

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

FORM S-3

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

PERMA-FIX ENVIRONMENTAL SERVICES, INC.

(Exact name of registrant as specified in charter)

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

58-1954497
*(I.R.S. Employer
Identification No.)*

**8302 Dunwoody Place, #250
Atlanta, Georgia 30350
(770) 587-9898**

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

**Ben Naccarato
Executive Vice President and Chief Financial Officer
Perma-Fix Environmental Services, Inc.**

**8302 Dunwoody Place, #250
Atlanta, Georgia 30350
(770) 587-9898**

(Address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

**Irwin H. Steinhorn, Esq.
Jeanette C. Timmons, Esq.
Stephoe & Johnson PLLC
210 Park Avenue, Suite 2300
Oklahoma City, Oklahoma 73102
(405) 825-9058**

Approximate date of commencement of proposed sale to the public: From time to time after this Registration Statement becomes effective.

If the only securities being registered on this form are being offered pursuant to a dividend or interest reinvestment plans, please check the following box:

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box:

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering:

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering:

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

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 the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

If an emerging growth company, indicate by check mark if the registrant has selected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, or until this registration statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities, and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

Subject to completion, dated December 2, 2024

PROSPECTUS



PERMA-FIX ENVIRONMENTAL SERVICES, INC.

\$100,000,000

Common Stock
Preferred Stock
Debt Securities
Depositary Shares
Warrants
Rights
Purchase Contracts
Units

We may offer and sell from time to time shares of our common stock, shares of our preferred stock, debt securities, depositary shares, warrants, rights, purchase contracts or units, or any combination thereof, in one or more offerings in amounts, at prices and on terms that we determine at the time of the offering, with an aggregate initial offering price of up to \$100,000,000 (or its equivalent in foreign currencies, currency units or composite currencies).

This prospectus describes some of the general terms that may apply to these securities and the manner in which they may be offered. We will provide the specific terms of any offering of securities in one or more supplements to this prospectus containing more information about the particular offering. The prospectus supplement also may add, update or change information contained in this prospectus. You should carefully read this prospectus and the applicable prospectus supplement, together with the documents we incorporate by reference, before you invest. This prospectus may not be used to offer and sell securities unless accompanied by a prospectus supplement.

These securities may be sold on a continuous or delayed basis to or through underwriters, brokers or dealers, directly to purchasers, through agents in “at the market” offerings or otherwise through a combination of any of these methods of sale.

Our common stock is traded on The Nasdaq Capital Market under the symbol “PESI.” If we decide to list or seek a quotation for any other securities, the prospectus supplement relating to those securities will disclose the exchange or market on which those securities will be listed or quoted.

Investing in our securities involves significant risks. You should review carefully the risks and uncertainties described under the heading “Risk Factors” on page 8 of this prospectus and any similar section contained in the applicable prospectus supplement and any related free writing prospectus we have authorized for use in connection with a specific offering, as well as the “Risk Factors” incorporated by reference into this prospectus from our filings made with the Securities and Exchange Commission.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is _____, 2024.

TABLE OF CONTENTS

ABOUT THIS PROSPECTUS	1
WHERE YOU CAN FIND MORE INFORMATION	2
INCORPORATION OF CERTAIN INFORMATION BY REFERENCE	2
SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS	4
PROSPECTUS SUMMARY	6
RISK FACTORS	8
USE OF PROCEEDS	8
DESCRIPTION OF SECURITIES WE MAY OFFER	9
DESCRIPTION OF COMMON STOCK	9
DESCRIPTION OF PREFERRED STOCK	11
DESCRIPTION OF THE DEBT SECURITIES	12
DESCRIPTION OF DEPOSITARY SHARES	18

DESCRIPTION OF THE WARRANTS	21
DESCRIPTION OF THE RIGHTS	23
DESCRIPTION OF THE PURCHASE CONTRACTS	24
DESCRIPTION OF THE UNITS	25
PLAN OF DISTRIBUTION	26
LEGAL MATTERS	28
EXPERTS	28

ABOUT THIS PROSPECTUS

To understand the terms of the securities offered by this prospectus, you should carefully read this prospectus and any applicable prospectus supplement. You should also read the documents referred to under the heading “Where You Can Find More Information” for information on us and the business conducted by us.

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission (the “SEC”), using a “shelf” registration process. Under this shelf registration process, we may offer and sell from time to time shares of our common stock, shares of our preferred stock, debt securities, depository shares, warrants, rights, purchase contracts or units, or any combination thereof, in one or more offerings in amounts, at prices and on terms that we determine at the time of the offering, with an aggregate initial offering price of up to \$100,000,000 (or its equivalent in foreign currencies, currency units or composite currencies). This prospectus provides you with a general description of the securities. Each time we offer the securities, we will provide a prospectus supplement that describes the terms of the offering. The prospectus supplement also may add, update or change information contained in this prospectus. Before making an investment decision, you should read carefully both this prospectus and any prospectus supplement together with the documents incorporated by reference into this prospectus as described below under the heading “Incorporation of Certain Information by Reference.”

The registration statement that contains this prospectus, including the exhibits to the registration statement and the information incorporated by reference, provides additional information about us and our securities. That registration statement can be found on the SEC’s website at www.sec.gov.

We have not authorized anyone to provide any information other than that contained or incorporated by reference in this prospectus, any accompanying prospectus supplement or in any free writing prospectus prepared by or on behalf of us or to which we have referred you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. You should not assume that the information in this prospectus or any supplement to this prospectus is accurate at any date other than the date indicated on the cover page of these documents. We are not making an offer to sell the securities in any jurisdiction where the offer or sale is not permitted.

We may sell the securities to or through underwriters, brokers or dealers, directly to purchasers, through agents, in “at the market” offerings or otherwise through a combination of any of these methods of sale. The securities may be sold for U.S. dollars, foreign-denominated currency, currency units or composite currencies. Amounts payable with respect to any securities may be payable in U.S. dollars or foreign-denominated currency, currency units or composite currencies as specified in the applicable prospectus supplement. We and our agents reserve the sole right to accept or reject in whole or in part any proposed purchase of the securities. The prospectus supplement, which we will provide each time we offer the securities, will set forth the names of any underwriters, dealers or agents involved in the sale of the securities, and any related fee, commission or discount arrangements. See “Plan of Distribution.”

The prospectus supplement may also contain information about any material U.S. federal income tax considerations relating to the securities covered by the prospectus supplement.

Unless the context otherwise requires, references in this prospectus to “Perma-Fix,” the “Company,” “we,” “our,” and “us” refer to Perma-Fix Environmental Services, Inc. and its consolidated subsidiaries.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-3 under the Securities Act with respect to the securities offered by this prospectus. This prospectus, which is part of the registration statement, omits certain information, exhibits, schedules, and undertakings set forth in the registration statement. You may refer to the registration statement, exhibits, and schedules for more information about us and the securities. The registration statement, exhibits, and schedules are available through the SEC’s website at www.sec.gov.

We are subject to the reporting requirements of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and, in accordance with such requirements, we file periodic reports, proxy statements, and other information with the SEC, including our audited financial statements. Our publicly available filings can be found on the SEC’s website. We also maintain a website at www.perma-fix.com, at which you may access these filings as well as additional information that we have made public to investors. The information contained in, or that can be accessed through, our website is not part of, and is not incorporated into, this prospectus (except for SEC reports expressly incorporated by reference herein).

You should rely only on the information in this prospectus and the additional information described above and under the heading “Incorporation of Certain Information by Reference” below. We have not authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely upon it. We are not making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information in this prospectus was accurate on the date of the front cover of this prospectus only. Our business, financial condition, results of operations and prospects may have changed since that date.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to “incorporate by reference” the information contained in documents that we file separately with the SEC, which means that we can disclose important information to you by referring you to those other documents. The information incorporated by reference is considered to be a part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information. In all cases, you should rely on the later information over different information included in this prospectus or the prospectus supplement. The following documents have been filed by us with the SEC and are incorporated by reference into this prospectus:

- Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2023, filed with the SEC on March 13, 2024;
- Quarterly Report on [Form 10-Q](#) for the quarter ended March 31, 2024, filed with the SEC on May 09, 2024;
- Quarterly Report on [Form 10-Q](#) for the quarter ended June 30, 2024, filed with the SEC on August 8, 2024
- Quarterly Report on [Form 10-Q](#) for the quarter ended September 30, 2024, filed with the SEC on November 13, 2024
- Current Report on [Form 8-K](#) filed with the SEC on April 10, 2024;
- Current Report on [Form 8-K](#) filed with the SEC on May 14, 2024;
- Current Report on [Form 8-K](#) filed with the SEC on May 24, 2024;
- Current Report on [Form 8-K](#) filed with the SEC on July 19, 2024;
- The description of our common stock that is contained in the Registration Statement on Form 8-A filed pursuant to Section 12 of the Exchange Act, that became effective on October 30, 1992, including any amendments or reports filed for the purpose of updating such description.

2

All documents subsequently filed by the Registrant with the SEC pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act (other than documents or portions of documents deemed to be furnished pursuant to the Exchange Act), prior to the filing of a post-effective amendment which indicates that all securities offered have been sold, or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference herein and to be a part hereof from the date of filing of such documents.

You should not assume that the information in this prospectus, the prospectus supplement, any applicable pricing supplement or any document incorporated by reference is accurate as of any date other than the date of the applicable document. Any statement contained in a document incorporated or deemed to be incorporated by reference into this prospectus will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or any other subsequently filed document that is deemed to be incorporated by reference into this prospectus modifies or supersedes the statement. Any statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

You may obtain copies of any of these filings by contacting us as described below, or by contacting the SEC or accessing its website as described above under the heading “Where You Can Find More Information.” We will provide to each person, including any beneficial owner, to whom a prospectus is delivered, without charge upon written or oral request, a copy of any or all of the documents that are incorporated by reference into this prospectus but not delivered with the prospectus, including exhibits that are specifically incorporated by reference into such documents. You may request a copy of these filings by writing or calling us at:

Perma-Fix Environmental Services, Inc.
8302 Dunwoody Place, #250
Atlanta, Georgia 30350
(770) 587-9898

THE INFORMATION CONTAINED ON, OR ACCESSIBLE THROUGH, OUR WEBSITE IS NOT INCORPORATED INTO AND DOES NOT CONSTITUTE A PART OF THIS PROSPECTUS.

3

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, including the documents incorporated by reference into this prospectus, contains “forward-looking statements” within the meaning of the U.S. Private Securities Litigation Reform Act of 1995, which involve risks and uncertainties. All statements other than statements of historical facts contained in this prospectus, including statements regarding our strategy, future operations, future financial position, future revenue, projected costs, prospects, plans, objectives of management, and expected market growth are forward-looking statements. These forward-looking statements are contained principally in the sections entitled “Summary,” “Risk Factors” and “Use of Proceeds.” Without limiting the generality of the preceding sentence, any time we use the words “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “goal,” “intend,” “likely,” “may,” “might,” “objective,” “plan,” “possible,” “potential,” “predict,” “project,” “seek,” “should,” “target,” “will,” “would” and, in each case, their negative or other various or comparable terminology, and similar expressions, we intend to clearly express that the information deals with possible future events and is forward-looking in nature. However, the absence of these words or similar expressions does not mean that a statement is not forward-looking.

These statements are only predictions and involve known and unknown risks, uncertainties, and other factors, including the risks, uncertainties and assumptions discussed under the caption “Risk Factors” and the risks set out below, any of which may cause our or our industry’s actual results, levels of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied by these forward-looking statements. These risks include, by way of example and not in limitation:

- demand for our services;
- reductions in the level of government funding in future years and its effect on the Company;
- the possibility that accelerated investments could adversely affect our operations on an ongoing basis;
- our belief that our base business is well-positioned for fiscal 2025;
- our belief that advancement of certain initiatives should have a positive impact beginning in the second half of fiscal 2024;
- our ability to reduce operating costs and non-essential expenditures;
- our ability to meet loan agreement quarterly covenant requirements;
- our ability to collect in a timely manner a material amount of receivables;
- our cash flow requirements;

- our belief that we have sufficient liquidity to fund operations for the next 12 months through cash from operations, borrowing availability under our credit facility, financing, and the collection of accounts receivable;
- the timing and amount of revenue under a multi-year contract awarded by the European Commission to our joint venture with Campoverde Srl;
- our ability to obtain additional grants or bid awards internationally;
- the manner in which applicable governmental entities are required to spend funding to remediate various sites containing environmental hazards;
- our ability to develop and/or improve new and existing technologies in the conduct of operations;
- uncertainties related to our new PFAS destruction technology process, including market acceptance of its superiority to currently available treatment options, expenditures associated with scalability, and our ability to advance operations at our pilot PFAS destruction unit and accept commercial quantities of waste for destruction by mid-2025;

4

- our ability to fund remediation expenditures for sites from funds generated internally;
- the need to use internally generated funds for purposes not presently anticipated;
- 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;
- a change in regulations reducing or even eliminating existing requirements to obtain permits for treatment, storage, and disposal (TSD) activities or licensing to handle low-level radioactive materials;
- terminations of contracts with government agencies or subcontracts involving government agencies, or reduction in amount of waste delivered to the Company under the contracts or subcontracts;
- changes in the scope of work relating to existing contracts;
- failure of our Italian joint venture partner to meet its performance obligations under the terms of the European Commission bid award;
- compliance with environmental regulations;
- our ability to obtain procurement contracts from the Department of Energy (“DOE”) and other government agencies;
- delays in waste shipments and contract awards;
- the risk that disposal expense accrual could prove to be inadequate in the event the waste requires re-treatment;
- potential effect of being a “Potentially Responsible Party,” or PRP, as such term is defined in 40 CFR § 304.12; and
- potential violations of environmental laws and attendant remediation at our facilities.
- inability to raise capital on commercially reasonable terms; and
- inability of the Company to maintain the listing of its common stock on The Nasdaq Capital Market.

The foregoing list sets forth many, but not all, of the factors that could impact our ability to achieve results described in any forward-looking statements. Investors should understand that it is not possible to predict or identify all such factors and should not consider this list to be a complete statement of all potential risks and uncertainties.

Moreover, new risks and uncertainties emerge from time to time, and it is not possible for us to predict all risks and uncertainties that could have an impact on the forward-looking statements contained in this prospectus and any related free-writing prospectus, and in the documents incorporated by reference into this prospectus. We cannot assure you that the results, events, and circumstances reflected in the forward-looking statements will be achieved or occur, and actual results, events, or circumstances could differ materially from those described in the forward-looking statements.

You should read this prospectus and the documents that we incorporate by reference herein with the understanding that our actual future results may be materially different from what we currently expect. You should assume that the information appearing in this prospectus and any document incorporated by reference herein is accurate as of its date only. Because the risks referred to above could cause actual results or outcomes to differ materially from those expressed in any forward-looking statements made by us or on our behalf, you should not place undue reliance on any forward-looking statements. Further, any forward-looking statement speaks only as of the date on which it is made, and we undertake no obligation to update any forward-looking statement to reflect events or circumstances after the date on which the statement is made or to reflect the occurrence of unanticipated events. New factors emerge from time to time, and it is not possible for us to predict which factors may arise. In addition, we cannot predict the impact of each factor on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. We qualify all of the information presented in this prospectus and any document incorporated herein by reference, and particularly our forward-looking statements, by these cautionary statements.

5

PROSPECTUS SUMMARY

The following summary highlights selected information from this prospectus and does not contain all of the information that you need to consider in making your investment decision. You should carefully read the entire prospectus, the applicable prospectus supplement and any related free writing prospectus, including the risks of investing in our securities discussed under the heading “Risk Factors” contained in the applicable prospectus supplement and any related free writing prospectus, and under similar headings in the other documents that are incorporated by reference into this prospectus. You should also carefully read the information incorporated by reference into this prospectus, including our financial statements, and the exhibits to the registration statement of which this prospectus is a part.

Our Company and Business

We are an environmental services and environmental technology know-how company providing waste treatment, processing, and disposal services for nuclear, low-level radioactive, mixed, hazardous, and non-hazardous waste, primarily through four treatment and storage facilities that are licensed by the Nuclear Regulatory Commission (or state equivalent agency) and permitted by the U.S. Environmental Protection Agency (“EPA”) or state-equivalent agency. We also conduct research and development (“R&D”) activities to identify, develop and implement innovative waste processing techniques for problematic waste streams, as well as provide technical services and on-site waste management services to commercial and governmental customers.

Headquartered in Atlanta, Georgia, we provide services across the United States and internationally 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 business is conducted through two operating segments, treatment and services, which contributed approximately 48.5% and 51.5%, respectively, to our total revenue in 2023. Historically, we have focused our business strategy in the treatment segment on upgrading our treatment facilities 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 also remains focused on expansion into both commercial and international markets to supplement government spending in the United States, from which a significant portion of the Company’s revenue is derived. Inherent in our strategy is the development of new services, new customers, and increased market share in our current markets.

For a description of our business, financial condition, results of operations and other important information regarding Perma-Fix, we refer you to our filings with the SEC incorporated by reference into this prospectus. For instructions on how to find copies of these documents, see “Where You Can Find More Information.” More information about us is also available through our website at www.perma-fix.com. The information on our website is not incorporated by reference into this prospectus or any accompanying prospectus supplement (except for SEC reports that are expressly incorporated by reference herein).

Corporate Information

We are a Delaware corporation incorporated in December 1990. Our principal executive offices are located at 8302 Dunwoody Place, Suite 250, Atlanta, Georgia 30350, and our telephone number is (770) 587-9898. Our website address is www.perma-fix.com. The information on our website is not incorporated by reference into this prospectus and should not be considered to be a part of this prospectus. Our internet address is included in this prospectus supplement as an inactive textual reference only.

The Securities That May Be Offered

We may offer or sell common stock, preferred stock, debt securities, depositary shares, warrants, rights, purchase contracts, and units in one or more offerings and in any combination. The aggregate offering price of the securities we sell pursuant to this prospectus will not exceed \$100,000,000. Each time securities are offered with this prospectus, we will provide a prospectus supplement that will describe the specific amounts, prices and terms of the securities being offered and the net proceeds we expect to receive from that sale.

