI, Inc. (1982-1987), then a NYSE- listed public company engaged in the hazardous waste business. Since July 1989, Mr. Shelton has served on the board of Subsurface Technologies, Inc., a privately held company specializing in providing environmentally sound innovative solutions for water well rehabilitation and development. Mr. Shelton has a B.A. in accounting from the University of Oklahoma.

With his years of accounting experience as CFO for various companies, including a number of waste management companies, Mr. Shelton combines extensive industry knowledge and understanding of accounting principles, financial reporting requirements, evaluating and overseeing financial reporting processes and business matters. These factors led the Board to conclude that he should serve as a director.

The Honorable Zach P. Wamp

Mr. Wamp, a director since January 2018, is currently the President of Zach Wamp Consulting, a position he has held since 2011. As the President and owner of Zach Wamp Consulting, he has served some of the

most prominent companies from Silicon Valley to Wall Street as a business development consultant and advisor. From September 2013 to November 2017, Mr. Wamp chaired the Board of Directors for Chicago Bridge and Iron Federal Services, LLC (a subsidiary of Chicago Bridge & Iron Company, NYSE: CBI, which provides critical services primarily to the U.S. government). From January 1995 to January 2011, Mr. Wamp served as a member of the U.S. House of Representatives from Tennessee's 3rd Congressional District. His district included the Oak Ridge National Laboratory, with strong science and research missions from energy to homeland security. Among his many accomplishments, which included various leadership roles in the advancement of education and science, Mr. Wamp was instrumental in the formation and success of the Tennessee Valley Technology Corridor, which created thousands of jobs for Tennesseans in the areas of high-tech research, development, and manufacturing. During his career in the political arena, Mr. Wamp served on several prominent subcommittees during his 14 years on the House Appropriations Committee, including serving as a "ranking member" of the Subcommittee on Military Construction and Veterans Affairs and Related Agencies. Mr. Wamp has been a regular panelist on numerous media outlets and has been featured in a number of national publications effectively articulating sound social and economic policy. Mr. Wamp's business career has also included work in the real estate sector for a number of years as a licensed industrial-commercial real estate broker, for which he was named Chattanooga's Small Business Person of the Year. He is a founder and Board Chair of Learning Blade, the nation's premiere STEM education platform, which is now operating statewide in six states with deployment in another 10 states. Learning Blade is owned and operated by SAI Interactive, Inc., d/b/a Thinking Media, a privately-held educational products and services company.

Mr. Wamp has an extensive career in solving and overseeing solutions to complex issues involving domestic concerns. In addition, his wide-ranging career, particularly with respect to his government-related work, provides solid experience for the continuing growth of the Company's Treatment and Services Segments. His extensive knowledge and problem-solving expertise enhance the Board's ability to address significant challenges in the nuclear market, and led the Board to conclude that he should serve as a director.

Mr. Mark A. Zwecker

Mr. Zwecker, a director since the Company's inception in January 1991, previously served as the CFO and a board member for JCI US Inc. from 2013 to 2019. JCI US Inc. is a telecommunications company and wholly-owned subsidiary of Japan Communications, Inc. (Tokyo Stock Exchange (Securities Code: 9424)), which provides cellular service for M2M (machine to machine) applications. From 2006 to 2013, Mr. Zwecker served as Director of Finance for Communications Security and Compliance Technologies, Inc., a wholly-owned subsidiary of JCI US Inc. that develops security software products for the mobile workforce. From 1997 to 2006, Mr. Zwecker served as President of ACI Technology, LLC, a privately-held IT services provider, and from 1986 to 1998, he served as Vice President of Finance and Administration for American Combustion, Inc., a privately-held combustion technology solutions provider. In 1981, 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 position him well to serve as a member of our Board. These factors led the Board to conclude that he should serve as a director.

BOARD LEADERSHIP STRUCTURE

We currently separate the roles of Chairman of the Board and CEO. The Board believes that this leadership structure promotes balance between the Board's independent authority to oversee our business, and the CEO and his management team, who manage the business on a day-to-day basis.

The Company does not have a written policy with respect to the separation of the positions of Chairman of

the Board and CEO. The Company believes it is important to retain its flexibility to allocate the responsibilities of the offices of the Chairman and CEO in any way that is in the best interests of the Company at a given point in time; therefore, the Company's leadership structure may change in the future as circumstances may dictate.

Mr. Mark Zwecker, a current member of our Board, continues to serve as the Independent Lead Director, a position he has held since February 2010. 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 such responsibilities as the Board may delegate from time to time.

AUDIT COMMITTEE

We have a separately designated standing Audit Committee of our Board established in accordance with Section 3(a)(58)(A) of the Exchange Act. Members of the Audit Committee are Mark A. Zwecker (Chairperson), Larry M. Shelton, and Joseph T. Grumski, who replaced Zach Wamp as a member of the Audit Committee effective April 16, 2020.

Our Board has determined that each of our Audit Committee members is and was independent within the meaning of the rules of the NASDAQ and is 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 discussed with Grant Thornton, LLP, 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 OF DIRECTOR INDEPENDENCE

The Board has determined that each director, other than Dr. Centofanti, is "independent" within the meaning of the applicable NASDAQ rules. Dr. Centofanti is not deemed to be an "independent director" because of his employment as an executive officer of the Company.

COMPENSATION AND STOCK OPTION COMMITTEE

The Compensation and Stock Option Committee (the "Compensation Committee") reviews and recommends to the Board the compensation and benefits of all of the Company's officers and reviews general policy matters relating to compensation and benefits of the Company's employees. The Compensation Committee also administers the Company's stock option plans. The Compensation Committee has the sole authority to retain and terminate a compensation consultant, as well as to approve the consultant's fees and other terms of engagement. It also has the authority to obtain advice and assistance from internal or external legal, accounting or other advisors. No compensation consultant was employed during 2020. Members of the Compensation Committee during 2020 were Larry M. Shelton (Chairperson), Joe R. Reeder, and Mark A. Zwecker. Effective January 21, 2021, Joseph T. Grumski replaced Larry M. Shelton as the Chairperson and a member of the Compensation Committee and Zach P. Wamp replaced Joe R. Reeder as a member of the Compensation Committee. None of the members of the Compensation Committee has been or is an officer or employee of the Company or has had or has any relationship with the Company requiring disclosure under applicable Commission regulations.

CORPORATE GOVERNANCE AND NOMINATING COMMITTEE

We have a separately-designated standing Corporate Governance and Nominating Committee (the "Nominating Committee"). Members of the Nominating Committee during 2020 were Joe R. Reeder (Chairperson), Zach P. Wamp, and Larry M. Shelton. Effective January 21, 2021, Mr. Bostick replaced Larry M. Shelton as a member of the Nominating Committee. All members of the Nominating Committee are and were "independent" as that term is defined by current NASDAQ listing standards.

The Nominating Committee recommends to the Board of Directors candidates to fill vacancies on the Board and the nominees for election as 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 Bylaws sets forth certain minimum director qualifications to qualify for nomination for election as a director. To qualify for nomination or for 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 Company is subject so as not to cause the Company 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 in the Bylaws);
- 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 Bylaws.

In addition to the minimum director qualifications as mentioned above, in order for any proposed nominee to be eligible to be a candidate for election to the Board, such candidate must deliver to the Nominating Committee a completed questionnaire with respect to the background, qualifications, stock ownership and independence of such proposed nominee. The Nominating Committee reviews each candidate's qualifications to include considerations of:

- standards of integrity, personal ethics and values, 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, diversity is one of the many factors taken into account when considering potential candidates to serve on the Board of Directors. The Company generally views and values diversity from the perspective of professional and life experiences, as well as geographic location, representative of the markets in which we do business. The Company recognizes that diversity in professional and life experiences may include consideration of gender, race, cultural background or national origin, in identifying individuals who possess the qualifications that the Nominating Committee believes are important to be represented on the Board. The Company believes that the inclusion of diversity as one of many factors considered in selecting director nominees is consistent with the Company's goal of creating a board of directors that best serves our needs and those of our shareholders.

Stockholder Nominees

There have been no changes to the stockholder nomination process since the Company's last proxy statement. The procedure for stockholder nominees to the Board of Directors is set out below.

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 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 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 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 90th day nor earlier than the 120th 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 10th day following the day on which public disclosure of the date of the Special Meeting of Stockholders is made.

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 Bylaws. If the Board of Directors, upon the recommendation of the Nominating Committee, determines that a nomination was not made in accordance with the Company's Bylaws, the Chairman of the Meeting shall declare the nomination defective and it will be disregarded.

STRATEGIC ADVISORY COMMITTEE

We have a separately designated Strategic Advisory Committee (the "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 identification of potential new business opportunities. The members of the Strategic Advisory Committee are Dr. Louis Centofanti (Chairperson), Joe R. Reeder, Mark A. Zwecker, and Larry M. Shelton. The Strategic Advisory Committee does not have a charter.

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>
Mr. Mark Duff	58	President and CEO
Mr. Ben Naccarato	58	CFO, EVP, and Secretary; CFO and member of the Management Board of PF Medical
Dr. Louis Centofanti	76	EVP of Strategic Initiatives; President of PF Medical
Mr. Andrew Lombardo	61	EVP of Nuclear and Technical Services; Member of the Supervisory Board of PF Medical
Mr. Richard Grondin	62	EVP of Waste Treatment Operations; Member of the Supervisory Board of PF Medical

Mr. Mark Duff

Mr. Mark Duff has held the position of President and CEO of the Company since September 2017. Since joining the Company in June 2016 and prior to being named the President and CEO, Mr. Duff held the positions of Chief Operating Officer and Executive Vice President of the Company. Since joining Perma-Fix, Mr. Duff has developed and implemented strategies to meet aggressive growth objectives in both the Treatment and Services Segments. In the Treatment Segment, he has upgraded each facility to increase efficiency and modernize treatment capabilities to meet the changing markets associated with the waste management industry. In the Services Segment, which encompasses all field operations, he has completed the revitalization of business development programs which has resulted in increased competitive procurement effectiveness and broadened the market penetration within both the commercial and government sectors. Both of these implemented strategies have contributed to continuous growth in revenues and profitability. Mr. Duff has over 30 years of management and technical experience in the U.S Department

of Energy (“DOE”) and U.S. Department of Defense (“DOD”) environmental and construction markets as a corporate officer, senior project manager, co-founder of a consulting firm, and federal employee. Mr. Duff has an MBA from the University of Phoenix and received his B.S. from the University of Alabama.

Mr. Ben Naccarato

Mr. Naccarato has served as the Company’s CFO since February 26, 2009. On January 16, 2020, the Company’s Board, with the approval of the Compensation Committee, promoted Mr. Naccarato to EVP and CFO from Vice President and CFO. 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. Since July 2015 and December 2015, Mr. Naccarato has served as the CFO of PF Medical and a member of the Management Board of PF Medical, respectively. Mr. Naccarato has over 30 years of experience in senior financial positions in the waste management and used oil industries. From December 2002 to September 2004, Mr. Naccarato was the CFO of a privately held company in the fuel distribution and used waste oil industry. Mr. Naccarato is a graduate of University of Toronto with a Bachelor of Commerce and Finance Degree and is a Chartered Professional Accountant, Certified Management Accountant (CPA, CMA).

On March 3, 2021, Mr. Naccarato was appointed to serve as an independent director of PyroGenesis Canada, Inc., a high-tech company involved in the design, development, manufacture and commercialization of advanced plasma processes and products and whose stock is listed for trading on the Toronto (PYR) and NASDAQ (PYR) Stock Exchange. Effective March 11, 2021, Mr. Naccarato was appointed to serve as a member of both the Audit and Compensation Committee of PyroGenesis.

Dr. Louis Centofanti

See “Director – Dr. Louis F. Centofanti” in this section for information on Dr. Centofanti.

Mr. Andrew (“Andy”) Lombardo

On January 16, 2020, the Company’s Board appointed Mr. Lombardo to the position of EVP of Nuclear and Technical Services and an executive officer of the Company. Since joining the Company in 2011, Mr. Lombardo has held various positions within the Company’s Services Segment, including SVP of Nuclear and Technical Services. Since May 2019, Mr. Lombardo has served as a member of the Supervisory Board of PF Medical.

Mr. Lombardo, a Certified Health Physicist (“CHP”), has over 35 years of management and technical experience in the commercial nuclear reactor market, and the DOE and DOD environmental and construction markets as a senior director, senior project manager, senior CHP and chemist. Prior to joining the Company, Mr. Lombardo held the position of Vice President of Technical Services for Safety and Ecology Corporation (“SEC”), a subsidiary of Homeland Security Capital Corporation, a publicly traded environmental services company, prior to the acquisition of SEC by the Company in 2011. In his positions with both the Company and SEC, Mr. Lombardo procured and performed greater than \$20 million a year in health physics and radioactive material management projects across the DOE and DOD complex while managing a professional staff of engineers and health physicists and an instrumentation laboratory. Prior to his employment with the Company and SEC, he managed decommissioning projects for two engineering firms which included the successful deployment of soil segregation technology, resulting in client savings of more than \$100 million in transportation and disposal costs. During this time, he developed an expertise characterizing and managing naturally occurring radioactive material (“NORM”) and technologically enhanced NORM (“TENORM”) waste streams across multiple industries including oil and gas exploration and production. As a result of his expertise, he was recently appointed to the National Council on Radiation Protection and Measurement Committee to provide a commentary on the generation and disposal of TENORM waste. Mr. Lombardo began his career as a chemist and health physicist for the Duquesne Light Company at two commercial reactor sites and one joint DOE/Naval Reactors Duquesne Light test reactor in Shippingport, PA. Mr. Lombardo is certified in comprehensive practice of health physics, and has a M.S. degree in Health Physics from the University of Pittsburgh and a B.S. in Natural Sciences from Indiana University of Pennsylvania.

Mr. Richard Grondin

On July 22, 2020, the Company's Board appointed Mr. Richard Grondin to the position of EVP of Waste Treatment Operations and an executive officer of the Company. Effective January 21, 2021, Mr. Grondin was elected to serve as a member of the Supervisory Board of PF Medical. Since joining the Company in 2002, Mr. Grondin has held various positions within the Company's Treatment Segment, including Vice President of Technical Services, Vice President/General Manager of the Perma-Fix Northwest Richland, Inc. ("PFNWR") Facility and Vice President of Western Operations. Mr. Grondin, a Project Management Professional ("PMP"), has over 35 years of management and technical experience in the highly regulated and specialized radioactive/hazardous waste management industry with the majority of his experience concentrated on managing start-up waste management processing and disposal facilities for four different organizations in the commercial and government sectors. Prior to joining the Company, Mr. Grondin held the position of Vice President of Mixed Waste Operations for Allied Technology Group ("ATG") in Richland, Washington; Vice President of Operations for Waste Control Specialists ("WCS") in Andrews Texas; and Technical Manager/Director of Operations for Rollins Environmental Services Facility in Deer Trail, Colorado. In his positions with the Company, Mr. Grondin, together with others, transformed the PFNWR facility to a profitable subsidiary after its acquisition by the Company. Mr. Grondin is recognized in the United States and Canada as an authority in hazardous and mixed waste treatment. He has been involved in the treatment of several hundred thousand tons of waste in the last 35 years. Mr. Grondin has a Diploma of Collegial Studies in Pure and Applied Sciences from CEGEP of Amiante (Thetford-Mines, Canada) and Analytical Chemistry Techniques from CEGEP of Ahuntsic (Montreal, Canada), a Geography minor from Montreal University (Montreal, Canada) and a Certificate of Business Management from the School of Higher Commercial Studies from Montreal University (Montreal, Canada).

Certain Relationships

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 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 2020 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 such investors are accredited investors under Rule 501 of Regulation D promulgated under the Act. In addition, Capital Bank has advised us that none of such investors, individually or as a group, beneficially own more than 4.9% of our Common Stock as calculated in accordance with Rule 13d-3 of the Exchange Act. 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 to file, and has not filed, (a) reports under Section 16(a) of the Exchange Act or (b) either Schedule 13D or Schedule 13G in connection with the shares of our Common Stock registered in the name of Capital Bank.

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 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.permatrix.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 at the same web address.

ITEM 11. EXECUTIVE COMPENSATION

Summary Compensation

The following table summarizes the total compensation paid or earned by each of the named executive officers (“NEOs”) for the fiscal years ended December 31, 2020 and 2019.

Name and Principal Position	Year	Salary	Bonus	Option Awards	Non-Equity	All other Compensation	Total Compensation
					Incentive Plan Compensation		
		(\$)	(\$)	(\$) ⁽⁵⁾	(\$)	(\$) ⁽⁸⁾	(\$)
Mark Duff	2020	344,400	—	—	107,010 ⁽⁶⁾	29,930	481,340
President and CEO	2019	287,000	—	35,564	110,699 ⁽⁷⁾	29,680	462,943
Ben Naccarato	2020	280,000	—	—	86,000 ⁽⁶⁾	41,594	407,594
EVP and CFO	2019	235,231	—	21,338	81,070 ⁽⁷⁾	40,861	378,500
Dr. Louis Centofanti	2020	233,336	—	—	71,668 ⁽⁶⁾	33,780	338,784
EVP of Strategic Initiatives	2019	228,985	—	21,338	78,918 ⁽⁷⁾	32,264	361,505
Andy Lombardo ⁽¹⁾	2020	280,000	27,000 ⁽³⁾	—	83,000 ⁽⁶⁾	12,385	402,385
EVP of Nuclear & Technical Services	2019	258,662	—	14,225	89,147 ⁽⁷⁾	5,168	367,202
Richard Grondin ⁽²⁾	2020	223,151	—	—	71,143 ⁽⁶⁾	29,216	323,510
EVP of Waste Treatment Operations	2019	183,904	30,341 ⁽⁴⁾	14,225	— ⁽⁷⁾	29,137	257,607

(1) On January 16, 2020, the Board appointed Mr. Lombardo to the position of EVP of Nuclear and Technical Services and an executive officer of the Company. Previously, Mr. Lombardo held the position of SVP of Nuclear and Technical Services (within the Services Segment). As the EVP of Nuclear and Technical Services, Mr. Lombardo’s annual base salary was increased to \$280,000, effective January 1, 2020.

(2) On July 22, 2020, the Board appointed Mr. Grondin to the position of EVP of Waste Treatment Operations and an executive officer of the Company. Previously, Mr. Grondin held the position of Vice President of Western Operations. As the EVP of Waste Treatment Operations, Mr. Grondin’s annual base salary was increased to \$240,000, effective July 22, 2020.

(3) Reflects a discretionary bonus earned by Mr. Lombardo which was approved by the Company’s Compensation Committee

and which is to be paid upon payment of the compensation earned under Mr. Lombardo's 2020 MIP as described in footnote (6) below.

- (4) Reflects a discretionary bonus earned by Mr. Grondin which was approved by the Company's CEO and paid in May 2020. See also footnote (7) below.
- (5) Reflects the aggregate grant date fair value of awards computed in accordance with ASC 718, "Compensation – Stock Compensation." Assumptions used in the calculation of this amount are included in "Note 7 – Capital Stock, Stock Plans, Warrants and Stock Based Compensation" to "Notes to Consolidated Financial Statement."
- (6) Represents performance compensation earned under the Company's Management Incentive Plan ("MIP"). The MIP for each individual in the table is described under the heading "2020 MIPs." Compensation earned under the 2020 MIPs is to be paid on or about 90 days after year-end, or sooner based on final Form 10-K filing.
- (7) Represents performance compensation earned under the Company's 2019 MIP. As discussed above, Mr. Lombardo was named an executive officer of the Company effective January 16, 2020. Mr. Lombardo had a MIP for 2019 as the SVP of Nuclear and Technical Services, prior to his election as an executive officer by the Board on January 16, 2020. Mr. Lombardo's MIP as SVP of Nuclear and Technical Services was subject to the approval of the CEO. Mr. Grondin did not have a MIP for 2019 but earned a bonus which is described in footnote (4) above. Compensation earned under the MIPs for 2019 was paid by the Company at the end of May 2020.
- (8) The amount shown includes a monthly automobile allowance, insurance premiums (health, disability and life) paid by the Company on behalf of the NEO, and 401(k) matching contributions.

Name	Insurance Premium	Auto Allowance	401(k) match	Total
Mark Duff	\$ 14,430	\$ 9,000	\$ 6,500	\$ 29,930
Ben Naccarato	\$ 26,853	\$ 9,000	\$ 5,741	\$ 41,594
Dr. Louis Centofanti	\$ 18,516	\$ 9,000	\$ 6,264	\$ 33,780
Andy Lombardo	\$ —	\$ 5,885	\$ 6,500	\$ 12,385
Richard Grondin	\$ 18,516	\$ 4,200	\$ 6,500	\$ 29,216

Outstanding Equity Awards at Fiscal Year-End

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

Outstanding Equity Awards at December 31, 2020

Name	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) ⁽¹⁾ Unexercisable	Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Unearned Options (#)	Option Exercise Price (\$)	Option Expiration Date
Mark Duff	50,000 ⁽²⁾	— ⁽²⁾	—	3.97	5/15/2022
	60,000 ⁽³⁾	40,000 ⁽³⁾	—	3.65	7/27/2023
	5,000 ⁽⁴⁾	20,000 ⁽⁴⁾	—	3.15	1/17/2025
Ben Naccarato	30,000 ⁽³⁾	20,000 ⁽³⁾	—	3.65	7/27/2023
	3,000 ⁽⁴⁾	12,000 ⁽⁴⁾	—	3.15	1/17/2025
Dr. Louis Centofanti	30,000 ⁽³⁾	20,000 ⁽³⁾	—	3.65	7/27/2023
	3,000 ⁽⁴⁾	12,000 ⁽⁴⁾	—	3.15	1/17/2025
Andy Lombardo	4,000 ⁽⁵⁾	8,000 ⁽⁵⁾	—	3.60	10/19/2023
	— ⁽⁴⁾	8,000 ⁽⁴⁾	—	3.15	1/17/2025
Richard Grondin	12,000 ⁽⁵⁾	8,000 ⁽⁵⁾	—	3.60	10/19/2023
	2,000 ⁽⁴⁾	8,000 ⁽⁴⁾	—	3.15	1/17/2025

- ⁽¹⁾ Pursuant to each of the employment agreements between the Company and, respectively, Mark Duff, Ben Naccarato, Dr. Lou Centofanti, Andy Lombardo, and Richard Grondin, each dated July 22, 2020, in the event of a change in control, death of the executive officer, the executive officer terminates his employment for "good reason" or the executive officer is terminated by the Company without cause, each outstanding option and award shall immediately become exercisable in full (see "Employment Agreements" below for further discussion of the event pursuant to which accelerated exercise of the respective NEO's

outstanding options can arise).

- (2) Incentive stock option granted on May 15, 2016 under the Company's 2010 Stock Option Plan. The option has a contractual term of six years with one-third yearly vesting over a three-year period.
- (3) Incentive stock option granted on July 27, 2017 under the Company's 2017 Stock Option Plan. The option has a contractual term of six years with one-fifth yearly vesting over a five-year period.
- (4) Incentive stock option granted on January 17, 2019 under the Company's 2017 Stock Option Plan. The option has a contractual term of six years with one-fifth yearly vesting over a five-year period.
- (5) Incentive stock option granted on October 19, 2017 under the Company's 2017 Stock Option Plan. The option has a contractual term of six years with one-fifth yearly vesting over a five-year period.

Option Exercises

The table below reflects options exercised by our NEO's in 2020.

Name	Number of Shares Acquired on Exercise (#)	Value Realized on Exercise (\$) ⁽¹⁾
Andy Lombardo	2,000	\$ 7,700

- (1) Realized value determined based on the difference between (a) the total proceeds received by the Company from the exercise of options for the purchase of 2,000 shares of the Company's Common Stock at \$3.15 per share, and (b) the market value (\$7.00 per share) of the 2,000 shares of the Company's Common Stock acquired by Mr. Lombardo on the date of the exercise of the options.

Employment Agreements

Effective July 22, 2020, each of the NEOs entered into an employment agreement with the Company (each, an "Employment Agreement" and, collectively, the "Employment Agreements"). Each of the Employment Agreements, which are substantially identical, provides for a specified annual base salary, which annual salary may be increased from time to time, but not reduced, as determined by the Compensation Committee. In addition, each of the NEOs is entitled to participate in the Company's broad-based benefits plans and to certain performance compensation payable under separate MIPs as approved by the Company's Compensation Committee and Board. The Company's Compensation Committee and the Board approved individual 2020 MIPs on January 16, 2020 (which were effective January 1, 2020 and applicable for the 2020 fiscal year) for each of Mark Duff, Ben Naccarato, Dr. Louis Centofanti, and Andy Lombardo. Additionally, the Compensation Committee and the Board approved a 2020 MIP for Richard Grondin on July 22, 2020 (which was effective January 1, 2020 and applicable for the 2020 fiscal year) (see discussion of each of the 2020 MIPs below under "2020 MIPs"). The Employment Agreements for each of Mark Duff, Dr. Louis Centofanti, and Ben Naccarato replaced existing employment agreements between the Company and each such individual originally entered into on September 8, 2017.

Each of the Employment Agreements is effective for three years from July 22, 2020 (the "Initial Term") unless earlier terminated by the Company or by the respective NEO. At the end of the Initial Term of each Employment Agreement, each Employment Agreement will automatically be extended for one additional year, unless at least six months prior to the expiration of the Initial Term, the Company or the respective NEO provides written notice not to extend the terms of the Employment Agreement.

Each of the Employment Agreements provides that, if an NEO's employment is terminated due to death/disability or for cause (as defined in the agreements), the Company will pay to the NEO or to his estate an amount equal to the sum of any unpaid base salary, accrued unused vacation time through the date of termination, any benefits due to the NEO under any employee benefit plan (the "Accrued Amounts") and any performance compensation payable pursuant to the MIP applicable to such NEO.

If the NEO terminates his employment for "good reason" (as defined in the agreements) or is terminated by the Company without cause (including any such termination for "good reason" or without cause within 24 months after a Change in Control (as defined in the agreements), the Company will pay the NEO the Accrued Amounts, two years of full base salary, and two times the performance compensation (under the NEO's MIP) earned with respect to the fiscal year immediately preceding the date of termination provided

the performance compensation earned with respect to the fiscal year immediately preceding the date of termination has not yet been paid. If performance compensation earned with respect to the fiscal year immediately preceding the date of termination has been paid to the NEO, the NEO will be paid an additional year of the performance compensation earned with respect to the fiscal year immediately preceding the date of termination. If the NEO terminates his employment for a reason other than for good reason, the Company will pay to the executive an amount equal to the Accrued Amounts plus any performance compensation payable pursuant to the MIP applicable to such NEO.

If there is a Change in Control (as defined in the agreements), all outstanding stock options to purchase the common stock held by the NEO will immediately become exercisable in full commencing on the date of termination through the original term of the options. In the event of the death of an NEO, all outstanding stock options to purchase common stock held by the NEO will immediately become exercisable in full commencing on the date of death, with such options exercisable for the lesser of the original option term or twelve months from the date of the NEO's death. In the event an NEO terminates his employment for "good reason" or is terminated by the Company without cause, all outstanding stock options to purchase common stock held by the NEO will immediately become exercisable in full commencing on the date of termination, with such options exercisable for the lesser of the original option term or within 60 days from the date of the NEO's date of termination. Severance benefits payable with respect to a termination (other than Accrued Amounts) shall not be payable until the termination constitutes a "separation from service" (as defined under Treasury Regulation Section 1.409A-1(h)).

Potential Payments

The following table sets forth the potential (estimated) payments and benefits to which each NEO would be entitled upon termination of employment or following a Change in Control of the Company, as specified under each of their respective Employment Agreements with the Company, assuming each circumstance described below occurred on December 31, 2020, the last day of our most recent fiscal year.

Name and Principal Position Potential Payment/Benefit	Disability/ Retirement		For Cause		Death		By Executive for Good Reason or by Company Without Cause		Change in Control of the Company	
Mark Duff President and CEO										
Accrued Amounts	\$ 24,163	(6)	\$ 24,163	(6)	\$ 24,163	(6)	\$ 712,963	(1)	\$ 712,963	(1)
Performance compensation	\$ 107,010	(2)	\$ 107,010	(2)	\$ 107,010	(2)	\$ 214,020	(3)	\$ 214,020	(3)
Stock Options	\$ 253,300	(5)	\$ 253,300	(5)	\$ 402,500	(4)	\$ 402,500	(4)	\$ 402,500	(4)
Ben Naccarato EVP and CFO										
Accrued Amounts	\$ 54,762	(6)	\$ 54,762	(6)	\$ 54,762	(6)	\$ 614,762	(1)	\$ 614,762	(1)
Performance compensation	\$ 86,000	(2)	\$ 86,000	(2)	\$ 86,000	(2)	\$ 172,000	(3)	\$ 172,000	(3)
Stock Options	\$ 78,060	(5)	\$ 78,060	(5)	\$ 158,300	(4)	\$ 158,300	(4)	\$ 158,300	(4)
Dr. Louis Centofanti EVP of Strategic Initiatives										
Accrued Amounts	\$ 166,967	(6)	\$ 166,967	(6)	\$ 166,967	(6)	\$ 633,639	(1)	\$ 633,639	(1)
Performance compensation	\$ 71,668	(2)	\$ 71,668	(2)	\$ 71,668	(2)	\$ 143,336	(3)	\$ 143,336	(3)
Stock Options	\$ 78,060	(5)	\$ 78,060	(5)	\$ 158,300	(4)	\$ 158,300	(4)	\$ 158,300	(4)
Andy Lombardo EVP of Nuclear and Technical Services										
Accrued Amounts	\$ 19,276	(6)	\$ 19,276	(6)	\$ 19,276	(6)	\$ 579,276	(1)	\$ 579,276	(1)
Performance compensation	\$ 83,000	(2)	\$ 83,000	(2)	\$ 83,000	(2)	\$ 166,000	(3)	\$ 166,000	(3)
Stock Options	\$ 9,480	(5)	\$ 9,480	(5)	\$ 51,000	(4)	\$ 51,000	(4)	\$ 51,000	(4)
Richard Grondin EVP of Waste Treatment Operations										
Accrued Amounts	\$ 91,201	(6)	\$ 91,201	(6)	\$ 91,201	(6)	\$ 571,201	(1)	\$ 571,201	(1)
Performance compensation	\$ 71,143	(2)	\$ 71,143	(2)	\$ 71,143	(2)	\$ 142,286	(3)	\$ 142,286	(3)
Stock Options	\$ 34,080	(5)	\$ 34,080	(5)	\$ 75,600	(4)	\$ 75,600	(4)	\$ 75,600	(4)

(1) Represents two times the base salary of the NEO at December 31, 2020 plus “Accrued Amounts” noted in footnote (6) below.

(2) Represents performance compensation earned for fiscal year 2020 (see “2020 MIPs” below). Pursuant to each MIP, performance compensation is to be paid about 90 days after year-end, or sooner based on final Form 10-K filing.

(3) Represents two times the performance compensation earned for fiscal year 2020 (see “2020 MIPs” below). Pursuant to the MIP, performance compensation is to be paid about 90 days after fiscal year-end, or sooner based on final Form 10-K filing.

(4) Benefit is calculated based on the difference between the exercise price of each option and the market value of the Company’s Common Stock per share (as reported on the NASDAQ) at December 31, 2020 times the number of options outstanding at December 31, 2020.

(5) Benefit is calculated based on the difference between the exercise price of each option and the market value of the Company’s Common Stock per share (as reported on the NASDAQ) at December 31, 2020 times the number of options vested at December 31, 2020.