The securities may be sold to or through underwriters, dealers or agents or directly to purchasers or as otherwise set forth in the section of this prospectus captioned “Plan of Distribution.” Each prospectus supplement will set forth the names of any underwriters, dealers, agents or other entities involved in the sale of securities described in that prospectus supplement and any applicable fee, commission or discount arrangements with them.

Common Stock

We may offer shares of our common stock, par value \$0.001 per share, either alone or underlying other registered securities convertible into our common stock. Holders of our common stock are entitled to receive dividends declared by our board of directors out of funds legally available for the payment of dividends, subject to rights, if any, of preferred shareholders. We have not paid dividends in the past and have no current plans to pay dividends. Each holder of common stock is entitled to one vote per share. The holders of common stock have no preemptive rights.

Preferred Stock

Our board of directors has the authority, subject to limitations prescribed by Delaware law, to issue preferred stock in one or more series, to establish from time to time the number of shares to be included in each series, and to fix the designation, powers, preferences and rights of the shares of each series and any of its qualifications, limitations or restrictions, in each case without further vote or action by our shareholders. Each series of preferred stock offered by us will be more fully described in the particular prospectus supplement that will accompany this prospectus, including redemption provisions, rights in the event of our liquidation, dissolution or winding up, voting rights and rights to convert into common stock.

Debt Securities

We may offer secured or unsecured obligations in the form of one or more series of senior or subordinated debt. The senior debt securities and the subordinated debt securities are together referred to in this prospectus as the “debt securities.” The subordinated debt securities generally will be entitled to payment only after payment of our senior debt. Senior debt generally includes all debt for money borrowed by us, except debt that is stated in the instrument governing the terms of that debt to be not senior to, or to have the same rank in right of payment as, or to be expressly junior to, the subordinated debt securities. We may issue debt securities that are convertible into shares of our common stock.

The debt securities will be issued under an indenture between us and a trustee to be identified in an accompanying prospectus supplement. We have summarized the general features of the debt securities to be governed by the indenture in this prospectus and the form of indenture has been filed as an exhibit to the registration statement of which this prospectus forms a part. We encourage you to read the indenture.

Depositary Shares

We may offer depositary shares evidenced by depositary receipts, with each depositary share representing a fractional interest in a share of a particular series of preferred stock issued and deposited with a depositary to be designated by us. Each series of depositary shares or depositary receipts offered by us will be more fully described in the particular prospectus supplement that will accompany this prospectus, including redemption provisions, rights in the event of our liquidation, dissolution or winding up, voting rights and rights to convert into common stock.

Warrants

We may offer warrants for the purchase of common stock, preferred stock, debt securities or depository shares. We may offer warrants independently or together with other securities.

Rights

We may offer rights to purchase our common stock. These rights may be offered independently or together with any other security offered hereby and may or may not be transferable by the securityholder receiving the subscription rights in such offering.

Purchase Contracts

We may offer purchase contracts, including contracts obligating holders or us to purchase from the other a specific or variable number of securities at a future date or dates.

Units

We may offer units comprised of one or more of the other classes of securities described in this prospectus in any combination. Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit.

RISK FACTORS

Investment in any securities offered pursuant to this prospectus involves substantial risks. Before you decide whether to purchase any of our securities, you should carefully consider the specific risks discussed in, or incorporated by reference into, the applicable prospectus supplement, together with all the other information contained in the prospectus supplement or incorporated by reference into this prospectus and the applicable prospectus supplement. You should also consider the risks, uncertainties and assumptions discussed under the caption “Risk Factors” included in our most recent Annual Report on Form 10-K and Quarterly Reports on Form 10-Q, which are incorporated by reference into this prospectus. These risk factors may be amended, supplemented or superseded from time to time by other reports we file with the SEC in the future. For more information, please see “Where You Can Find More Information” and “Incorporation of Certain Information by Reference.” These risks could materially and adversely affect our business, results of operations and financial condition and could result in a partial or complete loss of your investment.

USE OF PROCEEDS

We maintain broad discretion over the use of proceeds from the sale of securities pursuant to this prospectus. Unless we specify otherwise in an accompanying prospectus supplement, we intend to use the net proceeds from the sale of securities by us for general corporate purposes, which may include, but is not limited to, working capital, repayment of indebtedness, capital expenditures, research and development expenditures, and acquisitions of new technologies or businesses, subject in all respects to the consent of our secured creditor. The precise amount, use and timing of the application of such proceeds will depend upon our funding requirements and the availability and cost of other capital. Any allocation of the net proceeds of an offering of securities to a specific purpose will be determined at the time of such offering and will be described in the accompanying supplement to this prospectus.

DESCRIPTION OF SECURITIES WE MAY OFFER

The descriptions of the securities contained in this prospectus, together with the applicable prospectus supplements, summarize material terms and provisions of the various types of securities that we may offer. We will describe in the applicable prospectus supplement relating to any securities the particular terms of the securities offered by that prospectus supplement. If indicated in the applicable prospectus supplement, the terms of the securities may differ from the terms we have summarized below. We will also include information in the prospectus supplement, where applicable, about material United States federal income tax considerations relating to the securities, and the securities exchange, if any, on which the securities will be listed. This prospectus may not be used to consummate a sale of securities unless it is accompanied by a prospectus supplement.

DESCRIPTION OF COMMON STOCK

General

The following description summarizes some of the terms of our Restated Certificate of Incorporation, as amended (the “Certificate of Incorporation”) and our Second Amended and Restated By-Laws, as amended (the “Bylaws”), and of the General Corporation Law of the State of Delaware (the “DGCL”). This description is summarized from, and qualified in its entirety by reference to, our Certificate of Incorporation and Bylaws, each of which has been publicly filed with the SEC, as well as the relevant provisions of the DGCL.

Capital Stock

Our Certificate of Incorporation authorizes us to issue up to 30,000,000 shares of common stock, par value \$0.001 per share. As of November 21, 2024, there were 15,847,237 shares of our common stock outstanding.

Voting Power

Except as otherwise required by law or as otherwise provided in any certificate of designation for any series of preferred stock, the holders of common stock possess all voting power for the election of our directors and all other matters requiring stockholder action. Holders of common stock are entitled to one vote per share on matters to be voted on by stockholders.

Dividends

Common stockholders are entitled to receive dividends declared by the board of directors out of funds legally available for the payment of dividends, subject to the rights, if any, of preferred stockholders. However, we have never paid a dividend and we do not anticipate paying a dividend in the foreseeable future. Our current secured credit facility prohibits us from paying cash dividends on our common stock without prior approval from our lender.

Liquidation

Upon any liquidation, dissolution or winding up of our business, the holders of common stock are entitled to share equally in all assets available for distribution after payment of all liabilities and provision for liquidation preference of shares of preferred stock then outstanding.

Preemptive or Other Rights

The holders of common stock have no preemptive rights and no rights to convert their common stock into any other securities. There are no redemption or sinking fund provisions applicable to our common stock. All outstanding shares of common stock are fully paid and nonassessable.

Options and Other Equity Awards

Our Certificate of Incorporation authorizes us to issue shares of common stock and options, rights, and warrants relating to the common stock for the consideration and on the terms and conditions established by our board of directors in its sole discretion, whether in connection with acquisitions or otherwise. As of November 21, 2024, we had (i) 1,000,900 shares of common stock issuable under outstanding options granted pursuant to various incentive stock option plans of the Company, and (ii) an additional 61,538 shares available for issuance pursuant to outstanding warrants.

9

Antitakeover Effects of Delaware Law and Our Certificate of Incorporation and Bylaws

We are a Delaware corporation governed by the General Corporation Law of Delaware, or the DGCL, including the provisions of Section 203 of the DGCL, an antitakeover 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.

As of November 21, 2024, out of 30,000,000 shares of common stock authorized, we had 15,847,237 shares of common stock outstanding and 7,642 shares of treasury stock. In addition, at November 21, 2024, we had outstanding options to purchase 1,000,900 shares of our common stock at exercise prices ranging from \$3.15 to \$10.20 per share, and outstanding warrants to purchase 61,538 shares of our common stock at an exercise price of \$12.19 per share. Assuming the issuance of the common stock underlying such outstanding options and warrants, as of November 21, 2024, we had available for future issuance 13,090,325 shares of authorized and unissued common stock, including 897,934 shares of common stock available for issuance under our various incentive stock option plans, and 2,000,000 shares of our preferred stock. Future sales of authorized and unissued shares could be used by our management to make it more difficult for, and thereby discourage, an attempt to acquire control of us.

Requirements for Advance Notification of Stockholder Meetings, Nominations and Proposals

Our Certificate of Incorporation provides that special meetings of the stockholders may be called only by either the Chairman of the Board, if one has been elected, or the Chief Executive Officer, and shall be called by either such officer or the Secretary at the request in writing of a majority of the Board of Directors, but such special meetings may not be called by any other person or persons. In addition, any stockholder who wishes to bring business before an annual meeting or nominate directors must comply with the requirements set forth in our Bylaws. These provisions may have the effect of deferring, delaying or discouraging hostile takeovers or changes in control or management of our company.

No Cumulative Voting

The DGCL provides that stockholders are not entitled to the right to cumulate votes in the election of directors unless a corporation’s certificate of incorporation provides otherwise. Our Certificate of Incorporation does not provide for cumulative voting.

Transfer Agent and Registrar

The transfer agent and registrar for the common stock is Continental Stock Transfer & Trust Company, 1 State Street, 30th Floor, New York, New York 10004-1561.

Exchange Listing

Our common stock is listed on the Nasdaq Capital Market under the symbol “PESI.”

10

DESCRIPTION OF PREFERRED STOCK

We are authorized to issue 2,000,000 shares of preferred stock, par value \$0.001 per share. Our board of directors is authorized, subject to limitations prescribed by law, to provide for the issuance of shares of preferred stock in one or more series, and with respect to each series, to establish the number of shares to be included in each such series, and to fix the voting powers (if any), designations, powers, preferences, and relative, participating, optional or other special rights, if any, of the shares of each such series, and any qualifications, limitations or restrictions thereof. The powers (including voting powers), preferences, and relative, participating, optional and other special rights of each series of preferred stock and the qualifications, limitations or restrictions thereof, if any, may differ from those of any other series at any time outstanding. As of November 21, 2024, no shares of preferred stock are outstanding.

The authorization of undesignated preferred stock in our Certificate of Incorporation will make it possible for our board of directors to issue preferred stock with super voting, special approval, dividend or other rights or preferences on a discriminatory basis that could impede the success of any attempt to acquire us. These and other provisions may have the effect of deferring, delaying or discouraging hostile takeovers, or changes in control or management of our company.

11

DESCRIPTION OF THE DEBT SECURITIES

We may issue debt securities from time to time, in one or more series, as either senior or subordinated debt or as senior or subordinated convertible debt. While the terms summarized below will apply generally to any debt securities that we may offer under this prospectus, the particular terms of any debt securities that we may offer will be described in more detail in the applicable prospectus supplement or officer’s certificate. The terms of any debt securities offered under a prospectus supplement or officer’s certificate may differ from the terms described below. Unless the context requires otherwise, references to the indenture also refer to any supplemental indentures or officer’s certificates that specify the terms of a particular series of debt securities.

We will issue the debt securities under the indenture that we will enter into with the trustee named in the indenture. The indenture will be qualified under the Trust Indenture Act of 1939, as amended (the “Trust Indenture Act”). We have filed the form of indenture as an exhibit to the registration statement of which this prospectus is a part, and supplemental indentures, officer’s certificates and forms of debt securities containing the terms of the debt securities being offered will be filed as exhibits to the registration

statement of which this prospectus is a part or will be incorporated by reference from reports that we file with the SEC.

The following summary of material provisions of the debt securities and the indenture is subject to, and qualified in its entirety by reference to, all of the provisions of the indenture applicable to a particular series of debt securities. You are urged to read the applicable prospectus supplements or officer's certificates and any related free writing prospectuses related to the debt securities that we may offer under this prospectus, as well as the complete indenture that contains the terms of the debt securities.

General

The indenture does not limit the amount of debt securities that the Company may issue and it provides that the Company may issue debt securities up to the principal amount that the Company may authorize and may be in any currency or currency unit that the Company may designate. Except for the limitations on merger, consolidation and sale of all or substantially all of the Company assets contained in the indenture, the terms of the indenture do not contain any covenants or other provisions designed to give holders of any debt securities protection against changes in the Company's operations, financial condition or transactions involving the Company.

The Company may issue the debt securities issued under the indenture as "discount securities," which means they may be sold at a discount below their stated principal amount. These debt securities, as well as other debt securities that are not issued at a discount, may be issued with "original issue discount," or OID, for U.S. federal income tax purposes because of interest payment and other characteristics or terms of the debt securities. Material U.S. federal income tax considerations applicable to debt securities issued with OID will be described in more detail in any applicable prospectus supplement or officer's certificate.

The applicable prospectus supplement or officer's certificate will describe the terms of the series of debt securities being offered, including:

- the title of the series of debt securities;
- the forms of the series of debt securities;
- the price or prices (expressed as a percentage of the principal amount thereof) at which the series of debt securities will be issued;
- any limit upon the aggregate principal amount that may be issued;
- the maturity date or dates;
- the rate or rates (which may be fixed or variable) per annum or, if applicable, the method used to determine such rate or rates (including, but not limited to, any commodity, commodity index, stock exchange index or financial index) at which the series of debt securities shall bear interest, if any, the date or dates from which such interest, if any, shall accrue, the date or dates on which such interest, if any, shall commence and be payable and any regular record date for the interest payable on any interest payment date;
- the place or places where the principal of, premium and interest, if any, on the series of debt securities shall be payable, where the series of debt securities may be surrendered for registration of transfer or exchange and where notices and demands to or upon the Company in respect of the series of debt securities may be served, and the method of such payment, if by wire transfer, mail or other means;

12

- if applicable, the period or periods within which, the price or prices at which and the terms and conditions upon which the series of debt securities may be redeemed, in whole or in part, at the option of the Company;
- the obligation, if any, of the Company to redeem or purchase the series of debt securities pursuant to any sinking fund or analogous provisions and the period or periods within which, the price or prices at which and the terms and conditions upon which series of debt securities shall be redeemed or purchased, in whole or in part, pursuant to such obligation;
- the dates, if any, on which and the price or prices at which the series of debt securities will be repurchased by the Company at the option of the holders thereof and other detailed terms and provisions of such repurchase obligations;
- the denominations in which the series of debt securities shall be issuable, if other than minimum denominations of \$2,000 and integral multiples of \$1,000 in excess thereof;
- if other than the principal amount thereof, the portion of the principal amount of the series of debt securities that shall be payable upon declaration of acceleration of the maturity thereof;
- the designation of the currency, currencies or currency units in which payment of the principal of, premium and interest, if any, on the series of debt securities will be made if other than U.S. dollars;
- any addition to or change in the events of default under the indenture which applies to any series of debt securities and any change in the right of the trustee or the requisite Holders of such debt securities to declare the principal amount thereof due and payable;
- any addition to or change in the covenants set forth under the indenture which applies to series of debt securities;
- any depositories, interest rate calculation agents, exchange rate calculation agents or other agents with respect to series of debt securities if other than those appointed in the indenture the applicability of any guarantees;
- whether or not the debt securities will be secured or unsecured, and the terms of any secured debt;
- whether the debt securities rank as senior debt, senior subordinated debt, subordinated debt or any combination thereof, and the terms of any subordination;
- The Company's right, if any, to defer payment of interest and the maximum length of any such deferral period;
- whether the debt securities of the series shall be issued in whole or in part in the form of a global security or securities; the terms and conditions, if any, upon which such global security or securities may be exchanged in whole or in part for other individual securities; and the depository for such global security or securities; and
- any other specific terms, preferences, rights or limitations of, or restrictions on, the debt securities, any other additions or changes in the provisions of the indenture (which may modify or delete any provision of the indenture insofar as it applies to such series), and any terms that may be required by the Company or advisable under applicable laws or regulations.

Conversion or Exchange Rights

The applicable prospectus supplement or officer's certificate may set forth the terms on which a series of debt securities may be convertible into or exchangeable for the Company's common stock or its other securities. The applicable prospectus supplement or officer's certificate may include provisions as to settlement upon conversion or exchange and whether conversion or exchange is mandatory, at the option of the holder or at the Company's option. The applicable prospectus supplement or officer's certificate may include provisions pursuant to which the number of shares of the Company's common stock or the Company's other securities that the holders of the series of debt securities receive would be subject to adjustment.

13

Events of Default under the Indenture

Unless otherwise provided in the prospectus supplement or officer's certificate applicable to a particular series of debt securities, the following are events of default under the indenture with respect to any series of debt securities that the Company may issue:

- if the Company fails to pay any installment of interest on such series of debt securities, as and when the same shall become due and payable, and such default continues for a period of 90 days; provided, however, that a valid extension of an interest payment period by the Company in accordance with the terms of any indenture supplemental thereto shall not constitute a default in the payment of interest for this purpose;

- if the Company fails to pay the principal of, or premium, if any, on such series of debt securities as and when the same shall become due and payable whether at maturity, upon redemption, by declaration or otherwise, or in any payment required by any sinking or analogous fund established with respect to such series; provided, however, that a valid extension of the maturity of such debt securities in accordance with the terms of any indenture supplemental thereto shall not constitute a default in the payment of principal or premium, if any;
- if the Company fails to observe or perform any other covenant or agreement contained in the debt securities of such series or the indenture, other than a covenant specifically relating to another series of debt securities, and such failure continues for 90 days after the Company receives written notice of such failure, requiring the same to be remedied and stating that such is a notice of default thereunder, from the trustee or holders of not less than a majority in aggregate principal amount of the outstanding debt securities of the applicable series; and
- if specified events of bankruptcy, insolvency or reorganization occur.

If an event of default with respect to debt securities of any series occurs and is continuing, other than an event of default specified in the last bullet point above, the trustee or the holders of not less than 25% in aggregate principal amount of the outstanding debt securities of that series, by notice to the Company in writing, and to the trustee if notice is given by such holders, may declare the unpaid principal of, premium, if any, and accrued interest, if any, of such series of debt securities due and payable immediately. If an event of default specified in the last bullet point above occurs with respect to the Company, the principal amount of and accrued interest, if any, of each issue of debt securities then outstanding shall be due and payable without any notice or other action on the part of the trustee or any holder.