(6) Represents accrued base salary earned for 2020 but paid in 2021, as well as accrued unused vacation/sick time and benefits (defined as “Accrued Amounts” in each of the respective per the Employment Agreement).

2020 Executive Compensation Components

For the fiscal year ended December 31, 2020, 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.

Based on the amounts set forth in the Summary Compensation table, during 2020, salary accounted for approximately 69.7% of the total compensation of our NEOs, while equity option awards, MIP compensation, and other compensation accounted for approximately 30.3% of the total compensation of the NEOs.

Base Salary

The NEOs, other officers, and other employees of the Company receive a base annual salary. 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 companies in similar industry.

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

- market data and comparisons to companies in similar industry;
- 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 Compensation Committee's assessment of the individual's performance. The base salary and potential annual base salary adjustments for the NEOs are set forth in their respective employment agreements. On January 16, 2020, the Compensation Committee and the Board approved a base salary increase for each of the following individuals, which became effective January 1, 2020: (a) approximately \$57,400 increase from \$287,000 to \$344,400 for Mark Duff, CEO and President; (b) approximately \$44,769 increase from \$235,231 to \$280,000 for Ben Naccarato who was named EVP and CFO from VP and CFO; and (c) approximately \$21,338 increase from \$258,662 to \$280,000 for Andy Lombardo, who was named an executive officer of the Company effective January 16, 2020 and appointed to the position of EVP of Nuclear and Technical Services from SVP of Nuclear and Technical Services. Lou Centofanti, EVP of Strategic Initiatives, was approved a base salary increase of 1.9%, effective January 1, 2020 (from \$228,985 to \$233,336). As a result of Richard Grondin's promotion to EVP of Waste Treatment and being named an executive officer of the Company, his annual salary was increased from \$208,000 as the Vice President of Western Operations to \$240,000, effective July 22, 2020. In February 2021, the Compensation Committee approved a cost of living adjustment of approximately 2.3% of each NEO's base salary, effective April 1, 2021.

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 option 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.

2020 MIPs

On January 16, 2020, the Board and the Compensation Committee approved individual MIPs for the CEO, CFO, EVP of Strategic Initiatives and EVP of Nuclear and Technical Services. Additionally, on July 22,

2020, the Board and the Compensation Committee approved a MIP for the EVP of Treatment Waste Operations in connection with his appointment to such position on that date. The MIPs were effective January 1, 2020 and applicable for the 2020 fiscal year. Each MIP provides guidelines for the calculation of annual cash incentive-based compensation, subject to Compensation Committee oversight and modification. Each MIP awarded cash compensation based on achievement of performance thresholds, with the amount of such compensation established as a percentage of the executive's 2020 annual base salary. The potential target performance compensation ranged from 5% to 150% of the base salary for the CEO (\$17,220 to \$516,600), 5% to 100% of the base salary for the CFO (\$14,000 to \$280,000), 5% to 100% of the base salary for the EVP of Strategic Initiatives (\$11,667 to \$233,336), 5% to 100% of the base salary for the EVP of Nuclear and Technical Services (\$14,000 to \$280,000) and 5% to 100% of the base salary for the EVP of Waste Treatment Operations (\$12,000 to \$240,000).

Performance compensation, if any, is to be paid on or about 90 days after year-end, or sooner, based on final Form 10-K filing. 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.

The total performance compensation paid to the CEO, CFO, EVP of Strategic Initiatives, EVP of Nuclear and Technical Services and EVP of Waste Treatment Operations as a group is not to exceed 50% of the Company's pre-tax net income computed prior to the calculation of performance compensation.

The following describes the principal terms of the respective 2020 MIP applicable to each NEO:

CEO MIP:

CEO performance compensation for fiscal 2020 was based upon meeting corporate revenue, EBITDA, health and safety, and environmental compliance (permit and license violations) objectives for fiscal 2020, all with respect to the Company's operations. The Compensation Committee believes performance compensation payable under each of the 2020 MIPs as discussed herein and below should be based on achievement of an EBITDA target, which excludes certain non-cash items, as this target provides a better indicator of operating performance. However, EBITDA has certain limitations as it does not reflect all items of income or cash flows that affect the Company's financial performance under GAAP. At achievement of 60% to 110% of each of the revenue and EBITDA targets, the potential performance compensation was payable at 5% to 50% of the 2020 base salary, weighted 60% based on the EBITDA goal, 10% on the revenue goal, and 15% on the number of health and safety claim incidents that occurred during fiscal 2020, with the remaining 15% on the number of notices alleging environmental, health or safety violations under our permits or licenses that occurred during the fiscal 2020. Upon achievement of 111% to 150%+ of each of the revenue and EBITDA targets, the potential performance compensation was payable at 75% to 150% of the CEO's 2020 base salary, based on the four objectives noted above, with the payment of such performance compensation weighted more heavily toward the EBITDA objective. Each of the revenue and EBITDA components was based on the Board-approved revenue target and EBITDA target. The 2020 target performance incentive compensation for the CEO was as follows:

Annualized Base Pay:	\$344,400
Performance Incentive Compensation Target (at 100% of Plan):	<u>\$172,200</u>
Total Annual Target Compensation (at 100% of Plan):	<u>\$516,600</u>

Perma-Fix Environmental Services, Inc.
2020 Management Incentive Plan
CEO MIP MATRIX

	Performance Target Achieved						
	<60%	60%-74%	75%-89%	90%-110%	111%-129%	130%-150%	>150%
Revenue (1) (5)	\$ -	\$ 1,722	\$ 8,610	\$ 17,220	\$ 29,520	\$ 41,820	\$ 66,420
EBITDA (2)	-	10,332	51,660	103,320	177,120	250,920	398,520
Health & Safety (3) (5)	-	2,583	12,915	25,830	25,830	25,830	25,830
Permit & License Violations (4) (5)	-	2,583	12,915	25,830	25,830	25,830	25,830
	<u>\$ -</u>	<u>\$ 17,220</u>	<u>\$ 86,100</u>	<u>\$ 172,200</u>	<u>\$ 258,300</u>	<u>\$ 344,400</u>	<u>\$ 516,600</u>

- 1) Revenue was defined as the total consolidated third-party top line revenue as publicly reported in the Company's 2020 financial statements. The percentage achieved was determined by comparing the actual consolidated revenue for 2020 to the Board approved Revenue Target for 2020, which was \$86,201,000. The Board reserved 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.
- 2) EBITDA was defined as earnings before interest, taxes, depreciation, and amortization from continuing and discontinued operations, including PF Medical. The percentage achieved was determined by comparing the actual EBITDA to the Board approved EBITDA Target for 2020, which was \$6,913,000. The Board reserved the right to modify or change the EBITDA 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.
- 3) The Health and Safety Incentive Target was based upon the actual number of Worker's Compensation Lost Time Accidents, as provided by the Company's Worker's Compensation carrier. The Corporate Controller submitted a report on a quarterly basis documenting and confirming the number of Worker's Compensation Lost Time Accidents, supported by the Worker's Compensation Loss Report provided by the company's carrier or broker. Such claims were identified on the loss report as "indemnity claims." The following number of Worker's Compensation Lost Time Accidents and corresponding Performance Target Thresholds was established for the annual Incentive Compensation Plan calculation for 2020.

Work Comp. <u>Claim Number</u>	Performance <u>Target Achieved</u>
4	60%-74%
3	75%-89%
2	90%-110%
1	111%-129%
1	130%-150%
1	>150%

- 4) Permits or License Violations incentive was earned/determined according to the scale set forth below: An "official notice of non-compliance" was defined as an official communication during 2020 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 resulted in a facility's implementation of corrective action(s).

Permit and License Violations	Performance Target Achieved
4	60%-74%
3	75%-89%
2	90%-110%
1	111%-129%
1	130%-150%
1	>150%

- 5) No performance incentive compensation was payable for achieving the health and safety, permit and license violation, and revenue targets unless a minimum of 60% of the EBITDA Target was achieved.

CFO MIP:

CFO performance compensation for fiscal 2020 was based upon meeting corporate revenue, EBITDA, health and safety, and environmental compliance (permit and license violations) objectives for fiscal 2020, all with respect to the Company's operations. At achievement of 60% to 110% of each of the revenue and EBITDA targets, the potential performance compensation was payable at 5% to 50% of the 2020 base salary, weighted 75% based on EBITDA goal, 10% on the revenue goal, and 7.5% on the number of health and safety claim incidents that occurred during fiscal 2020, with the remaining 7.5% on the number of notices alleging environmental, health or safety violations under our permits or licenses that occurred during the fiscal 2020. Upon achievement of 111% to 150%+ of each of the revenue and EBITDA targets, the potential performance compensation was payable at 65% to 100% of the CFO's 2020 base salary, based on the four objectives noted above, with the payment of such performance compensation weighted more heavily toward the EBITDA objective. Each of the revenue and EBITDA components was based on the Board-approved revenue target and EBITDA target. The 2020 target performance incentive compensation for the CEO was as follows:

Annualized Base Pay:	\$280,000
Performance Incentive Compensation Target (at 100% of Plan):	<u>\$140,000</u>
Total Annual Target Compensation (at 100% of Plan):	<u>\$420,000</u>

Perma-Fix Environmental Services, Inc. 2020 Management Incentive Plan CFO MIP MATRIX							
	Performance Target Achieved						
	<60%	60%-74%	75%-89%	90%-110%	111%-129%	130%-150%	>150%
Revenue (1) (5)	\$ -	\$ 1,400	\$ 7,000	\$ 14,000	\$ 23,000	\$ 31,000	\$ 37,000
EBITDA (2)	-	10,500	52,500	105,000	138,000	186,000	222,000
Health & Safety (3) (5)	-	1,050	5,250	10,500	10,500	10,500	10,500
Permit & License Violations (4) (5)	-	1,050	5,250	10,500	10,500	10,500	10,500
	<u>\$ -</u>	<u>\$ 14,000</u>	<u>\$ 70,000</u>	<u>\$ 140,000</u>	<u>\$ 182,000</u>	<u>\$ 238,000</u>	<u>\$ 280,000</u>

- 1) Revenue was defined as the total consolidated third-party top line revenue as publicly reported in the Company's 2020 financial statements. The percentage achieved was determined by comparing the actual consolidated revenue for 2020 to the Board approved Revenue Target for 2020, which was \$86,201,000. The Board reserved 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.

- 2) EBITDA was defined as earnings before interest, taxes, depreciation, and amortization from continuing and discontinued operations, including PF Medical. The percentage achieved was determined by comparing the actual EBITDA to the Board approved EBITDA Target for 2020, which was \$6,913,000. The Board reserved the right to modify or change the EBITDA 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.
- 3) The Health and Safety Incentive Target was based upon the actual number of Worker's Compensation Lost Time Accidents, as provided by the Company's Worker's Compensation carrier. The Corporate Controller submitted a report on a quarterly basis documenting and confirming the number of Worker's Compensation Lost Time Accidents, supported by the Worker's Compensation Loss Report provided by the company's carrier or broker. Such claims were identified on the loss report as "indemnity claims." The following number of Worker's Compensation Lost Time Accidents and corresponding Performance Target Thresholds was established for the annual Incentive Compensation Plan calculation for 2020.

Work Comp. <u>Claim Number</u>	Performance <u>Target Achieved</u>
4	60%-74%
3	75%-89%
2	90%-110%
1	111%-129%
1	130%-150%
1	>150%

- 4) Permits or License Violations incentive was earned/determined according to the scale set forth below: An "official notice of non-compliance" was defined as an official communication during 2020 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 resulted in a facility's implementation of corrective action(s).

Permit and License Violations	Performance Target Achieved
4	60%-74%
3	75%-89%
2	90%-110%
1	111%-129%
1	130%-150%
1	>150%

- 5) No performance incentive compensation was payable for achieving the health and safety, permit and license violation, and revenue targets unless a minimum of 60% of the EBITDA Target was achieved.

EVP of Strategic Initiatives MIP:

The 2020 performance compensation plan for the EVP of Strategic Initiative was based upon meeting corporate revenue, EBITDA, health and safety, and environmental compliance (permit and license violations) objectives for fiscal 2020, all with respect to the Company's operations. At achievement of 60% to 110% of each of the revenue and EBITDA targets, the potential performance compensation was payable at 5% to 50% of the 2020 base salary, weighted 75% based on EBITDA goal, 10% on revenue goal, and

7.5% on the number of health and safety claim incidents that occurred during fiscal 2020, with the remaining 7.5% on the number of notices alleging environmental, health or safety violations under our permits or licenses that occurred during fiscal 2020. Upon achievement of 111% to 150%+ of each of the revenue and EBITDA targets, the potential performance compensation was payable at 65% to 100% of the EVP of Strategic Initiative's 2020 base salary, based on the four objectives noted above, with the payment of such performance compensation weighted more heavily toward the EBITDA objective. Each of the revenue and EBITDA components was based on the Board-approved revenue target and EBITDA target. The 2020 target performance incentive compensation for the EVP of Strategic Initiatives was as follows:

Annualized Base Pay:	\$233,336
Performance Incentive Compensation Target (at 100% of Plan):	<u>\$116,668</u>
Total Annual Target Compensation (at 100% of Plan):	<u>\$350,004</u>

Perma-Fix Environmental Services, Inc. 2020 Management Incentive Plan EVP OF STRATEGIC INITIATIVES MIP MATRIX							
	Performance Target Achieved						
	<60%	60%-74%	75%-89%	90%-110%	111%-129%	130%-150%	>150%
Revenue (1) (5)	\$ -	\$ 1,167	\$ 5,833	\$ 11,667	\$ 19,167	\$ 25,834	\$ 30,834
EBITDA (2)	-	8,750	43,751	87,501	115,001	155,002	185,002
Health & Safety (3) (5)	-	875	4,375	8,750	8,750	8,750	8,750
Permit & License Violations (4) (5)	-	875	4,375	8,750	8,750	8,750	8,750
	<u>\$ -</u>	<u>\$ 11,667</u>	<u>\$ 58,334</u>	<u>\$ 116,668</u>	<u>\$ 151,668</u>	<u>\$ 198,336</u>	<u>\$ 233,336</u>

- 1) Revenue was defined as the total consolidated third-party top line revenue as publicly reported in the Company's 2020 financial statements. The percentage achieved was determined by comparing the actual consolidated revenue for 2020 to the Board approved Revenue Target for 2020, which was \$86,201,000. The Board reserved 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.
- 2) EBITDA was defined as earnings before interest, taxes, depreciation, and amortization from continuing and discontinued operations, including PF Medical. The percentage achieved was determined by comparing the actual EBITDA to the Board approved EBITDA Target for 2020, which was \$6,913,000. The Board reserved the right to modify or change the EBITDA 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.
- 3) The Health and Safety Incentive Target was based upon the actual number of Worker's Compensation Lost Time Accidents, as provided by the Company's Worker's Compensation carrier. The Corporate Controller submitted a report on a quarterly basis documenting and confirming the number of Worker's Compensation Lost Time Accidents, supported by the Worker's Compensation Loss Report provided by the company's carrier or broker. Such claims were identified on the loss report as "indemnity claims." The following number of Worker's Compensation Lost Time Accidents and corresponding Performance Target Thresholds was established for the annual Incentive Compensation Plan calculation for 2020.

Work Comp. Claim Number	Performance Target Achieved
4	60%-74%
3	75%-89%
2	90%-110%

1	111%-129%
1	130%-150%
1	>150%

- 4) Permits or License Violations incentive was earned/determined according to the scale set forth below: An “official notice of non-compliance” was defined as an official communication during 2020 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 resulted in a facility’s implementation of corrective action(s).

Permit and License Violations	Performance Target Achieved
4	60%-74%
3	75%-89%
2	90%-110%
1	111%-129%
1	130%-150%
1	>150%

- 5) No performance incentive compensation was payable for achieving the health and safety, permit and license violation, and revenue targets unless a minimum of 60% of the EBITDA Target was achieved.