The holders of a majority in principal amount of the outstanding debt securities of an affected series may waive any default or event of default with respect to the series and its consequences (including acceleration described in the preceding paragraph), except that such waivers of defaults or events of default regarding payment of principal, premium, if any, or interest, require that the Company shall have paid or set aside with the trustee sufficient funds to pay all amounts then due and payable otherwise then due and payable otherwise then by acceleration. Any waiver shall cure the default or event of default.

Subject to the terms of the indenture, if an event of default under an indenture shall occur and be continuing, the trustee will be under no obligation to exercise any of its rights or powers under such indenture at the request or direction of any of the holders of the applicable series of debt securities, unless such holders have offered the trustee reasonable indemnity. The holders of a majority in principal amount of the outstanding debt securities of any series will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the trustee, or exercising any trust or power conferred on the trustee, with respect to the debt securities of that series, provided that the trustee may refuse to follow any direction that conflicts with law or the indenture that the trustee determines may be unduly prejudicial to the rights of other holders of the debt securities of any series or that may involve the trustee in personal liability.

14

No holder of the debt securities of any series will have the right to institute a proceeding under the indenture or to appoint a receiver or trustee, or to seek other remedies unless:

- the holder has given written notice to the trustee of a continuing event of default with respect to that series;
- the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series have made written request for the trustee to initiate such action or proceeding;
- such holders have offered to the trustee indemnity satisfactory to it against the costs, expenses and liabilities to be incurred by the trustee in compliance with the request;
- the trustee does not comply with the request within 60 days after receipt of the request and the offer and, if requested, the provision of indemnity; and
- during such 60-day period the holders of a majority in aggregate principal amount of the outstanding debt securities of that series do not give the trustee a direction inconsistent with the request.

No holder of the debt securities of any series may use the indenture to prejudice the rights of another holder of the debt securities of such series or to obtain a preference or priority over another holder of the debt securities of such series.

On an annual basis, the Company will provide statements to the trustee regarding its compliance with specified covenants in the indenture.

Modification of Indenture; Waiver

Unless otherwise provided in the prospectus supplement or officer's certificate applicable to a particular series of debt securities, the Company and the trustee may change an indenture without the consent of any holders with respect to specific matters:

- to cure any ambiguity, defect or inconsistency in the indenture or in the debt securities of any series;
- to provide for uncertificated debt securities in addition to or in place of certificated debt securities;
- to provide for the assumption of the Company's obligations to the holders of the debt securities of any series by a successor to the Company;
- to make any change that would provide any additional rights or benefits to the holders of the debt securities of any series or that does not adversely affect the legal rights hereunder of any holder;
- to comply with requirements of the SEC in order to effect or maintain the qualification of the indenture under the Trust Indenture Act ("TIA");
- to provide for the issuance of and establish the form and terms and conditions of debt securities of any series as permitted by the indenture;
- to add guarantees with respect to the debt securities of any series or to provide security for the debt securities of any series; or
- to evidence and provide for the acceptance of appointment hereunder by a successor trustee with respect to the debt securities of one or more series and to add to or change any of the provisions of the indenture as shall be necessary to provide for or facilitate the administration of the trusts hereunder by more than one trustee.

In addition, under the indenture, the rights of holders of a series of debt securities may be changed by the Company and the trustee with the written consent of the holders of at least a majority in aggregate principal amount of the outstanding debt securities of each series that is affected. However, unless otherwise provided in the prospectus supplement or officer's certificate applicable to a particular series of debt securities, the Company and the trustee may make the following changes only with the consent of each holder of any outstanding debt securities affected:

- reduce the principal amount or change the fixed maturity of any debt securities of any series or alter or waive any of the provisions with respect to the redemption or repurchase of the debt securities of any series;
- reduce the rate (or alter the method of computation) of or extend the time for payment of interest, including default interest, on any debt securities of any series;
- waive a default or event of default in the payment of principal of or premium, if any, or interest on the debt securities of any series, except a rescission of acceleration of the debt securities of any series by the holders of at least a majority in aggregate principal amount of the then outstanding debt securities of any series and a waiver of the payment default that resulted from such acceleration;
- make the principal of or premium, if any or interest on any debt securities of any series payable in currency other than that stated in the debt securities of any series;
- make any change in the provisions of the indenture relating to waivers of past defaults or the rights of holders of the debt securities of any series to receive payments of principal of or premium, interest, if any, on the debt securities of any series and to institute suit for the enforcement of any such payments;
- make any change in the foregoing amendment and waiver provisions; or
- reduce the percentage in principal amount of any debt securities of any series, the consent of the holders of which is required for any of the foregoing modifications or otherwise necessary to modify or amend the indenture or to waive any past defaults.

15

Discharge

The indenture provides that the Company can elect to be discharged from its obligations with respect to one or more series of debt securities that shall become due and payable within one year or are to be called for redemption within one year, including obligations to:

- provide for payment;
- register the transfer or exchange of debt securities of the series;
- replace stolen, lost or mutilated debt securities of the series;
- pay principal of and premium and interest on any debt securities of the series;
- maintain paying agencies;
- hold monies for payment in trust;
- recover excess money held by the trustee;
- compensate and indemnify the trustee; and
- appoint any successor trustee.

In order to exercise its rights to be discharged, the Company must irrevocably deposit with the trustee money or government obligations sufficient to pay all the principal of, any premium, if any, and interest on, the debt securities of the series when payments are due on the date of maturity or the date fixed for redemption.

Form, Exchange and Transfer

The Company will issue the debt securities of each series only in fully registered form without coupons and, unless otherwise provided in the applicable prospectus supplement or officer's certificate, in minimum denominations of \$2,000 and integral multiples of \$1,000 in excess thereof. The indenture provides that the Company may issue debt securities of a series in temporary or permanent global form and as book-entry securities that will be deposited with, or on behalf of, The Depository Trust Company ("DTC") or another depository named by the Company and identified in the applicable prospectus supplement or officer's certificate with respect to that series. To the extent the debt securities of a series are issued in global form and as book-entry, a description of terms relating to any book-entry securities will be set forth in the applicable prospectus supplement or officer's certificate.

At the option of the holder, subject to the terms of the indenture and the limitations applicable to global securities described in the applicable prospectus supplement or officer's certificate, the holder of the debt securities of any series can exchange the debt securities for other debt securities of the same series, in any authorized denomination and of like tenor and aggregate principal amount.

Subject to the terms of the indenture and the limitations applicable to global securities set forth in the applicable prospectus supplement or officer's certificate, holders of the debt securities may present the debt securities for exchange or for registration of transfer, duly endorsed or with the form of transfer endorsed thereon duly executed if so required by the Company or the security registrar, at the office of the security registrar or at the office of any transfer agent designated by the Company for this purpose. Unless otherwise provided in the debt securities that the holder presents for transfer or exchange, the Company will impose no service charge for any registration of transfer or exchange, but the Company may require payment of any taxes or other governmental charges.

The applicable prospectus supplement or officer's certificate will name the security registrar, and any transfer agent in addition to the security registrar, that the Company initially designates for any debt securities. The Company may, at any time, designate additional transfer agents or rescind the designation of any transfer agent or approve a change in the office through which any transfer agent acts, except that the Company will be required to maintain a transfer agent in each place of payment for the debt securities of each series.

If the Company elects to redeem the debt securities of any series, the Company will not be required to:

- issue, register the transfer of, or exchange any debt securities of that series during a period beginning at the opening of business 15 days before the day of mailing of a notice of redemption of any debt securities that may be selected for redemption and ending at the close of business on the day of the mailing; or
- register the transfer of or exchange of any debt securities so selected for redemption, in whole or in part, except the unredeemed portion of any debt securities the Company is redeeming in part.

Information Concerning the Trustee

The debt securities will be issued under an indenture between us and a trustee to be named in the indenture. The trustee, other than during the occurrence and continuance of an event of default under an indenture, undertakes to perform only those duties as are specifically set forth in the applicable indenture. Upon an event of default under an indenture, the trustee must use the same degree of care as a prudent person would exercise or use in the conduct of his or her own affairs. Subject to this provision, the trustee is under no obligation to exercise any of the powers given it by the indenture at the request of any holder of debt securities unless it is offered reasonable security and indemnity against the costs, expenses and liabilities that it might incur.

Payment and Paying Agents

Unless otherwise indicated in the applicable prospectus supplement or officer's certificate, the Company will make payment of the interest on any debt securities on any interest payment date to the person in whose name the debt securities, or one or more predecessor securities, are registered at the close of business on the regular record date for the interest.

The Company will pay principal of and any premium and interest on the debt securities of a particular series at the office of the paying agents designated by it, except that unless otherwise indicated in the applicable prospectus supplement or officer's certificate, the Company will make interest payments by check that it will mail to the holder or by wire transfer to certain holders. Unless otherwise indicated in the applicable prospectus supplement or officer's certificate, the Company will designate the corporate trust office of the trustee as its sole paying agent for payments with respect to debt securities of each series. The applicable prospectus supplement or officer's certificate will name any other paying agents that the Company initially designates for the debt securities of a particular series. The Company will maintain a paying agent in each place of payment for the debt securities of a particular series.

All money the Company pays to a paying agent or the trustee for the payment of the principal of or any premium or interest on any debt securities that remains unclaimed at the end of two years after such principal, premium or interest has become due and payable will be repaid to the Company, and the holder of the debt security thereafter may look only to the Company for payment thereof.

Governing Law

The indenture and the debt securities, and any claim, controversy or dispute arising under or related to the indenture or the debt securities, will be governed by and construed in accordance with the laws of the State of New York, except to the extent that the Trust Indenture Act is applicable.

DESCRIPTION OF DEPOSITARY SHARES

General

We may, at our option, elect to offer fractional shares rather than full shares of the preferred stock of a series. In the event that we determine to do so, we will issue receipts for depositary shares, each of which will represent a fraction (to be set forth in the prospectus supplement relating to a particular series of preferred stock) of a share of a particular series of preferred stock as more fully described below.

The shares of any series of preferred stock represented by depositary shares will be deposited under one or more deposit agreements among us, a depositary to be named in the applicable prospectus supplement, and the holders from time to time of depositary receipts issued thereunder. Subject to the terms of the applicable deposit agreement, each holder of a depositary share will be entitled, in proportion to the applicable fraction of a share of preferred stock represented by the depositary share, to all the rights and preferences of the preferred stock represented thereby (including, as applicable, dividend, voting, redemption, subscription and liquidation rights).

The depositary shares will be evidenced by depositary receipts issued pursuant to the deposit agreement. Depositary receipts will be distributed to those persons purchasing the fractional shares of the related series of preferred stock.

The following description sets forth certain general terms and provisions of the depositary shares to which any prospectus supplement may relate. The particular terms of the depositary shares to which any prospectus supplement may relate and the extent, if any, to which such general provisions may apply to the depositary shares so offered will be described in the applicable prospectus supplement. To the extent that any particular terms of the depositary shares or the deposit agreement described in a prospectus supplement differ from any of the terms described below, then the terms described below will be deemed to have been superseded by that prospectus supplement relating to such deposited shares. The forms of deposit agreement and depositary receipt will be filed as exhibits to the documents incorporated or deemed to be incorporated by reference into this prospectus.

The following summary of certain provisions of the depositary shares and deposit agreement does not purport to be complete and is subject to, and is qualified in its entirety by express reference to, all the provisions of the deposit agreement and the applicable prospectus supplement, including the definitions.

Immediately following our issuance of shares of a series of preferred stock that will be offered as fractional shares, we will deposit the shares with the depositary, which will then issue and deliver the depositary receipts to the purchasers thereof. Depositary receipts will only be issued evidencing whole depositary shares. A depositary receipt may evidence any number of whole depositary shares.

Pending the preparation of definitive depositary receipts, the depositary may, upon our written order, issue temporary depositary receipts substantially identical to (and entitling the holders thereof to all the rights pertaining to) the definitive depositary receipts but not in definitive form. Definitive depositary receipts will be prepared thereafter without unreasonable delay, and such temporary depositary receipts will be exchangeable for definitive depositary receipts at our expense.

Dividends and Other Distributions

The depositary will distribute all cash dividends or other cash distributions received in respect of the related series of preferred stock to the record holders of depositary shares relating to the series of preferred stock in proportion to the number of the depositary shares owned by the holders.

In the event of a distribution other than in cash, the depositary will distribute property received by it to the record holders of depositary shares entitled thereto in proportion to the number of depositary shares owned by the holders, unless the depositary determines that the distribution cannot be made proportionately among the holders or that it is not feasible to make the distributions, in which case the depositary may, with our approval, adopt any method as it deems equitable and practicable for the purpose of effecting the distribution, including the sale (at public or private sale) of the securities or property thus received, or any part thereof, at the place or places and upon those terms as it may deem proper.

The amount distributed in any of the foregoing cases will be reduced by any amounts required to be withheld by us or the depositary on account of taxes or other governmental charges.

Redemption of Depositary Shares

If any series of the preferred stock underlying the depositary shares is subject to redemption, the depositary shares will be redeemed from the proceeds received by the depositary resulting from any redemption, in whole or in part, of the series of the preferred stock held by the depositary. The redemption price per depositary share will be equal to the applicable fraction of the redemption price per share payable with respect to the series of the preferred stock. If we redeem shares of a series of preferred stock held by the depositary, the depositary will redeem as of the same redemption date the number of depositary shares representing the shares of preferred stock so redeemed. If less than all the depositary shares are to be redeemed, the depositary shares to be redeemed will be selected by lot or substantially equivalent method determined by the depositary.

After the date fixed for redemption, the depositary shares so called for redemption will no longer be deemed to be outstanding and all rights of the holders of the depositary shares will cease, except the right to receive the monies payable upon redemption and any money or other property to which the holders of the depositary shares were entitled upon such redemption, upon surrender to the depositary of the depositary receipts evidencing the depositary shares. Any funds deposited by us with the depositary for any depositary shares that the holders thereof fail to redeem will be returned to us after a period of two years from the date the funds are so deposited.

Voting the Underlying Preferred Stock

Upon receipt of notice of any meeting at which the holders of any series of the preferred stock are entitled to vote, the depositary will mail the information contained in the notice of meeting to the record holders of the depositary shares relating to the series of preferred stock. Each record holder of the depositary shares on the record date (which will be the same date as the record date for the related series of preferred stock) will be entitled to instruct the depositary as to the exercise of the voting rights pertaining to the number of shares of the series of preferred stock represented by that holder's depositary shares. The depositary will endeavor, insofar as practicable, to vote or cause to be voted the number of shares of preferred stock represented by the depositary shares in accordance with the instructions, provided the depositary receives the instructions sufficiently in advance of the meeting to enable it to so vote or cause to be voted the shares of preferred stock, and we will agree to take all reasonable action that may be deemed necessary by the depositary in order to enable the depositary to do so. The depositary will abstain from voting shares of the preferred stock to the extent it does not receive specific instructions from the holders of depositary shares representing the preferred stock.

Withdrawal of Stock

Upon surrender of the depositary receipts at the corporate trust office of the depositary and upon payment of the taxes, charges and fees provided for in the deposit agreement and subject to the terms thereof, the holder of the depositary shares evidenced thereby will be entitled to delivery at such office, to or upon his or her order, of the

number of whole shares of the related series of preferred stock and any money or other property, if any, represented by the depositary shares. Holders of depositary shares will be entitled to receive whole shares of the related series of preferred stock, but holders of the whole shares of preferred stock will not thereafter be entitled to deposit the shares of preferred stock with the depositary or to receive depositary shares therefor. If the depositary receipts delivered by the holder evidence a number of depositary shares in excess of the number of depositary shares representing the number of whole shares of the related series of preferred stock to be withdrawn, the depositary will deliver to the holder or upon his or her order at the same time a new depositary receipt evidencing the excess number of depositary shares.

Amendment and Termination of a Deposit Agreement

The form of depositary receipt evidencing the depositary shares of any series and any provision of the applicable deposit agreement may at any time and from time to time be amended by agreement between us and the depositary. However, any amendment that materially adversely alters the rights of the holders of depositary shares of any series will not be effective unless the amendment has been approved by the holders of at least a majority of the depositary shares of the series then outstanding. Every holder of a depositary receipt at the time the amendment becomes effective will be deemed, by continuing to hold the depositary receipt, to be bound by the deposit agreement as so amended. Notwithstanding the foregoing, in no event may any amendment impair the right of any holder of any depositary shares, upon surrender of the depositary receipts evidencing the depositary shares and subject to any conditions specified in the deposit agreement, to receive shares of the related series of preferred stock and any money or other property represented thereby, except in order to comply with mandatory provisions of applicable law. The deposit agreement may be terminated by us at any time upon not less than 60 days prior written notice to the depositary, in which case, on a date that is not later than 30 days after the date of the notice, the depositary shall deliver or make available for delivery to holders of depositary shares, upon surrender of the depositary receipts evidencing the depositary shares, the number of whole or fractional shares of the related series of preferred stock as are represented by the depositary shares. The deposit agreement shall automatically terminate after all outstanding depositary shares have been redeemed or there has been a final distribution in respect of the related series of preferred stock in connection with any liquidation, dissolution or winding up of us and the distribution has been distributed to the holders of depositary shares.

Charges of Depositary

We will pay all transfer and other taxes and the governmental charges arising solely from the existence of the depositary arrangements. We will pay the charges of the depositary, including charges in connection with the initial deposit of the related series of preferred stock and the initial issuance of the depositary shares and all withdrawals of shares of the related series of preferred stock, except that holders of depositary shares will pay transfer and other taxes and governmental charges and any other charges as are expressly provided in the deposit agreement to be for their accounts.

Resignation and Removal of Depositary

The depositary may resign at any time by delivering to us written notice of its election to do so, and we may at any time remove the depositary. Any resignation or removal will take effect upon the appointment of a successor depositary, which successor depositary must be appointed within 60 days after delivery of the notice of resignation or removal and must be a bank or trust company having its principal office in the United States and having a combined capital and surplus of at least \$50,000,000.

Miscellaneous

The depositary will forward to the holders of depositary shares all reports and communications from us that are delivered to the depositary and which we are required to furnish to the holders of the related preferred stock.

The depositary's corporate trust office will be identified in the applicable prospectus supplement. Unless otherwise set forth in the applicable prospectus supplement, the depositary will act as transfer agent and registrar for depositary receipts and if shares of a series of preferred stock are redeemable, the depositary will also act as redemption agent for the corresponding depositary receipts.

DESCRIPTION OF THE WARRANTS

The following description of the terms of the warrants sets forth certain general terms and provisions of the warrants to which any prospectus supplement may relate. We may issue warrants for the purchase of common stock, preferred stock, debt securities or depositary shares. Warrants may be issued independently or together with common stock, preferred stock, debt securities or depositary shares offered by any prospectus supplement and may be attached to or separate from any such offered securities. Each series of warrants may be issued under a separate warrant agreement to be entered into between us and a bank or trust company, as warrant agent, and, if issued in such manner, the warrant agent will act solely as our agent in connection with the warrants and will not assume any obligation or relationship of agency or trust for or with any holders or beneficial owners of warrants. The following summary of certain provisions of the warrants does not purport to be complete and is subject to, and qualified in its entirety by reference to, the provisions of the warrant agreement that will be filed with the SEC in connection with the offering of such warrants.

Debt Warrants

The prospectus supplement relating to a particular issue of debt warrants will describe the terms of such debt warrants, including the following:

- the title of such debt warrants;
- the offering price for such debt warrants, if any;
- the aggregate number of such debt warrants;
- the designation and terms of the debt securities purchasable upon exercise of such debt warrants;
- if applicable, the designation and terms of the debt securities with which such debt warrants are issued and the number of such debt warrants issued with each such debt security;

- if applicable, the date from and after which such debt warrants and any debt securities issued therewith will be separately transferable;
- the principal amount of debt securities purchasable upon exercise of a debt warrant and the price at which such principal amount of debt securities may be purchased upon exercise (which price may be payable in cash, securities or other property);
- the date on which the right to exercise such debt warrants shall commence and the date on which such right shall expire;
- if applicable, the minimum or maximum amount of such debt warrants that may be exercised at any one time;
- whether the debt warrants represented by the debt warrant certificates or debt securities that may be issued upon exercise of the debt warrants will be issued in registered or bearer form;
- information with respect to book-entry procedures, if any;
- the currency or currency units in which the offering price, if any, and the exercise price are payable;
- if applicable, a discussion of material United States federal income tax considerations;
- the antidilution or adjustment provisions of such debt warrants, if any;
- the redemption or call provisions, if any, applicable to such debt warrants; and
- any additional terms of such debt warrants, including terms, procedures, and limitations relating to the exchange and exercise of such debt warrants.

Stock Warrants

The prospectus supplement relating to any particular issue of common stock warrants, preferred stock warrants or depositary share warrants will describe the terms of such warrants, including the following:

- the title of such warrants;
- the offering price for such warrants, if any;
- the exercise price for such warrants;
- the aggregate number of such warrants;
- the designation and terms of the offered securities purchasable upon exercise of such warrants;
- if applicable, the designation and terms of the offered securities with which such warrants are issued and the number of such warrants issued with each such offered security;
- if applicable, the date from and after which such warrants and any offered securities issued therewith will be separately transferable;
- the number of shares of common stock, preferred stock or depositary shares purchasable upon exercise of a warrant and the price at which such shares may be purchased upon exercise;
- the date on which the right to exercise such warrants shall commence and the date on which such right shall expire;
- if applicable, the minimum or maximum amount of such warrants that may be exercised at any one time;
- the currency or currency units in which the offering price, if any, and the exercise price are payable;
- if applicable, a discussion of material United States federal income tax considerations;
- the antidilution provisions of such warrants, if any;
- the redemption or call provisions, if any, applicable to such warrants; and
- any additional terms of such warrants, including terms, procedures and limitations relating to the exchange and exercise of such warrants.

DESCRIPTION OF THE RIGHTS

We may issue rights to purchase our common stock. The rights may or may not be transferable by the persons purchasing or receiving the rights. In connection with any rights offering, we may enter into a standby underwriting or other arrangement with one or more underwriters or other persons pursuant to which such underwriters or other persons would purchase any offered securities remaining unsubscribed for after such rights offering. Each series of rights will be issued under a separate rights agent agreement to be entered into between us and one or more banks, trust companies or other financial institutions, as rights agent, that we will name in the applicable prospectus supplement. The rights agent will act solely as our agent in connection with the rights and will not assume any obligation or relationship of agency or trust for or with any holders of rights certificates or beneficial owners of rights.

The prospectus supplement relating to any rights that we offer will include specific terms relating to the offering, including, among other matters:

- the date of determining the security holders entitled to the rights distribution;
- the aggregate number of rights issued and the aggregate number of shares of common stock purchasable upon exercise of the rights;
- the exercise price;
- the conditions to completion of the rights offering;
- the date on which the right to exercise the rights will commence and the date on which the rights will expire; and
- any applicable federal income tax considerations.

Each right would entitle the holder of the rights to purchase for cash the principal amount of shares of common stock at the exercise price set forth in the applicable prospectus supplement. Rights may be exercised at any time up to the close of business on the expiration date for the rights provided in the applicable prospectus supplement. After the close of business on the expiration date, all unexercised rights will become void.

If less than all of the rights issued in any rights offering are exercised, we may offer any unsubscribed securities directly to persons other than our security holders, to or through agents, underwriters or dealers or through a combination of such methods, including pursuant to standby arrangements, as described in the applicable prospectus supplement.

DESCRIPTION OF THE PURCHASE CONTRACTS

We may issue, from time to time, purchase contracts, including contracts obligating holders to purchase from us and us to sell to the holders, a specified principal amount of debt securities, shares of common stock or preferred stock, depositary shares, government securities, or other securities that we may sell under this prospectus at a future date or dates. The consideration payable upon settlement of the purchase contracts may be fixed at the time the purchase contracts are issued or may be determined by a specific reference to a formula set forth in the purchase contracts. The purchase contracts may be issued separately or as part of units consisting of a purchase contract and other securities or obligations issued by us or third parties, including United States treasury securities, securing the holders' obligations to purchase the relevant securities under the purchase contracts. The purchase contracts may require us to make periodic payments to the holders of the purchase contracts or units or vice versa, and the payments may be unsecured or prefunded on some basis. The purchase contracts may require holders to secure their obligations under the purchase contracts.

The prospectus supplement related to any particular purchase contracts will describe, among other things, the material terms of the purchase contracts and of the securities being sold pursuant to such purchase contracts, a discussion, if appropriate, of any special United States federal income tax considerations applicable to the purchase contracts and any material provisions governing the purchase contracts that differ from those described above. The description in the prospectus supplement will not necessarily be complete and will be qualified in its entirety by reference to the purchase contracts, and, if applicable, collateral arrangements and depositary arrangements, relating to the purchase contracts.

DESCRIPTION OF THE UNITS

We may, from time to time, issue units comprised of one or more of certain other securities that may be offered under this prospectus, in any combination. Each unit may also include debt obligations of third parties, such as U.S. Treasury securities. Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security. The unit agreement under which a unit is issued may

provide that the securities included in the unit may not be held or transferred separately at any time, or at any time before a specified date.

Any prospectus supplement related to any particular units will describe, among other things:

- the material terms of the units and of the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;
- any material provisions relating to the issuance, payment, settlement, transfer or exchange of the units or of the securities comprising the units;
- if appropriate, any special United States federal income tax considerations applicable to the units; and
- any material provisions of the governing unit agreement that differ from those described above.

25

PLAN OF DISTRIBUTION

We may sell the securities being offered by us in this prospectus in one or more of the following ways: through underwriters or dealers; in short or long transactions; directly to a limited number of purchasers or to a single purchaser; through agents, including via an at-the-market program; or through a combination of any of these methods of sale. The applicable prospectus supplement will describe the terms of the offering of the securities, including:

- the name or names of any underwriters, if, and if required, any dealers or agents;
- the purchase price of the securities and the proceeds we will receive from the sale;
- any underwriting discounts and other items constituting underwriters' compensation;
- any discounts or concessions allowed or re-allowed or paid to dealers; and
- any securities exchange or market on which the securities may be listed or traded.

We, and our agents, dealers, and underwriters, as applicable, may distribute the securities from time to time in one or more transactions at:

- a fixed price or prices, which may be changed;
- market prices prevailing at the time of sale;
- prices related to such prevailing market prices; or
- negotiated prices.

We may determine the price or other terms of the securities offered under this prospectus by use of an electronic auction. We will describe how any auction will determine the price or any other terms, how potential investors may participate in the auction and the nature of the underwriters' obligations, in the applicable prospectus supplement or amendment.

We may solicit directly offers to purchase securities. We may also designate agents from time to time to solicit offers to purchase securities. Any agent that we designate, who may be deemed to be an underwriter as such term is defined in the Securities Act, may then resell such securities to the public at varying prices to be determined by such agent at the time of resale.

We may engage in "at the market" offerings of our securities as defined in Rule 415(a)(4) under the Securities Act. An "at the market" offering is an offering of our common stock at other than a fixed price, at prices prevailing at the time of sale or at prices related to such prevailing market prices, including sales made directly on a national securities exchange or sales made through a market maker other than on an exchange or other similar offerings through sales agents. We shall name any underwriter or agent that the Company engages for an at the market offering in a post-effective amendment to the registration statement containing this prospectus. In the related prospectus supplement, we shall also describe any additional details of the Company's arrangement with such underwriter or agent, including commissions or fees paid or discounts offered by the Company, and whether such underwriter is acting as principal or agent.

If underwriters are used in an offering, we will execute an underwriting agreement with such underwriters and will specify the name of each underwriter and the terms of the transaction (including any underwriting discounts and other terms constituting compensation of the underwriters and any dealers) in a prospectus supplement. Only underwriters named in a prospectus supplement are underwriters of the securities offered by that prospectus supplement. The securities may be offered to the public either through underwriting syndicates represented by managing underwriters or directly by one or more investment banking firms or others, as designated. If an underwriting syndicate is used, the managing underwriter(s) will be specified on the cover of the prospectus supplement. If underwriters are used in the sale, the offered securities will be acquired by the underwriters for their own accounts and may be resold from time to time in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. Any public offering price and any discounts or concessions allowed or re-allowed or paid to dealers may be changed from time to time. Unless otherwise set forth in the prospectus supplement, the obligations of the underwriters to purchase the offered securities will be subject to conditions precedent, and the underwriters will be obligated to purchase all of the offered securities, if any are purchased.

26

We may grant to the underwriters options to purchase additional securities to cover over-allotments, if any, at the public offering price, with additional underwriting commissions or discounts, as may be set forth in a related prospectus supplement. The terms of any over-allotment option will be set forth in the prospectus supplement for those securities.

If we use a dealer in the sale of the securities being offered pursuant to this prospectus or any prospectus supplement, we will sell the securities to the dealer, as principal. The dealer may then resell the securities to the public at varying prices to be determined by the dealer at the time of resale. The names of the dealers and the terms of the transaction will be specified in a prospectus supplement.

We may sell the securities directly or through agents we designate from time to time. We will name any agent involved in the offering and sale of securities and we will describe any commissions we will pay the agent in the prospectus supplement.

We may authorize agents or underwriters to solicit offers by institutional investors to purchase securities from us at the public offering price set forth in the prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on a specified date in the future. We will describe the conditions to these contracts and the commissions we must pay for solicitation of these contracts in the prospectus supplement.

In connection with the sale of the securities, underwriters, dealers or agents may receive compensation from us or from purchasers of the securities for whom they act as agents, in the form of discounts, concessions or commissions. Underwriters may sell the securities to or through dealers, and those dealers may receive compensation in the form of discounts, concessions or commissions from the underwriters or commissions from the purchasers for whom they may act as agents. Underwriters, dealers and agents that participate in the distribution of the securities, and any institutional investors or others that purchase securities directly for the purpose of resale or distribution, may be deemed to be underwriters, and any discounts or commissions received by them from us and any profit on the resale of the common stock by them may be deemed to be underwriting discounts and commissions under the Securities Act. No FINRA member firm may receive compensation in excess of that allowable under FINRA rules, including Rule 5110, in connection with the offering of the securities.

We may provide agents, underwriters and other purchasers with indemnification against particular civil liabilities, including liabilities under the Securities Act, or contribution with respect to payments that the agents, underwriters or other purchasers may make with respect to such liabilities. Agents and underwriters may engage in transactions with, or perform services for, us in the ordinary course of business.

To facilitate the public offering of a series of securities, persons participating in the offering may engage in transactions that stabilize, maintain, or otherwise affect the market price of the securities. This may include over-allotments or short sales of the securities, which involves the sale by persons participating in the offering of more securities than have been sold to them by us. In exercising the over-allotment option granted to those persons. In addition, those persons may stabilize or maintain the price of the securities by bidding for or purchasing securities in the open market or by imposing penalty bids, whereby selling concessions allowed to underwriters or dealers participating in any such offering may be reclaimed if securities sold by them are repurchased in connection with stabilization transactions. The effect of these transactions may be to stabilize or maintain the market price of the securities at a level above that which might otherwise prevail in the open market. Such transactions, if commenced, may be discontinued at any time. We make no representation or prediction as to the direction or magnitude of any effect that the transactions described above, if implemented, may have on the price of our securities.

Unless otherwise specified in the applicable prospectus supplement, any common stock sold pursuant to a prospectus supplement will be eligible for trading as quoted on the Nasdaq Capital Market. Any underwriters to whom securities are sold by us for public offering and sale may make a market in the securities, but such underwriters will not be obligated to do so and may discontinue any market making at any time without notice.

In order to comply with the securities laws of some states, if applicable, the securities offered pursuant to this prospectus will be sold in those states only through registered or licensed brokers or dealers. In addition, in some states securities may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and complied with.

27

LEGAL MATTERS

Legal matters in connection with the issuance and sale of the securities offered hereby will be passed upon for us by Steptoe & Johnson, PLLC. Additional legal matters will be passed upon for any underwriters, dealers, or agents by counsel named in the applicable prospectus supplement.

EXPERTS

The audited financial statements incorporated by reference in this prospectus and elsewhere in the registration statement have been so incorporated by reference in reliance upon the report of Grant Thornton LLP, independent registered public accountants, upon the authority of said firm as experts in accounting and auditing.

28



PERMA-FIX ENVIRONMENTAL SERVICES, INC.

\$100,000,000

Common Stock
Preferred Stock
Debt Securities
Depository Shares
Warrants
Rights
Purchase Contracts
Units

PART II INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution

The aggregate estimated (other than the registration fee) expenses to be paid by the Registrant in connection with this offering are as follows:

SEC Registration Fee	\$	15,310
Legal Fees and Expenses	\$	(1)
Accounting Fees and Expenses	\$	(1)

Printing	\$	(1)
Miscellaneous	\$	(1)
Total:	\$	*

(1) These fees are calculated based on the securities offered and the number of issuances and accordingly cannot be estimated at this time.

Item 15. Indemnification of Officers and Directors

Section 145 of the Delaware Corporation Law provides that a corporation has the power to indemnify a director, officer, employee or agent of the corporation and certain other persons serving at the request of the corporation in related capacities against amounts paid and expenses incurred in connection with an action or proceeding to which he is or is threatened to be made a party by reason of such position, if such person shall have acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation, and, in any criminal proceeding, if such person had no reasonable cause to believe his conduct was unlawful; provided that, no indemnification shall be made with respect to any matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the adjudicating court determines that, despite the adjudication of liability but in view of all the circumstance of the case, such person is fairly and reasonably entitled to indemnification.

Article EIGHTH of our Restated Certificate of Incorporation, as amended, provides as follows with respect to the indemnification of our officers and directors:

All persons who the Corporation is empowered to indemnify pursuant to the provisions of Section 145 of the General Corporation Law of the State of Delaware (or any similar provision or provisions of applicable law at the time in effect), shall be indemnified by the Corporation to the full extent permitted thereby. The foregoing right of indemnification shall not be deemed to be exclusive of any other rights to which those seeking indemnification may be entitled under any bylaw, agreement, vote of stockholders or disinterested directors, or otherwise. No repeal or amendment of this Article EIGHTH shall adversely affect any rights of any person pursuant to this Article EIGHTH which existed at the time of such repeal or amendment with respect to acts or omissions occurring prior to such repeal or amendment.

Our Restated Certificate of Incorporation, as amended, provides that no director shall be personally liable to us or its stockholders for any monetary damages for breaches of fiduciary duty as a director, provided that this provision shall not eliminate or limit the liability of a director (i) for any breach of the director's duty of loyalty to us or our stockholders; (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law; (iii) under Section 174 of the General Corporation Law of the State of Delaware; or (iv) for any transaction from which the director derived an improper personal benefit.

II-1

The indemnification discussed in this Item 15 is not exclusive of any other rights the party seeking indemnification may possess. We carry officer and director liability insurance with respect to certain matters, including matters arising under the Securities Act of 1933, as amended.

Item 16. Exhibits.

See the Exhibit Index immediately following the signature page of this Registration Statement.

Item 17. Undertakings

(a) The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by section 10(a)(3) of the Securities Act;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement.

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) do not apply if the registration statement is on Form S-3 or Form F-3, and the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the Commission by the registrant pursuant to Sections 13 or 15(d) of the Exchange Act that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

II-2

(4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:

(i) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

- (ii) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.
- (5) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities: The undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:
- (i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
- (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
- (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
- (iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.
- (b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (c) The undersigned registrants hereby undertake to supplement the prospectus, after the expiration of the subscription period, to set forth the results of the subscription offer, the transactions by the underwriters during the subscription period, the amount of unsubscribed securities to be purchased by the underwriters, and the terms of any subsequent reoffering thereof. If any public offering by the underwriters is to be made on terms differing from those set forth on the cover page of the prospectus, a post-effective amendment will be filed to set forth the terms of such offering.
- (d) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrants pursuant to the foregoing provisions, or otherwise, the registrants have been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrants of expenses incurred or paid by a director, officer or controlling person of the registrants in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrants will, unless in the opinion of counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

II-3

SIGNATURES

Pursuant to the requirements of the Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Atlanta, State of Georgia, on the 2nd day of December, 2024.

PERMA-FIX ENVIRONMENTAL SERVICES, INC.