EVP of Nuclear and Technical Services MIP:

The 2020 performance compensation plan for the EVP of Nuclear and Technical Services was based upon meeting corporate revenue, EBITDA, health and safety compliance, and Cost Performance Index (“CPI”) (a metric used in measuring project performance) objectives for fiscal 2020, all with respect to the Company’s operations. At achievement of 60% to 110% of each of the revenue and EBITDA targets, the potential performance compensation was payable at 5% to 50% of the 2020 base salary, weighted 60% based on the EBITDA goal, 10% on the revenue goal, and 15% on the number of health and safety claim incidents that occur during fiscal 2020, with the remaining 15% on CPI metric goals. Upon achievement of 111% to 150%+ of each of the revenue and EBITDA targets, the potential performance compensation was payable at 65% to 100% of the SVP of Nuclear and Technical Services’ 2020 base salary, based on the four objectives noted above, with the payment of such performance compensation weighted more heavily toward the EBITDA objective. Each of the revenue and EBITDA components was based on the Board-approved revenue target and the EBITDA target. The 2020 target performance incentive compensation for the EVP of Nuclear and Technical Services was as follows:

Annualized Base Pay:	\$280,000
Performance Incentive Compensation Target (at 100% of Plan):	<u>\$140,000</u>
Total Annual Target Compensation (at 100% of Plan):	<u>\$420,000</u>

Perma-Fix Environmental Services, Inc.
2020 Management Incentive Plan
EVP OF NUCLEAR & TECHNICAL SERVICES MIP MATRIX

	Performance Target Achieved						
	<60%	60%-74%	75%-89%	90%-110%	111%-129%	130%-150%	>150%
Revenue (1) (5)	\$ -	\$ 1,400	\$ 7,000	\$ 14,000	\$ 20,000	\$ 28,000	\$ 34,000
EBITDA (2)	-	8,400	42,000	84,000	120,000	168,000	204,000
Health & Safety (3) (5)	-	2,100	10,500	21,000	21,000	21,000	21,000
CPI (4) (5)	-	2,100	10,500	21,000	21,000	21,000	21,000
	<u>\$ -</u>	<u>\$ 14,000</u>	<u>\$ 70,000</u>	<u>\$ 140,000</u>	<u>\$ 182,000</u>	<u>\$ 238,000</u>	<u>\$ 280,000</u>

- 1) Revenue was defined as the total consolidated third-party top line revenue as publicly reported in the Company's 2020 financial statements. The percentage achieved was determined by comparing the actual consolidated revenue for 2020 to the Board approved Revenue Target for 2020, which was \$86,201,000. The Board reserved 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.
- 2) EBITDA was defined as earnings before interest, taxes, depreciation, and amortization from continuing and discontinued operations, including PF Medical. The percentage achieved was determined by comparing the actual EBITDA to the Board approved EBITDA Target for 2020, which was \$6,913,000. The Board reserved the right to modify or change the EBITDA 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.
- 3) The Health and Safety Incentive target was based upon the actual number of Worker's Compensation Lost Time Accidents in the Company's Services Segment, as provided by the Company's Worker's Compensation carrier. The Corporate Controller submitted a report on a quarterly basis documenting and confirming the number of Worker's Compensation Lost Time Accidents, supported by the Worker's Compensation Loss Report provided by the company's carrier or broker. Such claims were identified on the loss report as "indemnity claims." The following number of Worker's Compensation Lost Time Accidents and corresponding Performance Target Thresholds was established for the annual Incentive Compensation Plan calculation for 2020.

Work Comp. <u>Claim Number</u>	Performance <u>Target Achieved</u>
4	60%-74%
3	75%-89%
2	90%-110%
1	111%-129%
1	130%-150%
1	>150%

- 4) CPI incentive was earned/determined by maintaining project performance metrics for all Firm Fixed Price task orders and projects to include monitoring CPI based on recognized earned value calculations. As defined through monthly project reviews, all CPI metrics should exceed 1.0 for Nuclear Services Projects. A cumulative CPI (CCPI) was calculated from all fixed cost contracts.

The following CCPI and corresponding Performance Target Thresholds were established for annual incentive compensation plan calculation for 2020.

CPI (if CCPI is)	Performance Target Achieved
<0.60	(n/a)
0.60-0.74	60%-74%
0.75-0.89	75%-89%
0.90-1.10	90%-110%
1.11-1.29	111%-129%
1.30-1.50	130%-150%
>1.50	>150%

- 5) No performance incentive compensation was payable for achieving the health and safety, and CPI, and revenue targets unless a minimum of 60% of the EBITDA Target was achieved.

EVP of Waste Treatment Operations:

The 2020 performance compensation plan for the EVP of Waste Treatment Operations was based upon meeting corporate revenue, EBITDA, health and safety, and environmental compliance (permit and license violations) objectives for fiscal 2020, all with respect to the Company's operations. At achievement of 60% to 110% of each of the revenue and EBITDA targets, the potential performance compensation was payable at 5% to 50% of the 2020 base salary, weighted 60% based on EBITDA goal, 10% on revenue goal, and 15% on the number of health and safety claim incidents that occurred during fiscal 2020, with the remaining 15% on the number of notices alleging environmental, health or safety violations under our permits or licenses that occurred during fiscal 2020. Upon achievement of 111% to 150%+ of each of the revenue and EBITDA targets, the potential performance compensation was payable at 65% to 100% of the EVP of Waste Treatment Waste Operation's 2020 base salary, based on the four objectives noted above, with the payment of such performance compensation weighted more heavily toward the EBITDA objective. Each of the revenue and EBITDA components was based on the Board-approved revenue target and EBITDA target. The 2020 target performance incentive compensation for the EVP of Waste Treatment Operations was as follows:

Annualized Base Pay:	\$240,000
Performance Incentive Compensation Target (at 100% of Plan):	<u>\$120,000</u>
Total Annual Target Compensation (at 100% of Plan):	<u>\$360,000</u>

Perma-Fix Environmental Services, Inc. 2020 Management Incentive Plan EVP OF WASTE TREATMENT OPERATIONS MIP MATRIX							
	Performance Target Achieved						
	<60%	60%-74%	75%-89%	90%-110%	111%-129%	130%-150%	>150%
Revenue (1) (5)	\$ -	\$ 1,200	\$ 6,000	\$ 12,000	\$ 17,143	\$ 24,000	\$ 29,143
EBITDA (2)	-	7,200	36,000	72,000	102,857	144,000	174,857
Health & Safety (3) (5)	-	1,800	9,000	18,000	18,000	18,000	18,000
Permit & License Violations (4) (5)	-	1,800	9,000	18,000	18,000	18,000	18,000
	<u>\$ -</u>	<u>\$ 12,000</u>	<u>\$ 60,000</u>	<u>\$ 120,000</u>	<u>\$ 156,000</u>	<u>\$ 204,000</u>	<u>\$ 240,000</u>

- 1) Revenue was defined as the total consolidated third-party top line revenue as publicly reported in the Company's 2020 financial statements. The percentage achieved was determined by comparing the actual consolidated revenue for 2020 to the Board approved Revenue Target for 2020, which was \$86,201,000. The Board reserved 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.
- 2) EBITDA was defined as earnings before interest, taxes, depreciation, and amortization from continuing and discontinued operations, including PF Medical. The percentage achieved was determined by comparing the actual EBITDA to the Board approved EBITDA Target for 2020, which was \$6,913,000. The Board reserved the right to modify or change the EBITDA 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.
- 3) The Health and Safety Incentive Target was based upon the actual number of Worker's Compensation Lost Time Accidents, as provided by the Company's Worker's Compensation carrier. The Corporate Controller submitted a report on a quarterly basis documenting and confirming the number of Worker's Compensation Lost Time Accidents, supported by the Worker's Compensation Loss Report provided by the company's carrier or broker. Such claims were identified on the loss report as "indemnity claims." The following number of Worker's Compensation Lost Time Accidents and corresponding Performance Target Thresholds was established for the annual Incentive Compensation Plan calculation for 2020.

Work Comp. <u>Claim Number</u>	Performance <u>Target Achieved</u>
4	60%-74%
3	75%-89%
2	90%-110%
1	111%-129%
1	130%-150%
1	>150%

- 4) Permits or License Violations incentive was earned/determined according to the scale set forth below: An "official notice of non-compliance" was defined as an official communication during 2020 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 resulted in a facility's implementation of corrective action(s).

Permit and <u>License Violations</u>	Performance <u>Target Achieved</u>
4	60%-74%
3	75%-89%
2	90%-110%
1	111%-129%
1	130%-150%
1	>150%

- 5) No performance incentive compensation was payable for achieving the health and safety, permit and license violation, and revenue targets unless a minimum of 60% of the EBITDA Target was achieved.

2020 MIP Targets

As discussed above, 2020 MIPs approved by the Board and the Compensation Committee for the CEO, CFO, EVP of Strategic Initiatives, EVP of Nuclear and Technical Services and EPV of Waste Treatment Operations provided for the award of cash compensation based on achievement of performance targets which included revenue and EBITDA targets as approved by our Board. The 2020 MIP revenue target of \$86,201,000 and EBITDA target of \$6,913,000 were set by the Compensation Committee taking into account the Board-approved budget for 2020 as well as the committee's expectations for performance that in its estimation would warrant payment of incentive cash compensation. In formulating the revenue target of \$86,201,000, the Board considered 2019 results, economic conditions, and forecasts for 2020 government (U.S DOE) spending. The Compensation Committee believed the performance targets were likely to be achieved, but not assured.

The following tables set forth the MIP compensation earned by the CEO, CFO, EVP of Strategic Initiatives, EVP of Nuclear and Technical Services and EVP of Waste Treatment Operations for fiscal year 2020.

CEO

Target Objectives:	Performance Target Threshold Achieved	MIP Compensation Earned
Revenue	111%-129%	\$ 29,520
EBITDA	75%-89%	51,660
Health & Safety	<60%	—
Permit & License Violations	111%-129%	25,830
Total Performance Compensation		<u>\$ 107,010</u>

CFO

Target Objectives:	Performance Target Threshold Achieved	MIP Compensation Earned
Revenue	111%-129%	\$ 23,000
EBITDA	75%-89%	52,500
Health & Safety	<60%	—
Permit & License Violations	111%-129%	10,500
Total Performance Compensation		<u>\$ 86,000</u>

EVP of Strategic Initiatives

Target Objectives:	Performance Target Threshold Achieved	MIP Compensation Earned
Revenue	111%-129%	\$ 19,167
EBITDA	75%-89%	43,751
Health & Safety	<60%	—
Permit & License Violations	111%-129%	8,750
Total Performance Compensation		<u>\$ 71,668</u>

EVP of Nuclear and Technical Services

Target Objectives:	Performance Target Threshold Achieved	MIP Compensation Earned
Revenue	111%-129%	\$ 20,000
EBITDA	75%-89%	42,000
Health & Safety	<60%	—
CPI	90%-110%	21,000
Total Performance Compensation		<u>\$ 83,000</u>

EVP of Waste Treatment Operations

Target Objectives:	Performance Target Threshold Achieved	MIP Compensation Earned
Revenue	111%-129%	\$ 17,143
EBITDA	75%-89%	36,000
Health & Safety	<60%	—
Permit & License Violations	111%-129%	18,000
Total Performance Compensation		<u>\$ 71,143</u>

2021 MIPs

On January 21, 2021, the Company Compensation Committee and the Board approved individual MIPs for the calendar year 2021 for the CEO, CFO, EVP of Strategic Initiatives, EVP of Nuclear and Technical Services and EVP of Waste Treatment Operations. The MIPs are effective January 1, 2021 and applicable for the 2021 fiscal year. Each MIP provides guidelines for the calculation of annual cash incentive-based compensation, subject to Compensation Committee oversight and modification. Each MIP awards cash compensation based on achievement of performance thresholds, with the amount of such compensation established as a percentage of base salary at the time of the approval of the MIP. The potential target performance compensation ranges from 5% to 150% of the 2021 base salary for the CEO (\$17,220 to \$516,600), 5% to 100% of the 2021 base salary for the CFO (\$14,000 to \$280,000), 5% to 100% of the 2021 base salary for the EVP of Strategic Initiatives (\$11,667 to \$233,336), 5% to 100% of the 2021 base salary for the EVP of Nuclear and Technical Services (\$14,000 to \$280,000) and 5% to 100% (\$12,000 to \$240,000) of the 2021 base salary for the EVP of Waste Treatment Operations.

Performance compensation, if any, is to be paid on or about 90 days after year-end, or sooner, based on final Form 10-K filing. 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. Subsequent to the approval of the MIPs for fiscal year 2021 on January 21, 2021 as described below, in February 2021, the Compensation Committee approved a cost of living adjustment of approximately 2.3% of each NEO's base salary, effective April 1, 2021. As such, compensation payable, if any, under each of the MIPs for fiscal year 2021 as discussed below for our NEOs will be adjusted accordingly to reflect this cost of living adjustment.

The total performance compensation, if any, to be paid to the CEO, CFO, EVP of Strategic Initiatives, EVP of Nuclear and Technical Services and EVP of Waste Treatment Operations is not to exceed 50% of the Company's pre-tax net income prior to the calculation of performance compensation.

The following describes the principal terms of each 2021 MIP as approved on January 21, 2021:

CEO MIP:

CEO performance compensation for 2021 is based upon meeting corporate revenue, EBITDA, health and safety, and environmental compliance (permit and license violations) objectives for fiscal year 2021, all with respect to the Company's operations. At achievement of 60% to 110% of each of the revenue and EBITDA targets, the potential performance compensation is payable at 5% to 50% of the CEO's 2021 base salary, weighted 60% based on the EBITDA goal, 10% on the revenue goal, and 15% on the number of health and safety claim incidents that occur during fiscal 2021, with the remaining 15% on the number of notices alleging environmental, health or safety violations under our permit or licenses that occur during the fiscal 2021. Upon achievement of 111% to 150%+ of each of the revenue and EBITDA targets, the potential performance compensation is payable at 75% to 150% of the CEO's 2021 base salary, based on the four objectives noted above, with the payment of such performance compensation weighted more heavily toward the EBITDA objective. Each of the revenue and EBITDA components is based on our Board-approved revenue target and EBITDA target. The 2021 target performance incentive compensation for our CEO is as follows:

Annualized Base Pay:	\$344,400
Performance Incentive Compensation Target (at 100% of Plan):	<u>\$172,200</u>
Total Annual Target Compensation (at 100% of Plan):	<u>\$516,600</u>

Perma-Fix Environmental Services, Inc.
2021 Management Incentive Plan
CEO MIP MATRIX

	Performance Target Achieved						
	<60%	60%-74%	75%-89%	90%-110%	111%-129%	130%-150%	>150%
Revenue (1) (5)	\$ -	\$ 1,722	\$ 8,610	\$ 17,220	\$ 29,520	\$ 41,820	\$ 66,420
EBITDA (2)	-	10,332	51,660	103,320	177,120	250,920	398,520
Health & Safety (3) (5)	-	2,583	12,915	25,830	25,830	25,830	25,830
Permit & License Violations (4) (5)	-	2,583	12,915	25,830	25,830	25,830	25,830
	<u>\$ -</u>	<u>\$ 17,220</u>	<u>\$ 86,100</u>	<u>\$ 172,200</u>	<u>\$ 258,300</u>	<u>\$ 344,400</u>	<u>\$ 516,600</u>

- 1) Revenue is defined as the total consolidated third-party top line revenue as publicly reported in the Company's 2021 financial statements. The percentage achieved is determined by comparing the actual consolidated revenue for 2021 to the Board approved Revenue Target for 2021, which is \$101,810,000. 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.
- 2) EBITDA is defined as earnings before interest, taxes, depreciation, and amortization from continuing and discontinued operations, including PF Medical. The percentage achieved is determined by comparing the actual EBITDA to the Board approved EBITDA Target for 2021, which is \$3,623,000. The Board reserves the right to modify or change the EBITDA 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.
- 3) 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 Controller will submit a report on a quarterly basis documenting and confirming the number of Worker's Compensation Lost Time Accidents, supported by the Worker's Compensation Loss Report provided by the company's carrier or broker. 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 2021.

Work Comp. Claim Number	Performance Target Achieved
4	60%-74%
3	75%-89%
2	90%-110%
1	111%-129%
1	130%-150%
1	>150%

- 4) 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 during 2021 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 License Violations	Performance Target Achieved
4	60%-74%
3	75%-89%
2	90%-110%
1	111%-129%
1	130%-150%
1	>150%

- 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 60% of the EBITDA Target is achieved.

CFO MIP:

CFO performance compensation for fiscal 2021 is based upon meeting corporate revenue, EBITDA, health and safety, and environmental compliance (permit and license violations) objectives for fiscal 2021, all with respect to the Company's operations. At achievement of 60% to 110% of each of the revenue and EBITDA targets, the potential performance compensation is payable at 5% to 50% of the 2021 base salary, weighted 75% based on EBITDA goal, 10% on the revenue goal, and 7.5% on the number of health and safety claim incidents that occur during fiscal 2021, with the remaining 7.5% on the number of notices alleging environmental, health or safety violations under our permits or licenses that occur during the fiscal 2021. Upon achievement of 111% to 150%+ of each of the revenue and EBITDA targets, the potential performance compensation is payable at 65% to 100% of the CFO's 2021 base salary, based on the four objectives noted above, with the payment of such performance compensation weighted more heavily toward the EBITDA objective. Each of the revenue and EBITDA components is based on the Board-approved revenue target and EBITDA target. The 2021 target performance incentive compensation for the CEO is as follows:

Annualized Base Pay:	\$280,000
Performance Incentive Compensation Target (at 100% of Plan):	<u>\$140,000</u>
Total Annual Target Compensation (at 100% of Plan):	<u>\$420,000</u>

Perma-Fix Environmental Services, Inc. 2021 Management Incentive Plan CFO MIP MATRIX							
	Performance Target Achieved						
	<60%	60%-74%	75%-89%	90%-110%	111%-129%	130%-150%	>150%
Revenue (1) (5)	\$ -	\$ 1,400	\$ 7,000	\$ 14,000	\$ 23,000	\$ 31,000	\$ 37,000
EBITDA (2)	-	10,500	52,500	105,000	138,000	186,000	222,000
Health & Safety (3) (5)	-	1,050	5,250	10,500	10,500	10,500	10,500
Permit & License Violations (4) (5)	-	1,050	5,250	10,500	10,500	10,500	10,500
	<u>\$ -</u>	<u>\$ 14,000</u>	<u>\$ 70,000</u>	<u>\$ 140,000</u>	<u>\$ 182,000</u>	<u>\$ 238,000</u>	<u>\$ 280,000</u>

- 1) Revenue is defined as the total consolidated third-party top line revenue as publicly reported in the Company's 2021 financial statements. The percentage achieved is determined by comparing the actual consolidated revenue for 2021 to the Board approved Revenue Target for 2021, which is \$101,810,000.

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.

- 2) EBITDA is defined as earnings before interest, taxes, depreciation, and amortization from continuing and discontinued operations, including PF Medical. The percentage achieved is determined by comparing the actual EBITDA to the Board approved EBITDA Target for 2021, which is \$3,623,000. The Board reserves the right to modify or change the EBITDA 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.
- 3) 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 Controller will submit a report on a quarterly basis documenting and confirming the number of Worker's Compensation Lost Time Accidents, supported by the Worker's Compensation Loss Report provided by the company's carrier or broker. 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 2021.

Work Comp. <u>Claim Number</u>	Performance <u>Target Achieved</u>
4	60%-74%
3	75%-89%
2	90%-110%
1	111%-129%
1	130%-150%
1	>150%

- 4) 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 during 2021 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 <u>License Violations</u>	Performance <u>Target Achieved</u>
4	60%-74%
3	75%-89%
2	90%-110%
1	111%-129%
1	130%-150%
1	>150%

- 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 60% of the EBITDA Target is achieved.

EVP of Strategic Initiatives MIP:

EVP of Strategic Initiatives performance compensation for fiscal 2021 is based upon meeting corporate revenue, EBITDA, health and safety, and environmental compliance (permit and license violations) objectives for fiscal 2021, all with respect to the Company's operations. At achievement of 60% to 110% of each of the revenue and EBITDA targets, the potential performance compensation is payable at 5% to 50% of the 2021 base salary, weighted 75% based on EBITDA goal, 10% on the revenue goal, and 7.5% on the number of health and safety claim incidents that occur during fiscal 2021, with the remaining 7.5% on the number of notices alleging environmental, health or safety violations under our permits or licenses that occur during the fiscal 2021. Upon achievement of 111% to 150%+ of each of the revenue and EBITDA targets, the potential performance compensation is payable at 65% to 100% of the EVP of Strategic Initiative's 2021 base salary, based on the four objectives noted above, with the payment of such performance compensation weighted more heavily toward the EBITDA objective. Each of the revenue and EBITDA components is based on the Board-approved revenue target and EBITDA target. The 2021 target performance incentive compensation for the EVP of Strategic Initiative is as follows:

Annualized Base Pay:	\$233,336
Performance Incentive Compensation Target (at 100% of Plan):	<u>\$116,668</u>
Total Annual Target Compensation (at 100% of Plan):	<u>\$350,004</u>

Perma-Fix Environmental Services, Inc. 2021 Management Incentive Plan EVP OF STRATEGIC INITIATIVES MIP MATRIX							
	Performance Target Achieved						
	<60%	60%-74%	75%-89%	90%-110%	111%-129%	130%-150%	>150%
Revenue (1) (5)	\$ -	\$ 1,167	\$ 5,833	\$ 11,667	\$ 19,167	\$ 25,834	\$ 30,834
EBITDA (2)	-	8,750	43,751	87,501	115,001	155,002	185,002
Health & Safety (3) (5)	-	875	4,375	8,750	8,750	8,750	8,750
Permit & License Violations (4) (5)	-	875	4,375	8,750	8,750	8,750	8,750
	<u>\$ -</u>	<u>\$ 11,667</u>	<u>\$ 58,334</u>	<u>\$ 116,668</u>	<u>\$ 151,668</u>	<u>\$ 198,336</u>	<u>\$ 233,336</u>

- 1) Revenue is defined as the total consolidated third-party top line revenue as publicly reported in the Company's 2021 financial statements. The percentage achieved is determined by comparing the actual consolidated revenue for 2021 to the Board approved Revenue Target for 2021, which is \$101,810,000. 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.
- 2) EBITDA is defined as earnings before interest, taxes, depreciation, and amortization from continuing and discontinued operations, including PF Medical. The percentage achieved is determined by comparing the actual EBITDA to the Board approved EBITDA Target for 2021, which is \$3,623,000. The Board reserves the right to modify or change the EBITDA 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.
- 3) 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 Controller will submit a report on a quarterly basis documenting and confirming the number of Worker's Compensation Lost Time Accidents, supported by the Worker's Compensation Loss Report provided by the company's carrier or broker. 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 2021.

Work Comp. <u>Claim Number</u>	Performance <u>Target Achieved</u>
4	60%-74%
3	75%-89%
2	90%-110%
1	111%-129%
1	130%-150%
1	>150%

- 4) 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 during 2021 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 License Violations	Performance Target Achieved
4	60%-74%
3	75%-89%
2	90%-110%
1	111%-129%
1	130%-150%
1	>150%

- 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 60% of the EBITDA Target is achieved.

EVP of Nuclear and Technical Services MIP:

EVP of Nuclear and Technical Services performance compensation for 2021 is based upon meeting corporate revenue, EBITDA, health and safety compliance, and Cost Performance Index (“CPI”) (a metric used in measuring project performance) objectives for fiscal 2021, all with respect to the Company’s operations. At achievement of 60% to 110% of each of the revenue and EBITDA targets, the potential performance compensation is payable at 5% to 50% of the 2021 base salary, weighted 60% based on the EBITDA goal, 10% on the revenue goal, and 15% on the number of health and safety claim incidents that occur during fiscal 2021, with the remaining 15% on CPI metric goals. Upon achievement of 111% to 150%+ of each of the revenue and EBITDA targets, the potential performance compensation is payable at 65% to 100% of the EVP of Nuclear and Technical Service’s 2021 base salary, based on the four objectives noted above, with the payment of such performance compensation weighted more heavily toward the EBITDA objective. Each of the revenue and EBITDA components is based on the Board-approved revenue target and the EBITDA target. The 2021 target performance incentive compensation for the EVP of Nuclear and Technical Services is as follows:

Annualized Base Pay:	\$280,000
Performance Incentive Compensation Target (at 100% of Plan):	<u>\$140,000</u>
Total Annual Target Compensation (at 100% of Plan):	<u>\$420,000</u>

Perma-Fix Environmental Services, Inc.
2021 Management Incentive Plan
EVP OF NUCLEAR & TECHNICAL SERVICES MIP MATRIX

	Performance Target Achieved						
	<60%	60%-74%	75%-89%	90%-110%	111%-129%	130%-150%	>150%
Revenue (1) (5)	\$ -	\$ 1,400	\$ 7,000	\$ 14,000	\$ 20,000	\$ 28,000	\$ 34,000
EBITDA (2)	-	8,400	42,000	84,000	120,000	168,000	204,000
Health & Safety (3) (5)	-	2,100	10,500	21,000	21,000	21,000	21,000
CPI (4) (5)	-	2,100	10,500	21,000	21,000	21,000	21,000
	<u>\$ -</u>	<u>\$ 14,000</u>	<u>\$ 70,000</u>	<u>\$ 140,000</u>	<u>\$ 182,000</u>	<u>\$ 238,000</u>	<u>\$ 280,000</u>

- 1) Revenue is defined as the total consolidated third-party top line revenue as publicly reported in the Company's 2021 financial statements. The percentage achieved is determined by comparing the actual consolidated revenue for 2021 to the Board approved Revenue Target for 2021, which is \$101,810,000. 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.
- 2) EBITDA is defined as earnings before interest, taxes, depreciation, and amortization from continuing and discontinued operations, including PF Medical. The percentage achieved is determined by comparing the actual EBITDA to the Board approved EBITDA Target for 2021, which is \$3,623,000. The Board reserves the right to modify or change the EBITDA 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.
- 3) The Health and Safety Incentive target is based upon the actual number of Worker's Compensation Lost Time Accidents in the Company's Services Segment, as provided by the Company's Worker's Compensation carrier. The Corporate Controller will submit a report on a quarterly basis documenting and confirming the number of Worker's Compensation Lost Time Accidents, supported by the Worker's Compensation Loss Report provided by the company's carrier or broker. 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 2021.

Work Comp. <u>Claim Number</u>	Performance <u>Target Achieved</u>
4	60%-74%
3	75%-89%
2	90%-110%
1	111%-129%
1	130%-150%
1	>150%

- 4) CPI incentive is earned/determined by maintaining project performance metrics for all Firm Fixed Price task orders and projects to include monitoring CPI based on recognized earned value calculations. As defined through monthly project reviews, all CPI metrics should exceed 1.0 for Nuclear Services Projects. A cumulative CPI (CCPI) will be calculated from all fixed cost

contracts. The following CCPI and corresponding Performance Target Thresholds have been established for annual incentive compensation plan calculation for 2021.

CPI (if CCPI is)	Performance Target Achieved
<0.60	(n/a)
0.60-0.74	60%-74%
0.75-0.89	75%-89%
0.90-1.10	90%-110%
1.11-1.29	111%-129%
1.30-1.50	130%-150%
>1.50	>150%

- 5) No performance incentive compensation will be payable for achieving the health and safety, and CPI, and revenue targets unless a minimum of 60% of the EBITDA Target is achieved.

EVP of Waste Treatment Operations MIP:

EVP of Waste Treatment Operation's performance compensation for fiscal 2021 is based upon meeting corporate revenue, EBITDA, health and safety, and environmental compliance (permit and license violations) objectives for fiscal 2021, all with respect to the Company's operations. At achievement of 60% to 110% of each of the revenue and EBITDA targets, the potential performance compensation is payable at 5% to 50% of the 2021 base salary, weighted 60% based on EBITDA goal, 10% on the revenue goal, and 15% on the number of health and safety claim incidents that occur during fiscal 2021, with the remaining 15% on the number of notices alleging environmental, health or safety violations under our permits or licenses that occur during the fiscal 2021. Upon achievement of 111% to 150%+ of each of the revenue and EBITDA targets, the potential performance compensation is payable at 65% to 100% of the EVP of Waste Treatment Operation's 2021 base salary, based on the four objectives noted above, with the payment of such performance compensation weighted more heavily toward the EBITDA objective. Each of the revenue and EBITDA components is based on the Board-approved revenue target and EBITDA target. The 2021 target performance incentive compensation for the EVP of Waste Treatment Operations is as follows:

Annualized Base Pay:	\$240,000
Performance Incentive Compensation Target (at 100% of Plan):	<u>\$120,000</u>
Total Annual Target Compensation (at 100% of Plan):	<u>\$360,000</u>

Perma-Fix Environmental Services, Inc. 2021 Management Incentive Plan EVP OF WASTE TREATMENT OPERATIONS MIP MATRIX							
	Performance Target Achieved						
	<60%	60%-74%	75%-89%	90%-110%	111%-129%	130%-150%	>150%
Revenue (1) (5)	\$ -	\$ 1,200	\$ 6,000	\$ 12,000	\$ 17,143	\$ 24,000	\$ 29,143
EBITDA (2)	-	7,200	36,000	72,000	102,857	144,000	174,857
Health & Safety (3) (5)	-	1,800	9,000	18,000	18,000	18,000	18,000
Permit & License Violations (4) (5)	-	1,800	9,000	18,000	18,000	18,000	18,000
	<u>\$ -</u>	<u>\$ 12,000</u>	<u>\$ 60,000</u>	<u>\$ 120,000</u>	<u>\$ 156,000</u>	<u>\$ 204,000</u>	<u>\$ 240,000</u>

- 1) Revenue is defined as the total consolidated third-party top line revenue as publicly reported in the Company's 2021 financial statements. The percentage achieved is determined by comparing the actual consolidated revenue for 2021 to the Board approved Revenue Target for 2021, which is \$101,810,000. 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.
- 2) EBITDA is defined as earnings before interest, taxes, depreciation, and amortization from continuing and discontinued operations, including PF Medical. The percentage achieved is determined by comparing the actual EBITDA to the Board approved EBITDA Target for 2021, which is \$3,623,000. The Board reserves the right to modify or change the EBITDA 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.
- 3) 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 Controller will submit a report on a quarterly basis documenting and confirming the number of Worker's Compensation Lost Time Accidents, supported by the Worker's Compensation Loss Report provided by the company's carrier or broker. 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 2021.

Work Comp. <u>Claim Number</u>	Performance <u>Target Achieved</u>
4	60%-74%
3	75%-89%
2	90%-110%
1	111%-129%
1	130%-150%
1	>150%

- 4) 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 during 2021 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 <u>License Violations</u>	Performance <u>Target Achieved</u>
4	60%-74%
3	75%-89%
2	90%-110%
1	111%-129%
1	130%-150%
1	>150%

- 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 60% of the EBITDA Target is achieved.