By: /s/ Ben Naccarato

Ben Naccarato,
Executive Vice President and Chief Financial Officer

POWER OF ATTORNEY

Each person whose signature appears below constitutes and appoints Mark Duff and Ben Naccarato, and each of them acting individually and without the other, as his true and lawful attorneys-in-fact and agents, with full power of substitution and re-substitution, for him and in his name, place, and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments, exhibits thereto and other documents in connection therewith) to this Registration Statement, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or either of them individually, or their or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Act, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

By /s/ Mark Duff Date December 1, 2024
Mark Duff, President and Chief Executive Officer; Director
(Principal Executive Officer)

By /s/ Ben Naccarato Date December 2, 2024
Ben Naccarato, Executive Vice President and Chief Financial Officer
(Principal Financial and Accounting Officer)

By /s/ Thomas Bostick Date December 1, 2024
Thomas P. Bostick, Director

By /s/ Louis Centofanti Date December 1, 2024

Dr. Louis F. Centofanti, Director

By	<u>/s/ Kerry Duggan</u> Kerry C. Duggan, Director	Date	December 1, 2024
By	<u>/s/ Joseph Grumski</u> Joseph T. Grumski, Director	Date	December 1, 2024
By	<u>/s/ Joe Reeder</u> Joe R. Reeder, Director	Date	December 2, 2024
By	<u>/s/ Larry Shelton</u> Larry M. Shelton, Chairman of the Board	Date	December 2, 2024
By	<u>/s/ Zach Wamp</u> Zach P. Wamp, Director	Date	December 1, 2024
By	<u>/s/ Mark Zwecker</u> Mark A. Zwecker, Director	Date	December 1, 2024

II-4

**PERMA-FIX ENVIRONMENTAL SERVICES, INC.
REGISTRATION STATEMENT ON FORM S-3**

EXHIBIT INDEX

Exhibit No.	Description
1.1*	Form of Underwriting Agreement for Debt Securities.
1.2*	Form of Underwriting Agreement for Equity Securities.
1.3*	Form of Underwriting Agreement for Depositary Shares
1.4*	Form of Underwriting Agreement for Purchase Contracts
1.5*	Form of Underwriting Agreement for Units
3.1	Restated Certificate of Incorporation, as amended, of Perma-Fix Environmental Services, Inc., incorporated by reference from Exhibit 3(i) to the Company's Form 10-Q for the Quarter Ended March 21, 2021 filed on May 6, 2021.
3.2	Second Amended and Restated Bylaws of Perma-Fix Environmental Services, Inc., as amended effective April 20, 2023, incorporated by reference from Exhibit 3(ii) to the Company's Form 8-K filed on April 26, 2023.
4.1**	Form of Indenture.
4.2*	Form of Certificate of Designation.
4.3*	Form of Deposit Agreement.
4.4*	Form of Depositary Receipt.
4.5*	Form of Warrant Agreement.
4.6*	Form of Warrant.
4.7*	Form of Rights Agent Agreement.
4.8*	Form of Purchase Contract.
4.9*	Form of Unit Agreement.
4.10*	Specimen certificate evidencing shares of common stock.
4.11*	Form of Preferred Stock and Certificate of Designation of Preferred Stock.
4.12*	Form of Note
4.13*	Form of Rights Certificate.
5.1**	Opinion of Steptoe & Johnson PLLC.
23.1**	Consent of Grant Thornton LLP.
23.2**	Consent of Steptoe & Johnson PLLC (included in Exhibit 5.1)
24.1**	Power of Attorney (included on signature page hereof)
25.1*	Form T-1 Statement of Eligibility of Trustee to act as trustee under the Indenture.
107**	Calculation of Filing Fee Table.
*	To be filed, if necessary, by an amendment to the registration statement or as an exhibit to a report filed under the Securities Exchange Act of 1934, as amended, and incorporated herein by reference.
**	Filed herewith.

II-5

PERMA-FIX ENVIRONMENTAL SERVICES, INC.

INDENTURE

Dated as of [●], 202[●]

[]

Trustee

CROSS-REFERENCE TABLE*

*This Cross Reference Table is not part of this Indenture.

<i>Trust Indenture Act Section</i>	<i>Indenture Section</i>
310 (a)(1)	7.10
(a)(2)	7.10
(a)(3)	N.A.
(a)(4)	N.A.
(a)(5)	7.10
(b)	7.10
(c)	N.A.
311 (a)	7.11
(b)	7.11
(c)	N.A.
312 (a)	2.06
(b)	11.03
(c)	11.03
313 (a)	7.06
(b)(2)	7.06; 7.07
(c)	7.06; 11.02
(d)	7.06
314 (a)	11.02
(b)	N.A.
(c)(1)	11.04
(c)(2)	11.04
(c)(3)	N.A.
(d)	N.A.
(e)	11.05
(f)	N.A.
315 (a)	7.01
(b)	7.05; 11.02
(c)	7.01
(d)	7.01
(e)	6.11
316 (a) (last sentence)	2.10
(a)(1)(A)	6.05
(a)(1)(B)	6.04
(a)(2)	N.A.
(b)	6.07
(c)	2.13
317 (a)(1)	6.08
(a)(2)	6.09
(b)	2.05
318 (a)	11.01
(b)	N.A.
(c)	11.01

● N.A. means not applicable

TABLE OF CONTENTS

Section 1.02	Other Definitions.	4
Section 1.03	Incorporation by Reference of Trust Indenture Act.	4
Section 1.04	Rules of Construction.	5
ARTICLE 2 THE NOTES		5
Section 2.01	Issuable in Series.	5
Section 2.02	Establishment of Terms of Series of Notes.	6
Section 2.03	Execution and Authentication.	7
Section 2.04	Registrar and Paying Agent.	8
Section 2.05	Paying Agent to Hold Money in Trust.	8
Section 2.06	Holder Lists.	9
Section 2.07	Transfer and Exchange.	9
Section 2.08	Replacement Notes.	9
Section 2.09	Outstanding Notes.	10
Section 2.10	Treasury Notes.	10
Section 2.11	Temporary Notes.	10
Section 2.12	Cancellation.	10
Section 2.13	Defaulted Interest.	11
Section 2.14	Global Notes.	11
Section 2.15	CUSIP Number.	13
ARTICLE 3 REDEMPTION AND PREPAYMENT		13
Section 3.01	Notice to Trustee.	13
Section 3.02	Selection of Notes to Be Redeemed.	13
Section 3.03	Notice of Redemption.	14
Section 3.04	Effect of Notice of Redemption.	14
Section 3.05	Deposit of Redemption Price.	15
Section 3.06	Notes Redeemed in Part.	15

i

TABLE OF CONTENTS
(continued)

	<u>Page</u>
ARTICLE 4 COVENANTS	15
Section 4.01	15
Section 4.02	15
Section 4.03	16
Section 4.04	16
Section 4.05	16
ARTICLE 5 SUCCESSORS	17
Section 5.01	17
Section 5.02	17
ARTICLE 6 DEFAULTS AND REMEDIES	18
Section 6.01	18
Section 6.02	19
Section 6.03	19
Section 6.04	19
Section 6.05	20
Section 6.06	20
Section 6.07	20
Section 6.08	21
Section 6.09	21
Section 6.10	21
Section 6.11	22
Section 6.12	22
Section 6.13	22
ARTICLE 7 TRUSTEE	22
Section 7.01	22
Section 7.02	23

ii

TABLE OF CONTENTS
(continued)

	<u>Page</u>
Section 7.03	24
Section 7.04	24
Section 7.05	24
Section 7.06	25
Section 7.07	25
Section 7.08	26
Section 7.09	27
Section 7.10	27
Section 7.11	27
ARTICLE 8 LEGAL DEFEASANCE AND COVENANT DEFEASANCE	27
Section 8.01	27
Section 8.02	27
Section 8.03	28

Section 8.04	Conditions to Legal or Covenant Defeasance.	28
Section 8.05	Deposited Money and Government Securities to be Held in Trust; Other Miscellaneous Provisions.	29
Section 8.06	Repayment to Company.	30
Section 8.07	Reinstatement.	30
ARTICLE 9 AMENDMENT, SUPPLEMENT AND WAIVER		
Section 9.01	Without Consent of Holders of Notes.	30
Section 9.02	With Consent of Holders of Notes.	31
Section 9.03	Compliance with Trust Indenture Act.	32
Section 9.04	Revocation and Effect of Consents.	32
Section 9.05	Notation on or Exchange of Notes.	32
Section 9.06	Trustee to Sign Amendments, etc.	33
ARTICLE 10 SATISFACTION AND DISCHARGE		
Section 10.01	Satisfaction and Discharge.	33

TABLE OF CONTENTS
(continued)

	<u>Page</u>
Section 10.02	34
Application of Trust Money.	34
ARTICLE 11 MISCELLANEOUS	
Section 11.01	34
Trust Indenture Act Controls.	34
Section 11.02	34
Notices.	34
Section 11.03	35
Communication by Holders of Notes with Other Holders of Notes.	35
Section 11.04	36
Certificate and Opinion as to Conditions Precedent.	36
Section 11.05	36
Statements Required in Certificate or Opinion.	36
Section 11.06	36
No Personal Liability of Directors, Officers, Employees and Stockholders.	36
Section 11.07	36
Governing Law.	36
Section 11.08	37
No Adverse Interpretation of Other Agreements.	37
Section 11.09	37
Successors.	37
Section 11.10	37
Severability.	37
Section 11.11	37
Counterpart Originals.	37
Section 11.12	37
Table of Contents, Headings, etc.	37
Section 11.13	37
Waiver of Jury Trial.	37
Section 11.14	37
Patriot Act Compliance	37

INDENTURE dated as of [●], 202[●] by and among Perma-Fix Environmental Services, Inc., a Delaware corporation (the “Company”), and [●], a national banking association organized and existing under the laws of the United States of America, as trustee (the “Trustee”).

The Company and the Trustee agree as follows for the benefit of each other and for the equal and ratable benefit of the Holders of the Notes issued under this Indenture.

ARTICLE 1
DEFINITIONS AND INCORPORATION
BY REFERENCE

Section 1.01 *Definitions.*

“*Affiliate*” of any specified Person means any other Person directly or indirectly controlling or controlled by or under direct or indirect common control with such specified Person. For purposes of this definition, “*control*,” as used with respect to any Person, means the possession, directly or indirectly, of the power to direct or cause the direction of the management or policies of such Person, whether through the ownership of voting securities, by agreement or otherwise; *provided* that beneficial ownership of 10% or more of the Voting Stock of a Person will be deemed to be control. For purposes of this definition, the terms “*controlling*,” “*controlled by*” and “*under common control with*” have correlative meanings.

“*Agent*” means any Registrar, co-registrar, Paying Agent or additional paying agent.

“*Bankruptcy Law*” means Title 11, U.S. Code or any similar federal or state law for the relief of debtors.

“*Board of Directors*” means:

- (1) with respect to a corporation, the board of directors of the corporation or any committee thereof duly authorized to act on behalf of such board;
- (2) with respect to a partnership, the Board of Directors of the general partner of the partnership;
- (3) with respect to a limited liability company, the managing member or members or any controlling committee of managing members thereof; and
- (4) with respect to any other Person, the board or committee of such Person serving a similar function.

“*Board Resolution*” means a copy of a resolution certified by the Secretary or an Assistant Secretary of the Company to have been adopted by the Board of Directors or pursuant to authorization by the Board of Directors and to be in full force and effect on the date of the certificate and delivered to the Trustee.

“*Business Day*” means any day other than a Legal Holiday.

“*Capital Stock*” means:

- (1) in the case of a corporation, corporate stock;
- (2) in the case of an association or business entity, any and all shares, interests, participations, rights or other equivalents (however designated) of corporate stock;
- (3) in the case of a partnership or limited liability company, partnership interests (whether general or limited) or membership interests; and
- (4) any other interest or participation that confers on a Person the right to receive a share of the profits and losses of, or distributions of assets of, the issuing Person.

“*Company*” means Perma-Fix Environmental Services, Inc. and any and all successors thereto.

“*Company Order*” means a written order signed in the name of the Company by an Officer.

“*Corporate Trust Office of the Trustee*” will be at the address of the Trustee specified in Section 11.02 hereof or such other address as to which the Trustee may give notice to the Company.

“*Custodian*” means the Trustee, as custodian with respect to the Notes in global form, or any successor entity thereto.

“*Default*” means any event that is, or with the passage of time or the giving of notice or both would be, an Event of Default.

“*Depository*” means, with respect to the Notes of any Series issuable or issued in whole or in part in the form of one or more Global Notes, the person designated as Depository for such Series by the Company, which Depository shall be a clearing agency registered under the Exchange Act.

“*Discount Note*” means any Note that provides for an amount less than the stated principal amount thereof to be due and payable upon declaration of acceleration of the maturity thereof pursuant to Section 6.02.

“*Dollars*” and “\$” means the currency of The United States of America.

“*Equity Interests*” means Capital Stock and all warrants, options or other rights to acquire Capital Stock (but excluding any debt security that is convertible into, or exchangeable for, Capital Stock).

“*Exchange Act*” means the Securities Exchange Act of 1934.

“*GAAP*” means generally accepted accounting principles set forth in the opinions and pronouncements of the Accounting Principles Board of the American Institute of Certified Public Accountants and statements and pronouncements of the Financial Accounting Standards Board or in such other statements by such other entity as have been approved by a significant segment of the accounting profession, which are in effect from time to time.

“*Global Note*” or “*Global Notes*” means a Note or Notes, as the case may be, in the form established pursuant to Section 2.02 evidencing all or part of a Series of Notes, issued to the Depository for such Series or its nominee, and registered in the name of such Depository or nominee.

“*Government Securities*” means direct obligations of, or obligations guaranteed by, The United States of America, and the payment for which the United States pledges its full faith and credit.

“*Guarantee*” means a guarantee other than by endorsement of negotiable instruments for collection in the ordinary course of business, direct or indirect, in any manner including, without limitation, by way of a pledge of assets or through letters of credit or reimbursement agreements in respect thereof, of all or any part of any Indebtedness.

“*Holder*” means a Person in whose name a Note is registered.

“*Indenture*” means this Indenture, as amended, supplemented or restated from time to time and shall include the form and terms of particular Series of Notes established as contemplated hereunder.

“*Legal Holiday*” means a Saturday, a Sunday or a day on which banking institutions in the City of New York or at a place of payment are authorized by law, regulation or executive order to remain closed. If a payment date is a Legal Holiday at a place of payment, payment may be made at that place on the next succeeding day that is not a Legal Holiday, and no interest shall accrue on such payment for the intervening period.

“*Notes*” means notes or other debt instruments of the Company of any Series issued under this Indenture.

“*Officer*” means the Chief Executive Officer, the President, the Chief Operating Officer, the Chief Financial Officer, the Treasurer, any Assistant Treasurer, the Controller, the Secretary, the Assistant Secretary or any Vice President.

“*Officer’s Certificate*” means a certificate signed on behalf of the Company by an Officer of the Company that meets the requirements of Section 11.05 hereof. The Officer signing the Officer’s Certificate pursuant to Section 4.03(a) shall be the principal executive officer, principal financial officer, the treasurer or the principal accounting officer of the Company.

“*Opinion of Counsel*” means an opinion from legal counsel who is reasonably acceptable to the Trustee, that meets the requirements of Section 11.05 hereof. The counsel may be an employee of or counsel to the Company or any Subsidiary of the Company.

“*Person*” means any individual, corporation, partnership, joint venture, association, joint-stock company, trust, unincorporated organization or limited liability company, or governmental or other entity.

“*Responsible Officer*” when used with respect to the Trustee, means any officer within the Corporate Trust Administration of the Trustee (or any successor group of the Trustee) having direct responsibility for the administration of this Indenture and also means, with respect to a particular corporate trust matter, any other officer to whom such matter is referred because of his knowledge of and familiarity with the particular subject.

“*SEC*” means the Securities and Exchange Commission.

“*Securities Act*” means the Securities Act of 1933, as amended.

hereof. "Series" or "Series of Notes" means each series of debentures, notes or other debt instruments of the Company created pursuant to Sections 2.01 and 2.02

"Stated Maturity" means, with respect to any installment of interest or principal on any series of indebtedness, the date on which the payment of interest or principal, was scheduled to be paid in the documentation governing such indebtedness as of the date of this Indenture, and will not include any contingent obligations to repay, redeem or repurchase any such interest or principal prior to the date originally scheduled for the payment thereof.

"Subsidiary" means, with respect to any specified Person:

(1) any corporation, association or other business entity of which more than 50% of the total voting power of shares of Capital Stock entitled (without regard to the occurrence of any contingency and after giving effect to any voting agreement or stockholders' agreement that effectively transfers voting power) to vote in the election of directors, managers or trustees of the corporation, association or other business entity is at the time owned or controlled, directly or indirectly, by that Person or one or more of the other Subsidiaries of that Person (or a combination thereof); and

(2) any partnership (a) the sole general partner or the managing general partner of which is such Person or a Subsidiary of such Person or (b) the only general partners of which are that Person or one or more Subsidiaries of that Person (or any combination thereof).

"TIA" means the Trust Indenture Act of 1939, as amended (15 U.S.C. §§ 77aaa-77bbb).

"Trustee" means the person named as the "Trustee" in the first paragraph of this instrument until a successor Trustee shall have become such pursuant to the applicable provisions of this Indenture, and thereafter "Trustee" shall mean each person who is then a Trustee hereunder, and if at any time there is more than one such person, "Trustee" as used with respect to the Notes of any Series shall mean the Trustee with respect to Notes of that Series.

"Voting Stock" of any specified Person as of any date means the Capital Stock of such Person that is at the time entitled to vote in the election of the Board of Directors of such Person.

Section 1.02 *Other Definitions.*

<u>Term</u>	<u>Defined in Section</u>
"Authentication Order"	2.03
"Covenant Defeasance"	8.03
"Event of Default"	6.01
"Legal Defeasance"	8.02
"Paying Agent"	2.04
"Registrar"	2.04

Section 1.03 *Incorporation by Reference of Trust Indenture Act.*

Whenever this Indenture refers to a provision of the TIA, the provision is incorporated by reference in and made a part of this Indenture.

The following TIA terms used in this Indenture have the following meanings:

"indenture securities" means the Notes;

"indenture security Holder" means a Holder of a Note;

"indenture to be qualified" means this Indenture;

"indenture trustee" or "institutional trustee" means the Trustee; and

"obligor" on the indenture securities means the Company, and any successor obligor upon the Notes.

All other terms used in this Indenture that are defined by the TIA, defined by TIA reference to another statute or defined by SEC rule under the TIA have the meanings so assigned to them.

Section 1.04 *Rules of Construction.*

Unless the context otherwise requires:

(1) a term has the meaning assigned to it;

(2) an accounting term not otherwise defined has the meaning assigned to it in accordance with GAAP;

(3) "or" is not exclusive;

(4) words in the singular include the plural, and in the plural include the singular;

(5) "will" shall be interpreted to express a command;

(6) provisions apply to successive events and transactions; and

(7) references to sections of or rules under the Securities Act will be deemed to include substitute, replacement or successor sections or rules adopted by the SEC from time to time.

Section 2.01 *Issuable in Series.*

The aggregate principal amount of Notes that may be authenticated and delivered under this Indenture is unlimited. The Notes may be issued in one or more Series. All Notes of a Series shall be identical except as may be set forth in a Board Resolution, a supplemental indenture or an Officer's Certificate detailing the adoption of the terms thereof pursuant to the authority granted under a Board Resolution. In the case of Notes of a Series to be issued from time to time, the Board Resolution, Officer's Certificate or supplemental indenture detailing the adoption of the terms thereof pursuant to authority granted under a Board Resolution may provide for the method by which specified terms (such as interest rate, maturity date, record date or date from which interest shall accrue) are to be determined. Notes may differ between Series in respect of any matters.

Section 2.02 *Establishment of Terms of Series of Notes.*

At or prior to the issuance of any Notes within a Series, the following shall be established by or pursuant to a Board Resolution, and set forth or determined in the manner provided in a Board Resolution, supplemental indenture or an Officer's Certificate pursuant to authority granted under a Board Resolution:

- (a) the title of the Series (which shall distinguish the Notes of that particular Series from the Notes of any other Series);
- (b) the price or prices (expressed as a percentage of the principal amount thereof) at which the Notes of the Series will be issued;
- (c) any limit upon the aggregate principal amount of the Notes of the Series which may be authenticated and delivered under this Indenture (except for Notes authenticated and delivered upon registration of transfer of, or in exchange for, or in lieu of, other Notes of the Series pursuant to Section 2.07, 2.08, 2.11, 3.06 or 9.05);
- (d) the date or dates on which the principal of the Notes of the Series is payable;
- (e) the rate or rates (which may be fixed or variable) per annum or, if applicable, the method used to determine such rate or rates (including, but not limited to, any commodity, commodity index, stock exchange index or financial index) at which the Notes of the Series shall bear interest, if any, the date or dates from which such interest, if any, shall accrue, the date or dates on which such interest, if any, shall commence and be payable and any regular record date for the interest payable on any interest payment date;
- (f) the place or places where the principal of, premium and interest, if any, on the Notes of the Series shall be payable, where the Notes of such Series may be surrendered for registration of transfer or exchange and where notices and demands to or upon the Company in respect of the Notes of such Series and this Indenture may be served, and the method of such payment, if by wire transfer, mail or other means;
- (g) if applicable, the period or periods within which, the price or prices at which and the terms and conditions upon which the Notes of the Series may be redeemed, in whole or in part, at the option of the Company;
- (h) the obligation, if any, of the Company to redeem or purchase the Notes of the Series pursuant to any sinking fund or analogous provisions or at the option of a Holder thereof and the period or periods within which, the price or prices at which and the terms and conditions upon which Notes of the Series shall be redeemed or purchased, in whole or in part, pursuant to such obligation;
- (i) the dates, if any, on which and the price or prices at which the Notes of the Series will be repurchased by the Company at the option of the Holders thereof and other detailed terms and provisions of such repurchase obligations;
- (j) the denominations in which the Notes of the Series shall be issuable, if other than minimum denominations of \$2,000 and integral multiples of \$1,000 in excess thereof;
- (k) the forms of the Notes of the Series in fully registered form (and whether the Notes will be issuable as Global Notes);

(l) if other than the principal amount thereof, the portion of the principal amount of the Notes of the Series that shall be payable upon declaration of acceleration of the maturity thereof pursuant to Section 6.02;

(m) the designation of the currency, currencies or currency units in which payment of the principal of, premium and interest, if any, on the Notes of the Series will be made if other than U.S. dollars;

(n) the provisions, if any, relating to any security provided for the Notes of the Series, and any subordination in right of payment, if any, of the Notes of the Series;

(o) any addition to or change in the Events of Default which applies to any Notes of the Series and any change in the right of the Trustee or the requisite Holders of such Notes to declare the principal amount thereof due and payable pursuant to Section 6.02;

(p) any addition to or change in the covenants set forth in Articles 4 or 5 which applies to Notes of the Series;

(q) any other terms of the Notes of the Series (which may modify or delete any provision of this Indenture insofar as it applies to such Series); and

(r) any depositaries, interest rate calculation agents, exchange rate calculation agents or other agents with respect to Notes of such Series if other than those appointed herein.

All Notes of any one Series need not be issued at the same time and may be issued from time to time, consistent with the terms of this Indenture, if so provided by or pursuant to the Board Resolution, supplemental indenture hereto or Officer's Certificate referred to above, and, unless otherwise provided, a Series may be reopened, without the consent of the Holders, for issuances of additional Notes of such Series; *provided, however*, that if such additional Notes are not fungible with the Notes of such Series for U.S. federal income tax purposes, the additional Notes will have a separate CUSIP number.

Section 2.03 *Execution and Authentication.*

One Officer shall sign the Notes for the Company by manual or facsimile signature. If an Officer whose signature is on a Note no longer holds that office at the time such Note is authenticated, such Note shall nevertheless be valid.

A Note shall not be valid until authenticated by the manual signature of the Trustee. The signature shall be conclusive evidence that the Note, as applicable, has been authenticated under this Indenture.

The Trustee shall, upon a written order of the Company signed by one Officer (an “*Authentication Order*”), authenticate Notes for original issue in accordance with this Indenture. The Notes shall be dated their date of authentication.

The Trustee may appoint an authenticating agent acceptable to the Company to authenticate Notes. An authenticating agent may authenticate Notes whenever the Trustee may do so, Each reference in this Indenture to authentication by the Trustee includes authentication by such agent. An authenticating agent has the same rights as an Agent to deal with Holders or an Affiliate of the Company.

7

At any time and from time to time after the execution and delivery of this Indenture, the Company may deliver Notes of any Series executed by the Company to the Trustee for authentication, together with a Company Order for the authentication and delivery of such Notes, and the Trustee in accordance with the Company Order will authenticate and deliver such Notes. In authenticating such Notes, and accepting the additional responsibilities under this Indenture in relation to such Notes, the Trustee shall receive, and (subject to Section 7.01) will be fully protected in relying upon, an Opinion of Counsel to the effect that:

(a) such form has been established in conformity with the provisions of this Indenture;

(b) such terms have been established in conformity with the provisions of this Indenture; and

(c) such Notes, when authenticated and delivered by the Trustee and issued by the Company in the manner and subject to any customary assumptions and exceptions specified in such Opinion of Counsel, will constitute valid and binding obligations of the Company enforceable in accordance with their terms, except as the enforceability thereof may be limited by bankruptcy, insolvency, reorganization, moratorium, or other laws relating to or affecting creditors’ rights and by general principles of equity.

Section 2.04 *Registrar and Paying Agent.*

The Company shall maintain an office or agency where Notes may be presented for registration of transfer or for exchange (“*Registrar*”) and an office or agency where Notes may be presented for payment (“*Paying Agent*”). The Registrar shall keep a register with respect to each Series of the Notes and of their transfer and exchange. The Company may appoint one or more co-registrars and one or more additional paying agents or change the office of such Registrar or Paying Agent. The term “*Registrar*” includes any co-registrar and the term “*Paying Agent*” includes any additional paying agent. The Company may change any Paying Agent or Registrar without notice to any Holder; *however*, the Company shall maintain a Paying Agent in each place of payment for the Notes of each Series. The Company shall notify the Trustee in writing of the name and address of any Agent not a party to this Indenture. If the Company fails to appoint or maintain another entity as Registrar or Paying Agent, the Trustee shall act as such. The Company or any of its Subsidiaries may act as Paying Agent or Registrar.

The Company initially appoints the Trustee to act as the Registrar and Paying Agent and to act as Custodian with respect to the Global Notes.

Section 2.05 *Paying Agent to Hold Money in Trust.*

The Company shall require each Paying Agent other than the Trustee to agree in writing that the Paying Agent will hold in trust, for the benefit of Holders of any Series of Notes, or the Trustee, all money held by the Paying Agent for the payment of principal or interest on the Series of Notes, and shall notify the Trustee of any default by the Company in making any such payment: While any such default continues, the Trustee may require a Paying Agent to pay all money held by it to the Trustee. The Company at any time may require a Paying Agent to pay all money held by it to the Trustee. All payments to a Paying Agent or any Notes which remain unclaimed for a period of two years after such payment was due shall be repaid to the Company. Thereafter, the Holder may look only to the Company for repayment. Upon payment over to the Trustee, or to the Company, as the case may be, the Paying Agent (if other than the Company or a Subsidiary) shall have no further liability for the money. If the Company or a Subsidiary acts as Paying Agent, it shall segregate and hold in a separate trust fund for the benefit of Holders of any Series of Notes all money held by it as Paying Agent. Upon any bankruptcy or reorganization proceedings relating to the Company, the Trustee shall serve as Paying Agent for the Notes.

8

Section 2.06 *Holder Lists.*

The Trustee shall preserve in as current a form as is reasonably practicable the most recent list available to it of the names and addresses of Holders of each Series of Notes and shall otherwise comply with TIA Section 312(a). If the Trustee is not the Registrar, the Company shall furnish to the Trustee, at least seven Business Days before each interest payment date and at such other times as the Trustee may request in writing, a list in such form and as of such date as the Trustee may reasonably require of the names and addresses of Holders of each Series of Notes and the Company shall otherwise comply with TIA Section 312(a).

Section 2.07 *Transfer and Exchange.*

Notes may be transferred or exchanged at the office of the Registrar or co-registrar designated by the Company. Where Notes of a Series are presented to the Registrar or a co-registrar with a request to register a transfer or to exchange them for an equal principal amount of Notes of the same Series, the Registrar shall register the transfer or make the exchange if its requirements for such transactions are met. To permit registrations of transfers and exchanges, the Trustee shall authenticate Notes at the Registrar’s request. No service charge shall be made for any registration of transfer or exchange (except as otherwise expressly permitted herein), but the Company may require payment of a sum sufficient to cover any transfer tax or similar governmental charge payable in connection therewith (other than any such transfer tax or similar governmental charge payable upon exchanges pursuant to Sections 2.11, 3.06 or 9.05)

Neither the Company nor the Registrar shall be required (a) to issue, register the transfer of, or exchange Notes of any Series for the period beginning at the opening of business fifteen days immediately preceding the mailing of a notice of redemption of Notes of that Series selected for redemption and ending at the close of business on the day of such mailing, or (b) to register the transfer of or exchange Notes of any Series selected, called or being called for redemption as a whole or a portion thereof, except the unredeemed portion of Notes being redeemed in part.

Each Holder of a Security agrees to indemnify the Company and the Trustee against any liability that may result from the transfer, exchange or assignment of such Holder’s Security in violation of any provision of this Indenture and/or applicable United States federal or state securities law.

The Trustee shall have no obligation or duty to monitor, determine or inquire as to compliance with any restrictions on transfer imposed under this Indenture or under applicable law with respect to any transfer of any interest in any Note (including any transfers between or among Depository Participants or beneficial owners of interests in any Global Security) other than to require delivery of such certificates and other documentation or evidence as are expressly required by, and to do so if and when expressly required by the terms of, this Indenture, and to examine the same to determine substantial compliance as to form with the express requirements hereof.

Section 2.08 *Replacement Notes.*

If any mutilated Note is surrendered to the Trustee, or if the Company and the Trustee receive evidence to their satisfaction of the destruction, loss or theft of any Note, the Company shall issue and the Trustee, upon receipt of an Authentication Order together with such indemnity or security sufficient in the judgment of the Trustee and the Company to protect the Company, the Trustee, any Agent and any authenticating agent from any loss that any of them may suffer if a Note is replaced, shall authenticate a replacement Note of the same Series if the Trustee's requirements are met. The Company may charge for its expenses in replacing a Note.

9

Every replacement Note of any Series is an additional obligation of the Company and shall be entitled to all of the benefits of this Indenture equally and proportionately with all other Notes of that Series duly issued hereunder.

Section 2.09 *Outstanding Notes.*

The Notes outstanding at any time are all the Notes authenticated by the Trustee except for those canceled by it, those delivered to it for cancellation, those reductions in the interest in a Global Note effected by the Trustee in accordance with the provisions hereof, and those described in this Section as not outstanding. Except as set forth in Section 2.10 hereof, a Note does not cease to be outstanding because the Company or an Affiliate of the Company holds the Note.

If a Note is replaced pursuant to Section 2.08 hereof, it ceases to be outstanding unless the Trustee receives proof satisfactory to it that the replaced Note is held by a bona fide purchaser.

If the principal amount of any Note is considered paid under Section 4.01 hereof, it ceases to be outstanding and interest on it ceases to accrue.

If the Paying Agent (other than the Company, a Subsidiary or an Affiliate of any thereof) holds, on a redemption date or maturity date, money sufficient to pay Notes payable on that date, then on and after that date such Notes shall be deemed to be no longer outstanding and shall cease to accrue interest.

Section 2.10 *Treasury Notes.*

In determining whether the Holders of the required principal amount of Notes of a Series have concurred in any direction, waiver or consent, Notes owned by the Company, or by any Person directly or indirectly controlling or controlled by or under direct or indirect common control with the Company, shall be considered as though not outstanding, except that for the purposes of determining whether the Trustee shall be protected in relying on any such direction, waiver or consent, only Notes of a Series that a Responsible Officer of the Trustee actually knows are so owned shall be so disregarded.

Section 2.11 *Temporary Notes.*

Until certificates representing Notes are ready for delivery, the Company may prepare and the Trustee, upon receipt of an Authentication Order, shall authenticate temporary Notes. Temporary Notes shall be substantially in the form of certificated Notes but may have variations that the Company considers appropriate for temporary Notes and as shall be reasonably acceptable to the Trustee. Without unreasonable delay, the Company shall prepare and the Trustee shall authenticate definitive Notes in exchange for temporary Notes.

Holders of temporary Notes shall be entitled to all of the benefits of this Indenture.

Section 2.12 *Cancellation.*

The Company at any time may deliver Notes to the Trustee for cancellation. The Registrar and Paying Agent shall forward to the Trustee any Notes surrendered to them for registration of transfer, exchange or payment. The Trustee (and no one else) shall cancel, in accordance with its then customary procedures, all Notes surrendered for registration of transfer, exchange, payment, replacement or cancellation and shall, upon the written request of the Company, return such canceled Notes to the Company. The Company may not issue new Notes to replace Notes that it has paid or that have been delivered to the Trustee for cancellation.

10

Section 2.13 *Defaulted Interest.*

If the Company defaults in a payment of interest on a Series of Notes, it shall pay the defaulted interest in any lawful manner plus, to the extent lawful, interest payable on the defaulted interest, to the Persons who are Holders of the Series on a subsequent special record date, in each case at the rate provided in the Notes and in Section 4.01 hereof. The Company shall notify the Trustee in writing of the amount of defaulted interest proposed to be paid on each Note and the date of the proposed payment. The Company shall fix or cause to be fixed each such special record date and payment date, provided that no such special record date shall be less than 10 days prior to the related payment date for such defaulted interest. At least 15 days before the special record date, the Company (or, upon the written request of the Company, the Trustee in the name and at the expense of the Company) shall mail or cause to be mailed (or, in the case of the Depository with respect to any Global Note, sent electronically) to Holders a notice that states the special record date, the related payment date and the amount of such interest to be paid.

Section 2.14 *Global Notes.*

(a) Terms of Notes. A Board Resolution, a supplemental indenture hereto, or an Officer's Certificate shall establish whether the Notes of a Series shall be issued in whole or in part in the form of one or more Global Notes and shall name the Depository for such Global Note or Notes. Except as provided herein, each Global Note shall be (i) registered in the name of the Depository, (ii) deposited with the Depository or its nominee, and (iii) bear the legend indicated in Section 2.14(c).

(b) Transfer and Exchange. Notwithstanding any provisions to the contrary contained in Section 2.07 of the Indenture and in addition thereto, any Global Note shall be exchangeable pursuant to Section 2.07 of the Indenture for Notes registered in the names of Holders other than the Depository for such Note or its nominee only if (i) such Depository notifies the Company that it is unwilling or unable to continue as Depository for such Global Note or if at any time such Depository ceases to be a clearing agency registered under the Exchange Act, and, in either case, the Company fails to appoint a successor Depository registered as a clearing agency under the Exchange Act within 90 days of such event, (ii) the Company executes and delivers to the Trustee an Officer's Certificate to the effect that such Global Note shall be so exchangeable or (iii) an Event of Default with respect to the Notes represented by such Global Note shall have happened and be continuing. Any Global Note that is exchangeable pursuant to the preceding sentence shall be exchangeable for Notes registered in such names as the Depository shall direct in writing in an aggregate principal amount equal to the principal amount of the Global Note with like tenor and terms.

Except as provided in this Section 2.14(b), a Global Note may not be transferred except as a whole by the Depository with respect to such Global Note to a nominee of such Depository, by a nominee of such Depository to such Depository or another nominee of such Depository or by the Depository, or any such nominee to a successor Depository or a nominee of such a successor Depository.

11

(c) Legend. Any Global Note issued hereunder shall bear a legend in substantially the following form:

“This Note is a Global Note within the meaning of the Indenture hereinafter referred to and is registered in the name of the Depository or a nominee of the Depository. This Note is exchangeable for Notes registered in the name of a person other than the Depository or its nominee only in the limited circumstances described in the Indenture, and may not be transferred except as a whole by the Depository to a nominee of the Depository, by a nominee of the Depository to the Depository or another nominee of the Depository or by the Depository or any such nominee to a successor Depository or a nominee of such a successor Depository.”

(d) Acts of Holders. The Depository, as a Holder, may appoint agents and otherwise authorize participants to give or take any request, demand, authorization, direction, notice, consent, waiver or other action which a Holder is entitled to give or take under the Indenture.