2021 MIP Targets

As discussed above, 2021 MIPs approved by the Board and the Compensation Committee for the CEO, CFO, EVP of Strategic Initiatives, EVP of Nuclear and Technical Services and EVP of Waste Treatment Operations provide for the award of cash compensation based on achievement of performance targets which include revenue and EBITDA targets as approved by our Board. The 2021 MIP revenue target of \$101,810,000 and EBITDA target of \$3,623,000 were set by the Compensation Committee taking into account the Board-approved budget for 2021 as well as the committee's expectations for performance that in its estimation would warrant payment of incentive cash compensation. In formulating the revenue target of \$101,810,000, the Board considered 2020 results, economic conditions, impact of COVID-19 and forecasts for 2021 government (U.S. DOE) spending. The Compensation Committee believes the performance targets are likely to be achieved, but not assured, particularly in light of the uncertainty from the impact of COVID-19.

Long-Term Incentive Compensation

Employee Stock Option Plans

The 2017 Stock Option Plan ("2017 Option Plan") encourages 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 executives only when the value of our stock increases. The 2017 Option Plan authorizes the grant of Non-Qualified Stock Options ("NQSOs") and Incentive Stock Options ("ISOs") for the purchase of our Common Stock.

The 2017 Option Plan assists the Company to:

- enhance the link between the creation of stockholder value and long-term executive incentive compensation;
- 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 the Company and are granted generally at the Compensation Committee's regularly scheduled July or August 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's NEOs have outstanding options from the Company's 2017 Option Plan (See "Item 11 – Executive Compensation – Outstanding Equity Awards at Fiscal Year-End - Outstanding Equity Awards at December 31, 2020" for outstanding options for each of our NEOs). An option granted to our President and CEO in May 2016 for the purchase of up to 50,000 shares of the Company's Common Stock at \$3.97 per share with an expiration date of May 15, 2022 remains outstanding under the 2010 Stock Option Plan. The 2010 Stock Option Plan expired on September 29, 2020; however, the option remains in effect until the earlier of the exercise date by the optionee or the maturity date of May 15, 2022.

In cases of termination of an executive officer's employment due to death, by the executive for "good reason," by the Company without cause, and due to a "change of control," all outstanding stock options to purchase common stock held by the executive officer will immediately become exercisable in full (see further discussion of the exercisability term of these options in each of these circumstances in "Item 11 – EXECUTIVE COMPENSATION – Employment Agreements"). Otherwise, 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 retirement (subject to a six-month limitation) and disability (subject to a one-year limitation).

Accounting for Stock-Based Compensation

We account for stock-based compensation in accordance with Accounting Standards Codification (“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.

Retirement and Other Benefits

401(k) Plan

The Company 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. At our discretion, we may make matching contributions based on the employee’s elective contributions. Company contributions vest over a period of five years. In 2020, the Company contributed approximately \$594,000 in 401(k) matching funds, of which approximately \$31,500 was for our NEOs (see the “Summary Compensation” table in this section for 401(k) matching fund contributions made for the NEOs for 2020).

Perquisites and Other Personal Benefits

The Company provides executive officers with limited perquisites and other personal benefits (health/disability/life insurance) 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.

Compensation of Directors

Directors who are employees receive no additional compensation for serving on the Board or its committees. In 2020, the Company provided the following annual compensation to non-employee directors:

- options to purchase 2,400 shares of Common Stock with each option having a 10-year term and being fully vested after six months from grant date;
- a quarterly director fee of \$8,000;
- an additional quarterly fee of \$5,500 and \$7,500 to the Chairman of the Audit Committee and Chairman of the Board (non-employee), respectively; and
- a fee of \$1,000 for each board meeting attendance and a \$500 fee for meeting attendance via conference call.

Each director may elect to have either 65% or 100% of such fees payable in Common Stock under the 2003

Outside Directors Stock Plan (“2003 Outside Directors Plan”), with the balance, if any, payable in cash.

Dr. Louis Centofanti, a current member of the Board, is not eligible to receive compensation for his service as a director of the Company as he is an employee of the Company (see “Summary Compensation” table in this section for Dr. Centofanti’s annual salary and other compensation as an employee of the Company).

The table below summarizes the director compensation expenses recognized by the Company for director options and stock awards (resulting from fees earned) for the year ended December 31, 2020. The terms of the 2003 Outside Directors Plan are further described below under “2003 Outside Directors Plan.”

Director Compensation

Name	Fees Earned or Paid In Cash	Stock Awards	Option Awards		Non-Equity Incentive Plan Compensation	Nonqualified Deferred Compensation Earnings	All Other Compensation	Total
	(\$) ⁽¹⁾	(\$) ⁽²⁾	(\$) ⁽⁵⁾		(\$)	(\$)	(\$)	(\$)
Thomas P. Bostick	—	18,027	26,160 ⁽⁴⁾		—	—	—	44,187
Joseph T. Grumski	—	43,343	40,656 ⁽³⁾		—	—	—	83,999
Joe R. Reeder	—	48,662	11,256 ⁽³⁾		—	—	—	59,918
Larry M. Shelton	23,275	57,633	11,256 ⁽³⁾		—	—	—	92,164
Zach P. Wamp	12,775	31,630	11,256 ⁽³⁾		—	—	—	55,661
Mark A. Zwecker	20,475	50,701	11,256 ⁽³⁾		—	—	—	82,432

(1) 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 exclude the value of the directors’ fee elected to be paid in Common Stock under the 2003 Outside Directors Plan, which values are included under “Stock Awards.”

(2) 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 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.

(3) Reflects options granted under the Company’s 2003 Outside Directors Plan resulting from re-election to the Board on July 22, 2020. Options are for a 10-year period with an exercise price of \$6.70 per share 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 (approximately \$4.69) on the date of grant times the number of options granted, which was 2,400 for each director, pursuant to ASC 718, “Compensation – Stock Compensation.” Option awards for Joseph T. Grumski also included the grant of options for the purchase of up to 6,000 shares of our Common Stock granted to him upon initial election to the Board on February 4, 2020. The option is for a 10-year period with an exercise price of \$7.00 per share and are fully vested six months from date of grant. The fair value of the 6,000 options was determined to be approximately \$29,400 based on fair value of \$4.90 per share.

(4) Reflects options for the purchase of up to 6,000 shares of the Company’s Common Stock granted under the Company’s 2003 Outside Directors Plan resulting from initial election to the Board on August 10, 2020. The options are for a 10-year period with an exercise price of \$7.29 per share and are fully vested six months from date of grant. The fair value of the option was determined to be approximately \$26,160 based on fair value of \$4.36 per share.

(5) The following table reflects the aggregate number of outstanding non-qualified stock options held by the Company’s directors at December 31, 2020. As an employee of the Company or its subsidiaries, Dr. Centofanti is not eligible to participate in the 2003 Outside Directors Plan. Options reflected below for Dr. Centofanti were granted from the 2017 Stock Option Plan as discussed previously:

Name	Options Outstanding at December 31, 2020
Dr. Louis Centofanti	65,000
Thomas P. Bostick	6,000
Joseph T. Grumski	8,400
Joe R. Reeder	24,000
Larry M. Shelton	24,000
Zach P. Wamp	13,200
Mark A. Zwecker	24,000
Total	<u>164,600</u>

On January 21, 2021, the Company's Compensation Committee and the Board approved the following revision to the annual compensation of each non-employee Board member and the Board Committee(s) for which the Board member serves, effective January 1, 2021.

- each director is to be paid a quarterly fee of \$11,500, compared to the previous quarterly fee of \$8,000;
- the Chairman of the Board is to be paid an additional quarterly fee of \$8,750, compared to the Chairman's previous additional quarterly fee of \$7,500;
- the Chairman of the Audit Committee is to be paid an additional quarterly fee of \$6,250, compared to the Audit Chair's previous additional quarterly fee of \$5,500;
- the Chairman of each of the Compensation Committee, the Nominating Committee, and the Strategic Committee is to receive \$3,125 in additional quarterly fees. No additional quarterly fees were previously paid to the chairs of such committees. The Chairman of the Board is not eligible to receive a quarterly fee for serving as the Chairman of any the aforementioned committees ;
- each Audit Committee member (excluding the Chairman of the Audit Committee) is to receive an additional quarterly fee of \$1,250; and
- each member of the Compensation Committee, the Nominating Committee, and the Strategic Committee is to receive a quarterly fee of \$500. Such fee is payable only if the member does not serve as the Chairman of the Audit Committee, the Nominating Committee, the Strategic Committee or as the Chairman of the Board.

Each non-employee Board member will continue to receive \$1,000 for each board meeting attendance and a \$500 fee for meeting attendance via conference call. Also, each director will continue to receive an option to purchase up to 2,400 shares of the Company's Common Stock on the date of his re-election to the Board at the annual meeting of stockholders, with each option having a 10-year term and becoming fully vested after six months from grant date.

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

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 Plan, as amended, each outside director is granted a 10-year option to purchase up to 6,000 shares of Common Stock on the date such director is initially elected to the Board, and receives on each re-election date an option to purchase up to another 2,400 shares of our 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 Outside 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. At December 31, 2020, options to purchase 146,400 shares of Common Stock were outstanding under the 2003 Outside Directors Plan, of which 128,400 were vested at December 31, 2020.

As a member of the Board, each director may elect to receive either 65% or 100% of his 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 2020, the fees

earned by our outside directors totaled approximately \$307,000. 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 Outside Directors Plan.

As of December 31, 2020, we have issued 714,623 shares of our Common Stock in payment of director fees since the inception of the 2003 Outside Directors Plan.

In the event of a “change of control” (as defined in the 2003 Outside Directors 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.

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 February 12, 2021 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 Of Class	Amount and Nature of Ownership	Percent Of Class ⁽¹⁾
Heartland Advisors, Inc. ⁽²⁾	Common	1,352,530	11.1%

⁽¹⁾ The number of shares and the percentage of outstanding Common Stock shown as beneficially owned by a person are based upon 12,165,734 shares of Common Stock outstanding on February 12, 2021, 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 13D of Heartland Advisors, Inc., an investment advisor, filed with the Commission on January 13, 2021, disclosing that at January 8, 2021, each Heartland Advisors, Inc. and Mr. William Nasgovitz, as a control person of Heartland Advisors, Inc. had shared dispositive power over all shares shown above and shared voting power over 1,346,030 of such shares. The address of Heartland Advisors, Inc. is 789 North Water Street, Milwaukee, WI 53202.

As of February 12, 2021, Capital Bank–Grawe Gruppe AG (“Capital Bank”), a banking institution regulated by the banking regulations of Austria, holds of record as a nominee for, and as an agent of, certain accredited investors, 2,057,359 shares of our Common Stock. None of such investors beneficially own more than 4.9% of our Common Stock and to the best knowledge of Capital Bank, as far as stocks held by such investors in accounts with Capital Bank, none of such 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 disposition or investment of such stock. Additionally, the investors for whom Capital Bank acts as nominee with respect to such shares maintain full voting and dispositive power over the Common Stock beneficially owned by such investors, and Capital Bank has neither voting nor investment power over such shares. Accordingly, Capital Bank believes that (i) it 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; and (ii) 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.

Notwithstanding the previous paragraph, if Capital Bank's representations to us described above are incorrect or if the investors for whom Capital Bank acts as nominee are acting as a group, then Capital Bank or a group of such investors could be a beneficial owner of more than 5% of our voting securities. If Capital

Bank was 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 February 12, 2021:

<u>Name of Record Owner</u>	<u>Title Of Class</u>	<u>Amount and Nature of Ownership</u>	<u>Percent Of Class ^(*)</u>
Capital Bank-Grawe Gruppe	Common	2,057,359 ⁽⁺⁾	16.9%

^(*) This calculation is based upon 12,165,734 shares of Common Stock outstanding on February 12, 2021, 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.

⁽⁺⁾ 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 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 Stock. 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. Capital Bank has advised us that it (a) 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 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. Accordingly, we do not believe that Capital Bank is our affiliate. Capital Bank's address is Burgring 16, A-8010 Graz, Austria.

Security Ownership of Management

The following table sets forth information as to the shares of voting securities beneficially owned as of February 12, 2021, by each of our directors and NEOs and by all of our directors and NEOs 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.

<u>Name of Beneficial Owner ⁽²⁾</u>	<u>Amount and Nature of Beneficial Owner ⁽¹⁾</u>	<u>Percent of Class ⁽¹⁾</u>
Thomas P. Bostick	8,865 ⁽³⁾	*
Dr. Louis F. Centofanti ⁽⁴⁾	266,325 ⁽⁴⁾	2.18%
Joseph T. Grumski ⁽⁵⁾	15,376 ⁽⁵⁾	*
Joe R. Reeder ⁽⁶⁾	218,253 ⁽⁶⁾	1.79%
Larry M. Shelton ⁽⁷⁾	151,657 ⁽⁷⁾	1.24%
Zack P. Wamp ⁽⁸⁾	33,785 ⁽⁸⁾	*
Mark A. Zwecker ⁽⁹⁾	213,858 ⁽⁹⁾	1.75%
Mark Duff ⁽¹⁰⁾	138,321 ⁽¹⁰⁾	1.13%
Richard Grondin ⁽¹¹⁾	16,036 ⁽¹¹⁾	*
Andy Lombardo ⁽¹²⁾	11,900 ⁽¹²⁾	*
Ben Naccarato ⁽¹³⁾	39,318 ⁽¹³⁾	*
Directors and Executive Officers as a Group (11 persons)	1,113,694 ⁽¹⁴⁾	8.92%

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

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

⁽²⁾ 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.

- (3) Mr. Bostick has sole and voting and investment power over all shares shown, which include: (i) 2,865 shares of Common Stock held of record by Mr. Bostick, and (ii) immediately exercisable options to purchase 6,000 shares.
- (4) These shares include (i) 167,525 shares held of record by Dr. Centofanti, (ii) immediately exercisable options to purchase 36,000 shares, and (iii) 62,800 shares held by Dr. Centofanti's wife. Dr. Centofanti has sole voting and investment power over all such shares, except for the shares held by Dr. Centofanti's wife, over which Dr. Centofanti shares voting and investment power. Dr. Centofanti also owns 700 shares of PF Medical's Common Stock.
- (5) Mr. Grumski has sole and voting and investment power over all shares shown, which include: (i) 6,976 shares of Common Stock held of record by Mr. Grumski, and (ii) immediately exercisable options to purchase 8,400 shares.
- (6) Mr. Reeder has sole voting and investment power over all shares shown, which include: (i) 194,253 shares of Common Stock held of record by Mr. Reeder, and (ii) immediately exercisable options to purchase 24,000 shares.
- (7) Mr. Shelton has sole voting and investment power over all shares shown, which include: (i) 127,657 shares of Common Stock held of record by Mr. Shelton, and (ii) immediately exercisable options to purchase 24,000 shares. Mr. Shelton also owns 750 shares of PF Medical's Common Stock.
- (8) Mr. Wamp has sole voting and investment power over all shares shown, which include: (i) 20,585 shares of Common Stock held of record by Mr. Wamp, and (ii) immediately exercisable options to purchase 13,200 shares.
- (9) Mr. Zwecker has sole voting and investment power over all shares shown, which include: (i) 189,858 shares of Common Stock held of record by Mr. Zwecker, and (ii) immediately exercisable options to purchase 24,000 shares.
- (10) Mr. Duff has sole voting and investment power over all shares shown, which include: (i) 18,321 shares of Common Stock held of record by Mr. Duff, and (ii) immediately exercisable options to purchase 120,000 shares.
- (11) Mr. Grondin has sole voting and investment power over all shares shown, which include: (i) 36 shares of Common Stock held of record by Mr. Grondin, and (ii) immediately exercisable options to purchase 16,000 shares.
- (12) Mr. Lombardo has sole voting and investment power over all shares shown, which include: (i) 5,900 shares of Common Stock held of record by Mr. Lombardo, and (ii) immediately exercisable options to purchase 6,000 shares.
- (13) Mr. Naccarato has sole voting and investment power over all shares shown, which include: (i) 3,318 shares of Common Stock held of record by Mr. Naccarato, and (ii) immediately exercisable options to purchase 36,000 shares. Mr. Naccarato also owns 100 shares of PF Medical's Common Stock.
- (14) Amount includes 313,600 immediately exercisable options.

Equity Compensation Plans

The following table sets forth information as of December 31, 2020, with respect to our equity compensation plans.

Equity Compensation Plan			
Plan Category	Number of securities to be issued upon exercise of outstanding options warrants and rights	Weighted average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
	(a)	(b)	(c)
Equity compensation plans approved by stockholders	658,400	\$3.87	866,077
Equity compensation plans not approved by stockholders	—	—	—
Total	658,400	\$3.87	866,077

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

We describe below transactions to which we were a party during our last two fiscal years or to which we currently propose to be a party in the future, and in which:

- the amounts involved exceeded or will exceed the lesser of \$120,000 or one percent of the average of our total assets at year-end for the last two completed fiscal years; and
- any of our directors, executive officers or beneficial owners of more than 5% of any class of our voting securities, or any member of the immediate family of the foregoing persons, had or will have a direct or indirect material interest.

Audit Committee Review

Our Audit Committee Charter provides for the review by the Audit Committee of any related party transactions, other than transactions involving an employment relationship with the Company, which are reviewed by the Compensation Committee. Although we do not have written policies for the review of related party transactions, the Audit Committee reviews transactions between the Company and its directors, executive officers, holders of more than 5% of any class of the Company's voting securities, and their respective immediate family members. In reviewing 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;
- (6) the terms of the transaction; and
- (7) the risks to the Company.

In addition, as applicable, the Audit Committee considers Section 144 of the Delaware General Corporation Law ("DGCL") and the Company's Code of Ethics.

The provisions of Section 144 of the DGCL apply to transactions between the Company and any of its officers or directors, or any organization in which any such individual has a financial interest or serves as a director or officer (individually, a "Section 144 Related Party," and, collectively, "Section 144 Related Parties"). Section 144 provides that a transaction between a corporation and any Section 144 Related Party will not be void or voidable solely because such transaction involves the corporation and the Section 144 Related Party, or solely because the Section 144 Related Party is present at or participates or votes in the meeting of the board or committee which authorizes the transaction, if the transaction (a) is approved in

good faith after full disclosure of the material facts of the transaction by a majority vote of (i) the disinterested directors, or (ii) the stockholders, and (b) is fair as to the corporation as of the time it is authorized, approved, or ratified by the board, a committee or the stockholders.

The provisions of the Code of Ethics apply to our NEOs and provides that such individuals must exhibit and promote honest and ethical conduct in connection with the performance of his or her duties for and on behalf of the Company, including the ethical handling of actual or apparent conflicts of interest involving such individual and the Company, by, among other considerations:

- not entering into a transaction that would result in a conflict of interest with what is in the best interest of the Company and that is reasonably likely to result in material personal gain to any such individuals or their affiliates;
- not having a personal financial interest in any of the Company's suppliers, customers or competitors that could cause divided loyalty as a result of having the ability to influence the Company's decisions with that particular supplier or customer or actions to be taken by the Company that could materially benefit a competitor.

Related party transactions are reviewed by the Audit Committee prior to the consummation of the transaction. With respect to a related party transaction arising between Audit Committee meetings, the CFO may present it to the Audit Committee Chairperson, 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 interests.

Related Party Transactions

David Centofanti

David Centofanti serves as our Vice President of Information Systems. For such position, he received annual compensation of \$181,000 and \$177,000 for 2020 and 2019, respectively. David Centofanti is the son of Dr. Louis F. Centofanti, our EVP of Strategic Initiatives and a Board member.

Employment Agreements and MIPs

We entered into an employment agreement with each of our NEOs, Mark Duff (President and CEO), Ben Naccarato (CFO), Dr. Louis Centofanti (EVP of Strategic Initiatives), Andy Lombardo (EVP of Nuclear and Technical Services) and Richard Grondin (EVP of Waste Treatment Operations), with each employment agreement dated July 22, 2020 (see "Item 11. Executive Compensation – Employment Agreements" for a discussion of these employment agreements). Each of our NEOs also has a MIP for fiscal years 2020 and 2021 (see "Item 11. Executive Compensation - Performance-Based Incentive Compensation – 2020 MIPs and 2021 MIPs" for a discussion of these MIPs).

Board Independence

Our Common Stock is listed on the Nasdaq Capital Market. Rule 5605 of the Nasdaq Marketplace Rules requires a majority of a listed company's board of directors to be comprised of independent directors. In addition, the Nasdaq Marketplace Rules require that, subject to specified exceptions, each member of a listed company's audit, compensation and nominating and corporate governance committees be independent under applicable provisions of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Audit committee members must also satisfy independence criteria set forth in Rule 10A-3 under the Exchange Act, and compensation committee members must also satisfy the independence criteria set forth in Rule 10C-1 under the Exchange Act. Under Nasdaq Rule 5605(a)(2), a director will only qualify as an "independent director" if, in the opinion of our Board, that person does not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. In order to be considered independent for purposes of Rule 10A-3 under the Exchange Act, a member of an audit committee of a listed company may not, other than in his or her capacity as a member of the audit committee, the board of directors, or any other board committee, accept, directly or indirectly, any consulting, advisory, or other compensatory fee from the listed company or any of its subsidiaries or otherwise be an affiliated person of the listed company or any of its subsidiaries. In order to be considered

independent for purposes of Rule 10C-1, the board must consider, for each member of a compensation committee of a listed company, all factors specifically relevant to determining whether a director has a relationship to such company which is material to that director's ability to be independent from management in connection with the duties of a compensation committee member, including, but not limited to: the source of compensation of the director, including any consulting advisory or other compensatory fee paid by such company to the director; and whether the director is affiliated with the company or any of its subsidiaries or affiliates.

Our Board annually undertakes a review of the composition of our Board of Directors and its committees and the independence of each director. Based upon information requested from and provided by each director concerning his background, employment and affiliations, including family relationships, our Board of Directors has determined that each of Messrs. Thomas P. Bostick, Joseph T. Grumski, Joe R. Reeder, Larry M. Shelton, Zach P. Wamp and Mark A. Zwecker is an "independent director" as defined under the Nasdaq Marketplace Rules. Our Board of Directors has also determined that each member of our Audit Committee, consisting of Mark A. Zwecker (Chairperson), Zach Wamp (who was a member of the Audit Committee until April 16, 2020), Larry M. Shelton, and Joseph T. Grumski (who became a member of the Audit Committee effective April 16, 2020), and each member of our Compensation Committee, consisting of Joseph T. Grumski (who became a member and the Chairperson effective January 21, 2021), Zach P. Wamp (who became a member effective January 21, 2021), Mark A. Zwecker, Larry M. Shelton (who was replaced by Joseph T. Grumski as a member and the Chairperson effective January 21, 2021), and Joe R. Reeder (who was replaced by Zach P. Wamp as a member effective January 21, 2021) satisfy/satisfied the independence standards for such committees established by the Commission and the Nasdaq Marketplace Rules, as applicable. In making such determination, our Board of Directors considered the relationships that each such non-employee director has with our Company and all other facts and circumstances our Board of Directors deemed relevant in determining independence, including the beneficial ownership of our capital stock by each non-employee director.

Our Board of Directors has determined that Dr. Centofanti is not deemed to be an "independent director" because of his employment as a senior executive of the Company.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The following table reflects the aggregate fees for the audit and other services provided by Grant Thornton LLP, the Company's independent registered public accounting firm, for fiscal years 2020 and 2019:

Fee Type	2020	2019
Audit Fees ⁽¹⁾	\$ 557,000	608,000
Tax Fees ⁽²⁾	104,000	113,000
Total	\$ <u>661,000</u>	<u>721,000</u>

⁽¹⁾ Audit fees consist of audit work performed in connection with the annual financial statements, the reviews of unaudited quarterly financial statements, and work generally only the independent registered accounting firm can reasonably provide, such as consents and review of regulatory documents filed with the Securities and Exchange Commission.

⁽²⁾ Fees for income tax planning, filing, and consulting.

Engagement of the Independent Auditor

To ensure that our independent registered public accounting firm is engaged only to provide audit and non-audit services that are compatible with maintaining its independence, the Audit Committee has a policy that requires the Committee to review and approve in advance all services to be provided by the Company's independent accounting firm before the firm is engaged to provide those services. The Audit Committee considers non-audit services and fees when assessing auditor independence, and determined that tax return preparation and other tax compliance services is compatible with maintaining our accounting firm's independence. All services under the headings Audit Fees and Tax 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 the independent accounting firm and any member of the independent accounting firm's 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.

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/ Mark Duff
Mark Duff
Chief Executive Officer, President and
Principal Executive Officer

Date March 29, 2021

By /s/ Ben Naccarato
Ben Naccarato
Chief Financial Officer and
Principal Financial Officer

Date March 29, 2021

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	<u>/s/ Thomas P. Bostick</u> Thomas P. Bostick, Director	Date	<u>March 29, 2021</u>
By	<u>/s/ Dr. Louis F. Centofanti</u> Dr. Louis F. Centofanti, Director	Date	<u>March 29, 2021</u>
By	<u>/s/Joseph T. Grumski</u> Joseph T. Grumski	Date	<u>March 29, 2021</u>
By	<u>/s/ Joe R. Reeder</u> Joe R. Reeder, Director	Date	<u>March 29, 2021</u>
By	<u>/s/ Larry M. Shelton</u> Larry M. Shelton, Chairman of the Board	Date	<u>March 29, 2021</u>
By	<u>/s/ Zach P. Wamp</u> Zach P. Wamp, Director	Date	<u>March 29, 2021</u>
By	<u>/s/ Mark A. Zwecker</u> Mark A. Zwecker, Director	Date	<u>March 29, 2021</u>

EXHIBIT INDEX

Exhibit No.	Description
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 2018 Form 10-K filed on April 1, 2019.
3(ii)	Second Amended and Restated Bylaws, as amended effective January 21, 2021, of Perma-Fix Environmental Services, Inc., as incorporated by reference from Exhibit 3(ii) to the Company's 8-K filed on January 26, 2021.
4.1	Shareholder Rights Agreement dated and effective as of May 2, 2018 between Perma-Fix Environmental Services, Inc. as 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 2, 2018.
4.2	First Amendment to Shareholder Rights Agreement dated May 2, 2019 between Perma-Fix Environmental Services, Inc. and Continental Stock Transfer & Trust Company as Rights Agent, as incorporated by reference from Exhibit 4.2 to the Company's Form 8-K filed on May 3, 2019.
4.3	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, as incorporated by reference from Exhibit 4.8 to the Company 2016 Form 10-K filed on March 24, 2017.
4.4	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 4.4 to the Company 2017 Form 10-K filed on March 16, 2018.
4.5	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 4.4 to the Company 2018 Form 10-K filed on April 1, 2019.
4.6	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 4.5 to the Company 2018 Form 10-K filed on April 1, 2019.
4.7	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 4.6 to the Company 2018 Form 10-K filed on April 1, 2019.
4.8	Fourth Amendment to Amended and Restated Revolving Credit, Term Loan and Security Agreement and Waiver between PNC Bank, National Association and Perma-Fix Environmental Services, Inc., dated April 14, 2014, as incorporated by reference from Exhibit 4.8 to the Company's 2019 Form 10-K filed on March 20, 2020.
4.9	Fifth Amendment to Amended and Restated Revolving Credit, Term Loan and Security Agreement between PNC Bank, National Association and Perma-Fix Environmental Services, Inc., dated July 25, 2014, as incorporated by reference from Exhibit 4.9 to the Company's 2019 Form 10-K filed on March 20, 2020.
4.10	Sixth Amendment to Amended and Restated Revolving Credit, Term Loan and Security Agreement between PNC Bank, National Association and Perma-Fix Environmental Services, Inc., dated July 28, 2014, as incorporated by reference from Exhibit 4.10 to the Company's 2019 Form 10-K filed on March 20, 2020.
4.11	Seventh Amendment to Amended and Restated Revolving Credit, Term Loan and Security Agreement between PNC Bank, National Association and Perma-Fix Environmental Services, Inc., dated March 24, 2016, as incorporated by reference from Exhibit 4.17 to the Company's 2015 Form 10-K filed on March 24, 2016.
4.12	Eighth Amendment to Amended and Restated Revolving Credit, Term Loan and Security Agreement between PNC Bank, National Association and Perma-Fix Environmental

- Services, Inc., dated August 22, 2016, as incorporated by reference from Exhibit 4.9 to the Company's Form 10-Q for the quarter ended June 30, 2016 filed on August 22, 2016.
- 4.13 Ninth Amendment to Amended and Restated Revolving Credit, Term Loan and Security Agreement between PNC Bank, National Association and Perma-Fix Environmental Services, Inc., dated November 17, 2016, as incorporated by reference from Exhibit 4.10 to the Company's Form 10-Q for the quarter ended September 30, 2016 filed on November 18, 2016.
- 4.14 Tenth Amendment to Amended and Restated Revolving Credit, Term Loan and Security Agreement between PNC Bank, National Association and Perma-Fix Environmental Services, Inc., dated July 26, 2018, as incorporated by reference from Exhibit 4.1 to the Company's Form 8-K filed on July 30, 2018.
- 4.15 Eleventh Amendment to Amended and Restated Revolving Credit, Term Loan and Security Agreement and Waiver between PNC Bank, National Association and Perma-Fix Environmental Services, Inc., dated March 29, 2019, as incorporated by reference from Exhibit 4.14 to the Company's 2018 Form 10-K filed on April 1, 2019.
- 4.16 Twelfth Amendment to Amended and Restated Revolving Credit, Term Loan and Security Agreement between PNC Bank, National Association and Perma-Fix Environmental Services, Inc., dated June 20, 2019, as incorporated by reference from Exhibit 4.1 to the Company's Form 8-K filed on June 21, 2019.
- 4.17 Thirteenth Amendment to Amended and Restated Revolving Credit, Term Loan and Security Agreement between PNC Bank, National Association and Perma-Fix Environmental Services, Inc., dated December 13, 2019, as incorporated by reference from Exhibit 4.17 to the Company's 2019 Form 10-K filed on March 20, 2020.
- 4.18 Second 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 May 8, 2020, as incorporated by reference from Exhibit 4.1 to the Company's Form 10-Q for the Quarter ended March 31, 2020 filed on May 12, 2020.
- 4.19 Payment Protection Program Term Note dated April 11, 2020, by and between Perma-Fix Environmental Services, Inc. and PNC Bank, National Association, as incorporated by reference from Exhibit 99.1 to the Company's Form 8-K filed on April 15, 2020.
- 4.20 Loan and Securities Purchase Agreement, dated April 1, 2019 between Robert L. Ferguson and Perma-Fix Environmental Services, Inc., as incorporated by reference from Exhibit 4.15 to the Company's 2018 Form 10-K filed on April 1, 2019.
- 4.21 Common Stock Purchase Warrant dated April 1, 2019 for Robert L. Ferguson, as incorporated by reference from Exhibit 4.16 to the Company's 2018 Form 10-K filed on April 1, 2019.
- 10.1 2003 Outside Directors' Stock Plan of the Company, as incorporated by reference from Exhibit 10.1 to the Company's 2019 Form 10-K filed on March 20, 2020.
- 10.2 First Amendment to 2003 Outside Directors Stock Plan, as incorporated by reference from Exhibit 10.2 to the Company's 2019 Form 10-K filed on March 20, 2020.
- 10.3 Second Amendment to 2003 Outside Directors Stock Plan, as incorporated by reference from Exhibit 10.3 to the Company's 2017 Form 10-K filed on March 16, 2018.
- 10.4 Third Amendment to 2003 Outside Directors Stock Plan, as incorporated by reference from Exhibit 10.4 to the Company's 2017 Form 10-K filed on March 16, 2018.
- 10.5 Fourth Amendment to 2003 Outside Directors Stock Plan, as incorporated by reference from Exhibit A to the Company's Proxy Statement for its 2017 Annual Meeting of Stockholders filed on June 22, 2017.
- 10.6 2017 Stock Option Plan, as incorporated by reference from Exhibit B to the Company's Proxy Statement for its 2017 Annual Meeting of Stockholders filed on June 22, 2017.
- 10.7 Employment Agreement dated July 22, 2020 between Mark Duff, Chief Executive Officer, and Perma-Fix Environmental Services, Inc., as incorporated by reference from Exhibit 99.1 to the Company's Form 8-K filed on July 27, 2020.
- 10.8 Employment Agreement dated July 22, 2020 between Dr. Louis Centofanti, Executive Vice President of Strategic Initiatives, and Perma-Fix Environmental Services, Inc., as incorporated by reference from Exhibit 99.2 to the Company's Form 8-K filed on July 27, 2020.