(e) Payments. Notwithstanding the other provisions of this Indenture, unless otherwise specified as contemplated by Section 2.02, payment of the principal of and interest, if any, on any Global Note shall be made to the Holder thereof. Prior to due presentment of a Note for registration of transfer, the Company, the Trustee, and any agent of the Company or the Trustee may treat the Person in whose name such Security is registered as the owner of such Security at the close of business on the regular record date for the purpose of receiving payment of principal of and any premium and (subject to Section 2.13) any interest on such Security and for all other purposes whatsoever, whether or not such Security shall be overdue, and none of the Company, the Trustee or any agent of the Company or the Trustee will be affected by notice to the contrary.

(f) Consents, Declaration and Directions. Except as provided in Section 2.14(e), the Company, the Trustee and any Agent shall treat a person as the Holder of such principal amount of outstanding Notes of such Series represented by a Global Note as shall be specified in a written statement of the Depository with respect to such Global Note, for purposes of obtaining any consents, declarations, waivers or directions required to be given by the Holders pursuant to this Indenture

(g) Responsibility of Trustee or Agents.

(1) None of the Trustee or any Agent shall have any obligation or duty to monitor, determine or inquire as to compliance with any restrictions on transfer imposed under this Indenture or under applicable law with respect to any transfer of any interest in any Note (including any transfers between or among Agent Members or beneficial owners of interests in any Global Note) other than to require delivery of such certificates and other documentation or evidence as are expressly required by, and to do so if and when expressly required by the terms of, this Indenture, and to examine the same to determine substantial compliance as to form with the express requirements hereof.

(2) None of the Trustee or any Agent shall have any responsibility or obligation to any beneficial owner in a Global Note, a participant or other Person with respect to the accuracy of the records of the Depository or its nominee or of any participant, with respect to any ownership interest in a Global Note or with respect to the delivery to any participant, beneficial owner or other Person (other than the Depository or its nominee) of any notice (including any notice of redemption) or the payment of any amount (other than the Depository or its nominee), under or with respect to such Global Notes. All notices and communications to be given to the holders and all payments to be made to holders under the Notes and this Indenture shall be given or made only to or upon the order of the registered holders (which shall be the Depository or its nominee in the case of the Global Note).

12

Section 2.15 *CUSIP Number*.

The Company in issuing the Notes may use “CUSIP” numbers (if then generally in use), and, if so, the Trustee shall use CUSIP numbers in notices of redemption as a convenience to Holders; *provided* that any such notice may state that no representation is made as to the correctness of such numbers either as printed on the Notes or as contained in any notice of a redemption and that reliance may be placed only on the other identification numbers printed on the Notes, and any such redemption shall not be affected by any defect in or the omission of such numbers. The Company shall promptly notify the Trustee in writing of any change in the CUSIP numbers.

ARTICLE 3 REDEMPTION AND PREPAYMENT

Section 3.01 *Notice to Trustee*.

The Company may, with respect to any Series of Notes, reserve the right to redeem and pay the Series of Notes or may covenant to redeem and pay the Series of Notes or any part thereof prior to the Stated Maturity thereof at such time and on such terms as provided for in such Notes. If a Series of Notes is redeemable and the Company wants or is obligated to redeem prior to the Stated Maturity thereof all or part of the Series of Notes pursuant to the terms of such Notes, it shall notify the Trustee in writing of the redemption date and the principal amount of Series of Notes to be redeemed. The Company shall give the notice at least 15 days but not more than 60 days before the redemption date (or such shorter notice as may be acceptable to the Trustee).

Section 3.02 *Selection of Notes to Be Redeemed*.

If less than all of the Notes of a Series are to be redeemed or purchased in an offer to purchase at any time, the Trustee (subject to the applicable procedures of the Depository) shall select the Notes of a Series to be redeemed or purchased among the Holders of the Notes (a) in compliance with the requirements of the principal national securities exchange, if any, on which the Notes are listed or, (b) if the Notes are not so listed, on a *pro rata* basis, by lot, all in accordance with the then applicable procedures of the Depository. In the event of partial redemption or purchase by lot, the particular Notes to be redeemed shall be selected, unless otherwise provided herein, not less than 10 nor more than 60 days prior to the redemption date by the Trustee from the outstanding Notes not previously called for redemption or purchase. The Trustee may select for redemption or repurchase portions of the principal of Notes of the Series that have denominations larger than \$1,000.

The Trustee shall promptly notify the Company in writing of the Notes selected for redemption and, in the case of any Note selected for partial redemption, the principal amount thereof to be redeemed. Notes of a Series and portions of them selected shall be in amounts of \$1,000 or whole multiples of \$1,000, or with respect to Notes of any Series issuable in other denominations pursuant to Section 2.02(j), the minimum principal denomination for each Series and integral multiples thereof. Except as provided in the preceding sentence, provisions of this Indenture that apply to Notes of a Series called for redemption or repurchase also apply to portions of Notes of a Series called for redemption or repurchase.

13

Section 3.03 *Notice of Redemption*.

Unless otherwise indicated for a particular Series by Board Resolution, a supplemental indenture hereto or an Officer’s Certificate, at least 10 days but not more than 60 days before a redemption date, the Company shall mail or cause to be delivered or, in the case of the Depository with respect to any Global Note, sent electronically, a notice of redemption to each Holder whose Notes are to be redeemed at its registered address.

The notice shall identify the Notes of the Series to be redeemed and shall state:

- (1) the redemption date;
- (2) the redemption price;
- (3) any conditions precedent to the redemption of the Notes;
- (4) the name and address of the Paying Agent;
- (5) that Notes of the Series called for redemption must be surrendered to the Paying Agent to collect the redemption price;
- (6) that interest on Notes of the Series called for redemption ceases to accrue on and after the redemption date;
- (7) the CUSIP number, if any; and
- (8) any other information as may be required by the terms of the particular Series of the Notes or the Notes of a Series being redeemed.

At the Company's request, and upon receipt of an Officer's Certificate complying with Section 11.04 hereof, the Trustee shall give the notice of redemption in the Company's name and at its expense.

Section 3.04 Effect of Notice of Redemption.

Once notice of redemption is sent in accordance with Section 3.03 hereof, Notes called for redemption become irrevocably due and payable on the redemption date at the redemption price, subject to satisfaction or waiver of any conditions precedent.

14

Section 3.05 Deposit of Redemption Price.

One Business Day prior to the redemption date, the Company shall deposit with the Trustee or with the Paying Agent money sufficient to pay the redemption price of and accrued interest on all Notes to be redeemed on that date. The Trustee or the Paying Agent shall promptly return to the Company any money deposited with the Trustee or the Paying Agent by the Company in excess of the amounts necessary to pay the redemption price of, and accrued interest on, all Notes to be redeemed.

If the Company complies with the provisions of the preceding paragraph, on and after the redemption date, interest shall cease to accrue on the Notes or the portions of Notes called for redemption. If a Note is redeemed on or after an interest record date but on or prior to the related interest payment date, then any accrued and unpaid interest shall be paid to the Person in whose name such Note was registered at the close of business on such record date. If any Note called for redemption shall not be so paid upon surrender for redemption because of the failure of the Company to comply with the preceding paragraph, interest shall be paid on the unpaid principal, from the redemption date until such principal is paid, and to the extent lawful on any interest not paid on such unpaid principal, in each case at the rate provided in the Notes and in Section 4.01 hereof.

Section 3.06 Notes Redeemed in Part.

Upon surrender of a Note that is redeemed in part, the Company shall issue and, upon the Company's written request, the Trustee shall authenticate for the Holder, at the expense of the Company, a new Note equal in principal amount to the unredeemed portion of the Note surrendered or in the case of Global Notes, take appropriate action in accordance with the applicable procedures of the Depositary.

No Notes of \$1,000 or less can be redeemed in part.

ARTICLE 4
COVENANTS

Section 4.01 Payment of Principal and Interest.

The Company covenants and agrees for the benefit of the Holders of each Series of Notes that it will pay or cause to be paid the principal of, premium, if any, and interest on the Notes on the dates, and in the manner provided, in such Notes. Principal, premium, if any, and interest on any Series of Notes will be considered paid on the date due if the Paying Agent, if other than the Company or a Subsidiary thereof, holds as of 10:00 a.m. Eastern Time on the due date money deposited by the Company in immediately available funds and designated for and sufficient to pay all principal, premium, if any, and interest then due.

Section 4.02 Maintenance of Office or Agency.

The Company covenants and agrees for the benefit of the Holders of each Series of Notes that it will maintain in the Borough of Manhattan, the City of New York, an office or agency (which may be an office of the Trustee for such Notes or an affiliate of the Trustee, Registrar for such Notes or co-registrar) where Notes may be surrendered for registration of transfer or for exchange and where notices and demands to or upon the Company in respect of such Notes and this Indenture may be served. The Company will give prompt written notice to the Trustee for such Notes of the location, and any change in the location, of such office or agency. If at any time the Company fails to maintain any such required office or agency or fails to furnish the Trustee with the address thereof, such presentations, surrenders, notices and demands may be made or served at the Corporate Trust Office of the Trustee.

15

The Company may also from time to time designate one or more other offices or agencies where a Series of Notes may be presented or surrendered for any or all such purposes and may from time to time rescind such designations; *provided, however*, that no such designation or rescission will in any manner relieve the Company of its obligation to maintain an office or agency in the Borough of Manhattan, the City of New York for such purposes. The Company will give prompt written notice to the Trustee for such Series of Notes of any such designation or rescission and of any change in the location of any such other office or agency.

With respect to each Series of Notes, the Company hereby designates the Corporate Trust Office of the Trustee as one such office or agency of the Company in accordance with Section 2.04.

Section 4.03 Compliance Certificate.

(a) The Company shall deliver to the Trustee with respect to such Series, within 120 days after the end of each fiscal year, an Officer's Certificate stating that a review of the activities of the Company and its Subsidiaries during the preceding fiscal year has been made under the supervision of the signing Officers with a view to

determining whether the Company has kept, observed, performed and fulfilled its obligations under this Indenture, and further stating, as to each such Officer signing such certificate, that to the best of his or her knowledge the Company has kept, observed, performed and fulfilled each and every covenant contained in this Indenture and is not in default in the performance or observance of any of the terms, provisions and conditions of this Indenture (or, if a Default or Event of Default shall have occurred, describing all such Defaults or Events of Default of which he or she may have knowledge and what action the Company is taking or proposes to take with respect thereto) and that to the best of his or her knowledge no event has occurred and remains in existence by reason of which payments on account of the principal of or interest, if any, on the Notes is prohibited or if such event has occurred, a description of the event and what action the Company is taking or proposes to take with respect thereto.

(b) The Company shall, so long as any of Series of Notes are outstanding, deliver to the Trustee with respect to such Series, as soon as possible, but in no event later than five days after any Officer becoming aware of any Default or Event of Default, an Officer's Certificate specifying such Default or Event of Default and what action the Company is taking or proposes to take with respect thereto.

Section 4.04 *Taxes.*

The Company will pay, prior to delinquency, all material taxes, assessments, and governmental levies except such as are contested in good faith and by appropriate proceedings or where the failure to effect such payment is not adverse in any material respect to the Holders of the Notes.

Section 4.05 *Stay, Extension and Usury Laws.*

The Company covenants (to the extent that it may lawfully do so) that it will not, at any time insist upon, plead, or in any manner whatsoever claim or take the benefit or advantage of, any stay, extension or usury law wherever enacted, now or at any time hereafter in force, that may affect the covenants or the performance of this Indenture, and the Company (to the extent that it may lawfully do so), as applicable, hereby expressly waives all benefit or advantage of any such law, and covenants that it will not, by resort to any such law, hinder, delay or impede the execution of any power herein granted to the Trustee for such Notes, but will suffer and permit the execution of every such power as though no such law has been enacted.

ARTICLE 5
SUCCESSORS

Section 5.01 *Merger, Consolidation, or Sale of Assets.*

The Company shall not, directly or indirectly: (a) consolidate or merge with or into another Person; or

(b) sell, assign transfer, convey or otherwise dispose of all or substantially all of the properties or assets of the Company and its Subsidiaries taken as a whole, in one or more related transactions, to another Person, unless:

(1) either:

(A) the Company is the surviving corporation; or

(B) the Person formed by or surviving any such consolidation or merger (if other than the Company) or to which such sale, assignment, transfer, conveyance or other disposition has been made is a corporation, limited liability company, partnership, trust or other entity organized or existing under the laws of the United States, any state of the United States or the District of Columbia;

(2) the Person formed by or surviving any such consolidation or merger (if other than the Company) or the Person to which such sale, assignment, transfer, conveyance or other disposition has been made expressly assumes by a supplemental indenture, executed and delivered to the Trustee, in form reasonably satisfactory to the Trustee, all of the obligations of the Company under the Notes and this Indenture;

(3) immediately after such transaction and treating the Company's obligations in connection with or as a result of such transaction as having been incurred as of the time of such transaction, no Default or Event of Default shall have occurred and be continuing; and

(4) the Company or the surviving entity shall have delivered to the Trustee an Officer's Certificate and an Opinion of Counsel, to the effect that such consolidation, merger, sale, assignment, transfer, lease, conveyance or other disposition and, if a supplemental indenture is required in connection with such transaction, such supplemental indenture complies with the applicable provisions of this Indenture and that all conditions precedent in this Indenture relating to such transaction have been satisfied.

In addition, the Company will not, directly or indirectly, lease all or substantially all of its properties or assets, in one or more related transactions, to any other Person. This Section 5.01 will not apply to:

(1) a merger of the Company with an Affiliate solely for the purpose of reincorporating the Company in another jurisdiction; or

(2) any consolidation or merger, or any sale, assignment, transfer, conveyance, lease or other disposition of assets between or among the Company and its Subsidiaries.

Section 5.02 *Successor Corporation Substituted.*

Upon any consolidation or merger, or any sale, assignment, transfer, lease, conveyance or other disposition of all or substantially all of the properties or assets of the Company in a transaction that is subject to, and that complies with the provisions of, Section 5.01 hereof, the successor Person formed by such consolidation or into or with which the Company is merged or to which such sale, assignment, transfer, lease, conveyance or other disposition is made shall succeed to, and be substituted for (so that from and after the date of such consolidation, merger, sale, assignment, transfer, lease, conveyance or other disposition, the provisions of this Indenture referring to the "Company" shall refer instead to the successor Person and not to the Company), and may exercise every right and power of the Company under this Indenture with the same effect as if such successor Person had been named as the Company herein; *provided, however*, that the predecessor Company shall not be relieved from the obligation to pay the principal of and interest on any Series of Notes except in the case of a sale of all of the Company's assets in a transaction that is subject to, and that complies with the provisions of, Section 5.01 hereof.

ARTICLE 6
DEFAULTS AND REMEDIES

Section 6.01 *Events of Default.*

“Event of Default,” wherever used herein with respect to Notes of any Series, means any one of the following events, unless in the establishing Board Resolution, supplemental indenture or Officer’s Certificate, it is provided that such Series shall not have the benefit of said Event of Default:

(a) default in the payment of any interest on any Note of that Series when it becomes due and payable, and continuance of such default for a period of 30 days; or

(b) default in payment when due of the principal of, or premium, if any, on any Note of that Series; or

(c) default in the performance or breach of any covenant or warranty of the Company in this Indenture (other than a covenant or warranty that has been included in this Indenture solely for the benefit of Series of Notes other than that Series), which default continues uncured for a period of 60 days after written notice given by the Trustees for such Notes or Holders of such Notes, or the Company and the Trustee receive written notice from Holders of not less than a majority in aggregate principal amount of such Notes outstanding; or

(d) the Company:

(1) commences a voluntary case in bankruptcy,

(2) consents to the entry of an order for relief against it in an involuntary bankruptcy case,

(3) applies for or consents to the appointment of any custodian, receiver, trustee, conservator, liquidator, rehabilitator or similar officer of it or for all or substantially all of its property,

(4) makes a general assignment for the benefit of its creditors, or

(5) generally is unable to pay its debts as they become due;

(e) a court of competent jurisdiction enters an order or decree under any Bankruptcy Law that:

(1) is for relief against the Company;

18

(2) appoints a custodian of the Company or for all or substantially all of the property of the Company;

(3) or orders the liquidation of the Company;

and the order or decree remains unstayed and in effect for 90 consecutive days; or

(f) any other Event of Default provided with respect to Notes of that Series, which is specified in a Board Resolution, a supplemental indenture hereto or an Officer’s Certificate, in accordance with Section 2.02.

Section 6.02 *Acceleration.*

If an Event of Default with respect to Notes of any Series at the time outstanding occurs and is continuing (other than an Event of Default referred to in Section 6.01(d) or (e)) then in every such case the Trustee or the Holders of not less than 25% in aggregate principal amount of the outstanding Notes of that Series may declare the principal amount (or, if any Notes of that Series are Discount Notes, such portion of the principal amount as may be specified in the terms of such Notes) of and accrued and unpaid interest, if any, on all of the Notes of that Series to be due and payable immediately, by a notice in writing to the Company (and to the Trustee if given by Holders), and upon any such declaration such principal amount (or specified amount) and accrued and unpaid interest, if any, shall become immediately due and payable. If an Event of Default specified in Section 6.01(d) or (e) shall occur, the principal amount (or specified amount) of and accrued and unpaid interest, if any, on all outstanding Notes shall *ipso facto* become and be immediately due and payable without any declaration or other act on the part of the Trustee or any Holder.

At any time after such a declaration of acceleration with respect to any Series has been made, the Holders of a majority in principal amount of the outstanding Notes of that Series, by written notice to the Company and the Trustee, may rescind and annul such declaration and its consequences if the rescission would not conflict with any judgment or decree and if all existing Events of Default (except nonpayment of principal, interest or premium that has become due solely because of the acceleration) have been cured or waived and all sums paid or advanced by the Trustee hereunder and the reasonable compensation expenses and disbursements of the Trustee and its agents and counsel have been paid.

No such rescission shall affect any subsequent Default or impair any right consequent thereon.

Section 6.03 *Other Remedies.*

If an Event of Default with respect to Notes of any Series at the time outstanding occurs and is continuing, the Trustee may pursue any available remedy to collect the payment of principal, premium, if any, and interest on such Notes or to enforce the performance of any provision of such Notes or this Indenture.