- 10.9 Employment Agreement dated July 22, 2020 between Ben Naccarato, Chief Financial Officer, and Perma-Fix Environmental Services, Inc., as incorporated by reference from Exhibit 99.3 to the Company's Form 8-K filed on July 27, 2020.
- 10.10 Employment Agreement dated July 22, 2020 between Andy Lombardo, EVP of Nuclear and Technical Services, Inc. and Perma-Fix Environmental Services, Inc., as incorporated by reference from Exhibit 99.4 to the Company's Form 8-K filed on July 27, 2020.
- 10.11 Employment Agreement dated July 22, 2020 between Richard Grondin, EVP of Waste Treatment Operations and Perma-Fix Environmental Services, Inc., as incorporated by reference from Exhibit 99.5 to the Company's Form 8-K filed on July 27, 2020.
- 10.12 2020 Incentive Compensation Plan for Chief Executive Officer, effective January 1, 2020, as incorporated by reference from Exhibit 99.1 to the Company's Form 8-K filed on January 22, 2020.
- 10.13 2020 Incentive Compensation Plan for Chief Financial Officer, effective January 1, 2020, as incorporated by reference from Exhibit 99.2 to the Company's Form 8-K filed on January 22, 2020.
- 10.14 2020 Incentive Compensation Plan for Executive Vice President of Strategic Initiatives, effective January 1, 2020, as incorporated by reference from Exhibit 99.3 to the Company's Form 8-K filed on January 22, 2020.
- 10.15 2020 Incentive Compensation Plan for Executive Vice President of Nuclear and Technical Services, effective January 1, 2020, as incorporated by reference from Exhibit 99.4 to the Company's Form 8-K filed on January 22, 2020.
- 10.16 2020 Incentive Compensation Plan for Executive Vice President of Waste Treatment Operations, effective January 1, 2020, as incorporated by reference from Exhibit 99.6 to the Company's Form 8-K filed on July 27, 2020.
- 10.17 Incentive Stock Option Agreement dated July 27, 2017 between Perma-Fix Environmental Services, Inc., and Chief Executive Officer, as incorporated by reference from Exhibit 99.1 to the Company's Form 8-K filed on August 2, 2017.
- 10.18 Incentive Stock Option Agreement dated July 27, 2017 between Perma-Fix Environmental Services, Inc., and Executive Vice President/Chief Operating Officer, as incorporated by reference from Exhibit 99.2 to the Company's Form 8-K filed on August 2, 2017.
- 10.19 Incentive Stock Option Agreement dated July 27, 2017 between Perma-Fix Environmental Services, Inc., and Chief Financial Officer, as incorporated by reference from Exhibit 99.3 to the Company's Form 8-K filed on August 2, 2017.
- 10.20 Incentive Stock Option Agreement dated January 17, 2019 between Perma-Fix Environmental Services, Inc., and Chief Executive Officer, as incorporated by reference from Exhibit 99.4 to the Company's Form 8-K filed on January 23, 2019.
- 10.21 Incentive Stock Option Agreement dated January 17, 2019 between Perma-Fix Environmental Services, Inc., and Chief Financial Officer, as incorporated by reference from Exhibit 99.5 to the Company's Form 8-K filed on January 23, 2019.
- 10.22 Incentive Stock Option Agreement dated January 17, 2019 between Perma-Fix Environmental Services, Inc., and EVP of Strategic Initiatives, as incorporated by reference from Exhibit 99.6 to the Company's Form 8-K filed on January 23, 2019.
- 10.23 Incentive Stock Option Agreement dated October 19, 2017 between Perma-Fix Environmental Services, Inc., and Richard Grondin, as incorporated by reference from Exhibit 99.11 to the Company's Form 8-K filed on July 27, 2020.
- 10.24 Incentive Stock Option Agreement dated January 17, 2019 between Perma-Fix Environmental Services, Inc., and Richard Grondin, as incorporated by reference from Exhibit 99.12 to the Company's Form 8-K filed July 27, 2020.
- 10.25 Stock Option Agreement dated July 27, 2017 between Perma-Fix Environmental Services, Inc., and Mr. Robert L. Ferguson, as incorporated by reference from Exhibit 10.6 to the Company's third quarter Form 10-Q filed on August 9, 2017.
- 10.26 First Amendment to Stock Option Agreement dated July 27, 2017 between Perma-Fix Environmental Services, Inc. Mr. Robert L. Ferguson, as incorporated by reference from Exhibit 10.23 to the Company 2018 Form 10-K filed on April 1, 2019.

10.27	Second Amendment to Stock Option Agreement dated July 27, 2017 between Perma-Fix Environmental Services, Inc. Mr. Robert L. Ferguson, as incorporated by reference from Exhibit 99.3 to the Company Form 8-K filed on March 31, 2020.
10.28	Task Order Agreement for Small Scales Remediation Package between Canadian Nuclear Laboratories LTD and Perma-Fix Canada Inc., as incorporated by reference from Exhibit 10.1 to the Company's Form 10-Q for the quarter ended March 31, 2019 filed on May 9, 2019. CERTAIN INFORMATION WITHIN SCHEDULE 2 – PRICE INFORMATION OF THIS EXHIBIT HAS BEEN EXCLUDED FROM THE EXHIBIT BECAUSE IT IS NOT MATERIAL AND WOULD LIKELY CAUSE COMPETITIVE HARM TO THE COMPANY IF PUBLICLY DISCLOSED.
10.29	2021 Incentive Compensation Plan for Chief Executive Officer, effective January 1, 2021, as incorporated by reference from Exhibit 99.1 to the Company's Form 8-K filed on January 26, 2021.
10.30	2021 Incentive Compensation Plan for Chief Financial Officer, effective January 1, 2021, as incorporated by reference from Exhibit 99.2 to the Company's Form 8-K filed on January 26, 2021.
10.31	2021 Incentive Compensation Plan for EVP of Strategic Initiatives, effective January 1, 2021, as incorporated by reference from Exhibit 99.3 to the Company's Form 8-K filed on January 26, 2021.
10.32	2021 Incentive Compensation Plan for EVP of Nuclear and Technical Services, effective January 1, 2021, as incorporated by reference from Exhibit 99.4 to the Company's Form 8-K filed on January 26, 2021.
10.33	2021 Incentive Compensation Plan for EVP of Waste Treatment Operations, effective January 1, 2021, as incorporated by reference from Exhibit 99.5 to the Company's Form 8-K filed on January 26, 2021.
10.34	Time and Material Master Task Ordering Agreement Subcontract Form of Agreement (subcontract 573512) dated February 23, 2020 and Modification 4 between Perma-Fix Environmental Services, Inc. and Triad National Security, LLC. CERTAIN INFORMATION OF THIS EXHIBIT WITHIN "EXHIBIT C" – "Form A-1 SCHEDULE OF RATES AND NOT-TO-EXCEED AMOUNTS" HAS BEEN EXCLUDED FROM THE EXHIBIT BECAUSE IT IS NOT MATERIAL AND WOULD LIKELY CAUSE COMPETITIVE HARM TO THE COMPANY IF PUBICLY DISCLOSED.
10.35	Time and Material Master Task Ordering Agreement Subcontract Form of Agreement (subcontract 554628) dated August 21, 2019 and Modification 6 between Perma-Fix Environmental Services, Inc. and Triad National Security, LLC. CERTAIN INFORMATION OF THIS EXHIBIT WITHIN "EXHIBIT C" – "FORM A-1 SCHEDULE OF RATES AND NOT-TO-EXCEED AMOUNTS" HAS BEEN EXCLUDED FROM THE EXHIBIT BECAUSE IT IS NOT MATERIAL AND WOULD LIKELY CAUSE COMPETITIVE HARM TO THE COMPANY IF PUBICLY DISCLOSED.
21.1	List of Subsidiaries
23.1	Consent of Grant Thornton, LLP
31.1	Certification by Mark Duff, Chief Executive Officer and Principal Executive Officer of the Company pursuant to Rule 13a-14(a) and 15d-14(a).
31.2	Certification by Ben Naccarato, Chief Financial Officer and Principal Financial Officer of the Company pursuant to Rule 13a-14(a) and 15d-14(a).
32.1	Certification by Mark Duff, Chief Executive Officer and Principal Executive Officer of the Company furnished pursuant to 18 U.S.C. Section 1350.
32.2	Certification by Ben Naccarato, Chief Financial Officer and Principal Financial Officer of the Company furnished pursuant to 18 U.S.C. Section 1350.
101.INS	XBRL Instance Document*
101.SCH	XBRL Taxonomy Extension Schema Document*
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document*
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document*
101.LAB	XBRL Taxonomy Extension Labels Linkbase Document*

*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.

EXHIBIT 31.1

CERTIFICATIONS

I, Mark Duff, certify that:

1. I have reviewed this annual report on Form 10-K of Perma-Fix Environmental Services, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of the internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 29, 2021

/s/ Mark Duff

Mark Duff
Chief Executive Officer, President
and Principal Executive Officer

EXHIBIT 31.2

CERTIFICATIONS

I, Ben Naccarato, certify that:

1. I have reviewed this annual report on Form 10-K of Perma-Fix Environmental Services, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of the internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 29, 2021

/s/ Ben Naccarato

Ben Naccarato
Chief Financial Officer and
Principal Financial Officer

CORPORATE INFORMATION

Board of Directors

Thomas P. Bostick
CEO of
Bostick Global Strategies, LLC
(Director since August 2020)⁽²⁾

Dr. Louis F. Centofanti
Executive Vice President of
Strategic Initiatives
(Director since 1991)⁽⁴⁾

Kerry C. Duggan
Founder and Principal of
SustainabiliD
(Director since May 2021)

Joseph T. Grumski
Director
President and Chief Executive Officer
of TAS Energy, Inc.
(Director since February 2020)⁽¹⁾⁽³⁾

Joe R. Reeder
Director
Shareholder of
Greenburg Traurig, LLP,
Former Army Undersecretary
(Director since 2003)⁽²⁾⁽⁴⁾

Larry M. Shelton
Chairman of the Board
(Director since 2006)⁽¹⁾⁽⁴⁾

Zach P. Wamp
Director
President of
Zach Wamp Consulting
(Director since 2018)⁽²⁾⁽³⁾

Mark A. Zwecker
Director
(Director since 1991)⁽¹⁾⁽³⁾⁽⁴⁾

Management Team

Mark Duff
President and
Chief Executive Officer

Ben Naccarato
Executive Vice President and
Chief Financial Officer

Dr. Louis F. Centofanti
Executive Vice President of Strategic
Initiatives

Andrew Lombardo
Executive Vice President of
Nuclear and Technical Services

Richard Grondin
Executive Vice President of
Waste Treatment Operations

⁽¹⁾ Member of Audit Committee

⁽²⁾ Member of Corporate Governance and Nominating Committee

⁽³⁾ Member of Compensation and Stock Option Committee

⁽⁴⁾ Member of Strategic Advisory Committee

Corporate Information

Executive Offices
8302 Dunwoody Place, Suite 250
Atlanta, Georgia 30350
Telephone: 770-587-9898
Fax: 770-587-9937

Transfer Agent and Registrar
Continental Stock Transfer
& Trust Company
One State Street Plaza, 30th Floor
New York, New York 10004

Independent Registered
Public Accounting Firm
Grant Thornton LLP
1100 Peachtree Street NE #1200
Atlanta, Georgia 30309

Stock Listing
The common stock of Perma-Fix
Environmental Services, Inc. is listed
on Nasdaq where it is traded under
the ticker symbol PESI.

Stockholder Inquiries

Inquiries concerning stockholder records should be addressed to the Transfer Agent listed above. Comments or questions concerning the operations of the Company should be addressed to the Secretary, Perma-Fix Environmental Services, Inc., 8302 Dunwoody Place, Suite 250, Atlanta, Georgia 30350.

Included within this Annual Report is a list briefly describing all exhibits listed in the Company's Form 10-K. We will furnish any exhibit to a shareholder upon receipt of a written request and payment of a specified reasonable fee, which fee shall be limited to the registrant's reasonable expenses in furnishing such exhibit. Each request must set forth a good-faith representation that, as of the record date for the solicitation of proxies, the person making the request was a beneficial owner of securities of the Company entitled to vote.

The Company defines EBITDA as earnings before interest, taxes, depreciation and amortization. Adjusted EBITDA is defined as EBITDA before research and development costs related to the Medical Isotope project, closure costs accrued for East Tennessee Materials and Energy Corporation (M&EC), and net gain on exchange offer of Series B Preferred stock of M&EC (where applicable). Both EBITDA and adjusted EBITDA are not measures of performance calculated in accordance with accounting standards generally accepted in the United States of America ("U.S. GAAP"), and should not be considered in isolation of, or as a substitute for, earnings as an indicator of operating performance or cash flows from operating activities as a measure of liquidity. The Company believes the presentation of EBITDA and adjusted EBITDA is relevant and useful by enhancing the readers' ability to understand the Company's operating performance. The Company's management utilizes EBITDA and adjusted EBITDA as a means to measure performance. The Company's measurements of EBITDA and adjusted EBITDA may not be comparable to similar titled measures reported by other companies. The table below reconciles EBITDA and adjusted EBITDA, both non-GAAP measures, to GAAP numbers for income (loss) from continuing operations for the period noted.

(In thousands)	Fiscal Year 2020	Fiscal Year 2019	Fiscal Year 2018
Income (loss) from continuing operations	\$ 3,149	\$ 2,732	\$ (1,074)
Adjustments:			
Depreciation and amortization	1,596	1,342	1,455
Interest income	(140)	(337)	(295)
Interest expense	398	432	251
Interest expense—financing fees	294	208	38
Income tax (benefit) expense	(189)	157	(936)
Loss on extinguishment of debt	27	—	—
EBITDA	5,135	4,534	(561)
Research and development costs related to medical isotope project	311	314	811
Net gain on exchange offer of Series B Preferred Stock of M&EC	—	—	(1,596)
Closure costs accrued for M&EC subsidiary	—	330	3,323
Adjusted EBITDA	\$ 5,446	\$ 5,178	\$ 1,977

Certain statements contained in the Shareholders' letter, which have been added to this Annual Report on Form 10-K, may be deemed additional forward-looking statements. All estimates, projections, and other statements generally identifiable by the use of the words "believe," "expect," "intend," "anticipate," "plans to" and similar expressions (except statements of historical facts) contained therein are forward-looking statements, including but not limited to, advancing initiatives; sales pipeline in the Services Segment; bid and bid award; backlog of contracts; enhance revenues; establish large backlog; leverage our advanced capabilities; growth strategy for 2021; broadening our base of clients; and COVID impact. See "Special Note Regarding Forward-Looking Statements" contained in this Form 10-K that is part of the Annual Report and our Form 10-Q for quarter ended March 31, 2021, for discussion of factors which could cause future outcomes to differ materially from those described herein.

The Shareholders' letter should be read in conjunction with the "Management's Discussion and Analysis of Financial Condition and Results of Operations" included in the Form 10-K contained within this 2020 Annual Report and our Form 10-Q for the quarter ended March 31, 2021.



8302 Dunwoody Place, Suite 250 / Atlanta, Georgia 30350
P 770-587-9898 / F 770-587-9937
www.perma-fix.com