The Trustee may maintain a proceeding even if it does not possess any of the Notes or does not produce any of them in the proceeding. A delay or omission by the Trustee or any Holder of a Note in exercising any right or remedy accruing upon an Event of Default shall not impair the right or remedy or constitute a waiver of or acquiescence in the Event of Default. All remedies are cumulative to the extent permitted by law.

Section 6.04 *Waiver of Past Defaults.*

The Holders of a majority in aggregate principal amount of the Notes of any Series then outstanding by notice to the Trustee may on behalf of the Holders of all of the Notes waive any existing Default or Event of Default and its consequences under this Indenture except a continuing Default or Event of Default in the payment of premium or interest on, or the principal of, the Notes (including in connection with an offer to purchase); *provided, however*, that the Holders of a majority in aggregate principal amount of the then outstanding Notes of any Series may rescind an acceleration of such Notes and its consequences, including any related payment default that resulted from such acceleration. Upon any such waiver, such Default or Event of Default shall cease to exist, and any Event of Default arising therefrom shall be deemed to have been cured for every purpose of this Indenture, but no such waiver shall extend to any subsequent or other Default or Event of Default or impair any right consequent thereon.

19

Section 6.05 *Control by Majority.*

Holders of a majority in aggregate principal amount of the then outstanding Notes of any Series may in writing direct the time, method and place of conducting any proceeding for exercising any remedy available to the Trustee or exercising any trust or power conferred on it, subject to Section 7.02(f). However, the Trustee may refuse to follow any direction that conflicts with law or this Indenture that the Trustee determines may be unduly prejudicial to the rights of other Holders of Notes or that may involve the Trustee in personal liability.

Section 6.06 Limitation on Suits.

A Holder of any Series of Notes may pursue a remedy with respect to this Indenture or the Notes only if:

- (a) the Holder of a Note gives to the Trustee written notice of a continuing Event of Default;
- (b) the Holders of at least 25% in aggregate principal amount of the then outstanding Notes of such Series make a written request to the Trustee to pursue the remedy;
- (c) such Holder of a Note or Holders of Notes offer and, if requested, provide to the Trustee indemnity satisfactory to the Trustee against any loss, liability or expense;
- (d) the Trustee does not comply with the request within 60 days after receipt of the request and the offer and, if requested, the provision of indemnity; and
- (e) during such 60-day period the Holders of a majority in aggregate principal amount of the then outstanding Notes do not give the Trustee a direction inconsistent with the request.

A Holder of any Series of Notes may not use this Indenture to prejudice the rights of another Holder of such Series of Notes or to obtain a preference or priority over another Holder of Notes of such Series.

Section 6.07 Rights of Holders of Notes to Receive Payment.

Notwithstanding any other provision of this Indenture, the right of any Holder of a Note to receive payment of principal, premium, if any, and interest on the Note, on or after the respective due dates expressed in the Note (including in connection with an offer to purchase), or to bring suit for the enforcement of any such payment on or after such respective dates, shall not be impaired or affected without the consent of such Holder.

20

Section 6.08 Collection Suit by Trustee.

If an Event of Default specified in Section 6.01(a) or (b) hereof occurs and is continuing, the Trustee is authorized to recover judgment in its own name and as trustee of an express trust against the Company for the whole amount of principal of, premium, if any, and interest remaining unpaid on, the Notes and interest on overdue principal and, to the extent lawful, interest and such further amount as shall be sufficient to cover the costs and expenses of collection, including the reasonable compensation, expenses, disbursements and advances of the Trustee, its agents and counsel.

Section 6.09 Trustee May File Proofs of Claim.

The Trustee for each Series of Notes is authorized to file such proofs of claim and other papers or documents as may be necessary or advisable in order to have the claims of the Trustee (including any claim for the reasonable compensation, expenses, disbursements and advances of the Trustee its agents and counsel) and the Holders of the Notes allowed in any judicial proceedings relative to the Company (or any other obligor upon the Notes), its creditors or its property and shall be entitled and empowered to collect, receive and distribute any money or other property payable or deliverable on any such claims and any custodian in any such judicial proceeding is hereby authorized by each Holder to make such payments to the Trustee, and in the event that the Trustee shall consent to the making of such payments directly to the Holders, to pay to the Trustee any amount due to it for the reasonable compensation, expenses, disbursements and advances of the Trustee, its agents and counsel, and any other amounts due the Trustee under Section 7.07 hereof. To the extent that the payment of any such compensation, expenses, disbursements and advances of the Trustee, its agents and counsel, and any other amounts due the Trustee under Section 7.07 hereof out of the estate in any such proceeding, shall be denied for any reason, payment of the same shall be secured by a lien on, and shall be paid out of, any and all distributions, dividends, money, securities and other properties that the Holders may be entitled to receive in such proceeding whether in liquidation or under any plan of reorganization or arrangement or otherwise. Nothing herein contained shall be deemed to authorize the Trustee to authorize or consent to or accept or adopt on behalf of any Holder any plan of reorganization, arrangement, adjustment or composition affecting the Notes or the rights of any Holder, or to authorize the Trustee to vote in respect of the claim of any Holder in any such proceeding.

Section 6.10 Priorities.

If the Trustee collects any money pursuant to this Article 6, it shall pay out the money in the following order:

First: to the Trustee, its agents and attorneys for amounts due under Section 7.07 hereof, including payment of all compensation, expenses and liabilities incurred, and all advances made, by the Trustee and the costs and expenses of collection;

Second: to Holders of Notes for amounts due and unpaid on the Notes for principal, premium, if any, and interest, ratably, without preference or priority of any kind, according to the amounts due and payable on the Notes for principal, premium, if any and interest, respectively; and

Third: to the Company or to such party as a court of competent jurisdiction shall direct.

The Trustee may fix a record date and payment date for any payment to Holders of Notes pursuant to this Section 6.10.

21

Section 6.11 Undertaking for Costs.

In any suit for the enforcement of any right or remedy under this Indenture or in any suit against the Trustee for any action taken or omitted by it as a Trustee, a court in its discretion may require the filing by any party litigant in the suit of an undertaking to pay the costs of the suit, and the court in its discretion may assess reasonable costs, including reasonable attorneys' fees and expenses, against any party litigant in the suit, having due regard to the merits and good faith of the claims or defenses made by the party litigant. This Section does not apply to a suit by the Trustee, a suit by a Holder of a Note pursuant to Section 6.07 hereof, or a suit by Holders of more than 10% in principal amount of the then outstanding Notes of any Series.

Section 6.12 Unconditional Right of Holders to Receive Principal, Premium, and Interest.

Notwithstanding any other provision in this Indenture, the Holder of any Note will have the right, which is absolute and unconditional, to receive payment of the principal of and any premium and (subject to Section 2.13) interest on such Note on the respective stated maturities expressed in such Note (or, in the case of redemption, on the Redemption Date) and to institute suit for the enforcement of any such payment, and such rights may not be impaired without the consent of such Holder.

Section 6.13 *Restoration of Rights and Remedies.*

If the Trustee or any Holder has instituted any proceeding to enforce any right or remedy under this Indenture and such proceeding has been discontinued or abandoned for any reason, or has been determined adversely to the Trustee or to such Holder, then and in every such case, subject to any determination in such proceeding, the Company, the Trustee, and the Holders will be restored severally and respectively to their former positions hereunder and thereafter all rights and remedies of the Trustee and the Holders will continue as though no such proceeding had been instituted.

ARTICLE 7
TRUSTEE

Section 7.01 *Duties of Trustee.*

(a) If an Event of Default has occurred and is continuing, the Trustee will exercise such of the rights and powers vested in it by this Indenture, and use the same degree of care and skill in its exercise, as a prudent person would exercise or use under the circumstances in the conduct of such person's own affairs.

(b) Except during the continuance of an Event of Default the duties of the Trustee will be determined solely by the express provisions of this Indenture and the Trustee need perform only those duties that are specifically set forth in this Indenture and no others, and no implied covenants or obligations shall be read into this Indenture against the Trustee; and

(c) In the absence of bad faith on its part, the Trustee may conclusively rely, as to the truth of the statements and the correctness of the opinions expressed therein, upon certificates or opinions furnished to the Trustee and conforming to the requirements of this Indenture. However, the Trustee will examine the certificates and opinions to determine whether or not they conform to the requirements of this Indenture (but need not confirm or investigate the accuracy of mathematical calculations or other facts stated thereon).

22

(d) The Trustee may not be relieved from liabilities for its own grossly negligent action, its own grossly negligent failure to act, or its own willful misconduct, except that:

(1) this paragraph does not limit the effect of paragraph (b) of this Section 7.01;

(2) the Trustee will not be liable for any error of judgment made in good faith by a Responsible Officer, unless it is proved that the Trustee was negligent in ascertaining the pertinent facts;

(3) the Trustee will not be liable with respect to any action it takes or omits to take in good faith in accordance with a direction received by it pursuant to Section 6.05 hereof; and

(4) no provision of this Indenture will require the Trustee to expend or risk its own funds or incur any liability. The Trustee will be under no obligation to exercise any of its rights and powers under this Indenture at the request of any Holders, unless such Holder has offered to the Trustee security and indemnity satisfactory to it against any loss, liability or expense.

(e) Whether or not therein expressly so provided, every provision of this Indenture that in any way relates to the Trustee is subject to paragraphs (a), (b), (c) and (d) of this Section 7.01.

(f) The Trustee will not be liable for interest on any money received by it except as the Trustee may agree in writing with the Company. Money held in trust by the Trustee need not be segregated from other funds except to the extent required by law.

Section 7.02 *Rights of Trustee.*

(a) The Trustee may conclusively rely upon any document believed by it to be genuine and to have been signed or presented by the proper Person. The Trustee need not investigate any fact or matter stated in the document.

(b) Before the Trustee acts or refrains from acting, it may require an Officer's Certificate or an Opinion of Counsel or both. The Trustee will not be liable for any action it takes or omits to take in good faith in reliance on such Officer's Certificate or Opinion of Counsel. The Trustee may consult with counsel and the written advice of such counsel or any Opinion of Counsel will be full and complete authorization and protection from liability in respect of any action taken, suffered or omitted by it hereunder in good faith and in reliance thereon.

(c) The Trustee may act through its attorneys and agents and will not be responsible for the misconduct or negligence of any attorney or agent appointed with due care.

(d) The Trustee will not be liable for any action it takes or omits to take in good faith that it believes to be authorized or within the rights or powers conferred upon it by this Indenture.

(e) Unless otherwise specifically provided in this Indenture any demand, request, direction or notice from the Company will be sufficient if signed by an Officer of the Company.

(f) The Trustee will be under no obligation to exercise any of the rights or powers vested in it by this Indenture at the request or direction of any of the Holders unless such Holders have offered to the Trustee reasonable indemnity or security against the losses, liabilities and expenses that might be incurred by it in compliance with such request or direction.

(g) In no event shall the Trustee be responsible or liable for special, indirect, punitive or consequential loss or damage of any kind whatsoever (including, but not limited to, loss of profit) irrespective of whether the Trustee has been advised of the likelihood of such loss or damage and regardless of the form of action.

23

(h) The rights, privileges, protections, immunities and benefits given to the Trustee, including, without limitation, its right to be indemnified, are extended to,

and shall be enforceable by, the Trustee in each of its capacities hereunder, and each agent, custodian and other Person employed to act hereunder.

(i) The permissive rights of the Trustee to take the actions permitted by this Indenture will not be construed as an obligation or duty to do so.

(j) The Trustee may request that the Corporation deliver an Officer's Certificate setting forth the names of the individuals and/or titles of officers authorized at such time to take specified actions pursuant to this Indenture, which Officer's Certificate may be signed by any person authorized to sign an Officer's Certificate, including any person specified as so authorized in any such certificate previously delivered and not superseded.

(k) The Trustee shall have no duty to inquire as to the performance of the Corporation with respect to the covenants contained herein. The Trustee may assume without inquiry in the absence of written notice to the contrary that the Issuer is duly complying with its obligations contained in this Indenture required to be performed and observed by it, and that no Default or Event of Default or other event which would require repayment of the Notes has occurred.

(l) The rights, privileges, protections, immunities and benefits given to the Trustee, including, without limitation, its right to be indemnified, are extended to, and shall be enforceable by, the Trustee in each of its capacities hereunder, and each agent, custodian and other Person employed to act hereunder.

Section 7.03 Individual Rights of Trustee.

The Trustee in its individual or any other capacity may become the owner or pledgee of Notes and may otherwise deal with the Company or any Affiliate of the Company with the same rights it would have if it were not Trustee. However, in the event that the Trustee acquires any conflicting interest it must eliminate such conflict within 90 days, apply to the SEC for permission to continue as trustee (if this Indenture has been qualified under the TIA) or resign. Any Agent may do the same with like rights and duties. The Trustee is also subject to Sections 7.10 and 7.11 hereof.

Section 7.04 Trustee's Disclaimer and Acceptance of Facsimile Instructions.

The Trustee will not be responsible for and makes no representation as to the validity or adequacy of this Indenture or the Notes, it shall not be accountable for the Company's use of the proceeds from the Notes or any money paid to the Company or upon the Company's direction under any provision of this Indenture, it will not be responsible for the use or application of any money received by any Paying Agent other than the Trustee, and it will not be responsible for any statement or recital herein or any statement in the Notes or any other document in connection with the sale of the Notes or pursuant to this Indenture other than its certificate of authentication.

The Trustee agrees to accept and act upon instructions it receives by facsimile pursuant to this Indenture, provided that promptly following delivery of such facsimile instructions, the originally executed instructions shall be delivered to the Trustee, and such originally executed instructions shall be signed by an authorized person.

Section 7.05 Notice of Defaults.

If a Default or Event of Default occurs and is continuing and if it is known to the Trustee (in accordance with Section 7.02(m)), the Trustee will deliver to Holders of Notes a notice of the Default or Event of Default within 90 days after it occurs. Except in the case of a Default or Event of Default in payment of principal of, premium, if any, or interest on, any Note, the Trustee may withhold the notice from Holders of the Notes if and so long as a committee of its Responsible Officers in good faith determines that withholding the notice is in the interests of the Holders of the Notes.

24

Section 7.06 Reports by Trustee to Holders of the Notes.

(a) Within 60 days after the first day of the Company's fiscal year beginning with the October 2 following the date of this Indenture, and for so long as Notes remain outstanding, the Trustee will mail to the Holders of the Notes a brief report dated as of such reporting date that complies with TIA § 313(a) (but if no event described in TIA § 313(a) has occurred within the twelve months preceding the reporting date, no report need be transmitted). The Trustee also will comply with TIA § 313(b)(2). The Trustee will also transmit by mail all reports as required by TIA § 313(c).

(b) A copy of each report at the time of its mailing to the Holders of Notes will be mailed by the Trustee to the Company and filed by the Trustee with the SEC and each stock exchange on which the Notes are listed in accordance with TIA § 313(d). The Company will promptly notify the Trustee when the Notes are listed on any stock exchange or delisted therefrom.

Section 7.07 Compensation and Indemnity.

(a) The Company will pay to the Trustee from time to time such compensation for its acceptance of this Indenture and services hereunder as the Trustee and the Company may agree from time to time in writing. The Trustee's compensation will not be limited by any law on compensation of a trustee of an express trust. The Company will reimburse the Trustee promptly upon request for all reasonable disbursements, advances and expenses incurred or made by it in addition to the compensation for its services. Such expenses will include the reasonable compensation, disbursements and expenses of the Trustee's agents and counsel.

(b) The Company will indemnify the Trustee, its officers, directors, employees, representatives and agents from and against any and all losses, liabilities or expenses incurred by it arising out of or in connection with the acceptance or administration of its duties under this Indenture, including the costs and expenses of enforcing this Indenture against the Company (including this Section 7.07) and defending itself against any claim (whether asserted by the Company, any Holder or any other Person) or liability in connection with the exercise or performance of any of its powers or duties hereunder, except to the extent any such loss, liability or expense may be attributable to its negligence or bad faith. The Trustee will notify the Company promptly of any claim for which it may seek indemnity. Failure by the Trustee to so notify the Company will not relieve the Company of its obligations hereunder. The Company will defend the claim and the Trustee will cooperate in the defense. The Trustee may have separate counsel and the Company will pay the reasonable fees and expenses of such counsel. The Company need not pay for any settlement made without its consent, which consent will not be unreasonably withheld.

(c) The obligations of the Company under this Section 7.07 will survive the satisfaction and discharge of this Indenture.

(d) To secure the Company's payment obligations in this Section 7.07, the Trustee will have a lien prior to the Notes on all money or property held or collected by the Trustee. Such lien will survive the satisfaction and discharge of this Indenture.

(e) When the Trustee incurs expenses or renders services after an Event of Default specified in Section 6.01(d) or (e) hereof occurs, the expenses and the compensation for the services (including the fees and expenses of its agents and counsel) are intended to constitute expenses of administration under any Bankruptcy Law.

25

(f) The Trustee will comply with the provisions of TIA § 313(b)(2) to the extent applicable.

Section 7.08 Replacement of Trustee.

(a) A resignation or removal of the Trustee and appointment of a successor Trustee will become effective only upon the successor Trustee's acceptance of appointment as provided in this Section 7.08.

(b) The Trustee may resign in writing at any time and be discharged from the trust hereby created by so notifying the Company. The Holders of a majority in aggregate principal amount of the then outstanding Notes may remove the Trustee by so notifying the Trustee and the Company with 30 days prior notice in writing. The Company may remove the Trustee with 30 days prior written notice if:

- (1) the Trustee fails to comply with Section 7.10 hereof;
- (2) the Trustee is adjudged a bankrupt or an insolvent or an order for relief is entered with respect to the Trustee under any Bankruptcy Law;
- (3) a custodian or public officer takes charge of the Trustee or its property; or
- (4) the Trustee becomes incapable of acting.

(c) If the Trustee resigns or is removed or if a vacancy exists in the office of Trustee for any reason, the Company will promptly appoint a successor Trustee. Within one year after the successor Trustee takes office, the Holders of a majority in aggregate principal amount of the then outstanding Notes may appoint a successor Trustee to replace the successor Trustee appointed by the Company.

(d) If a successor Trustee does not take office within 60 days after the retiring Trustee resigns or is removed, the retiring Trustee, at the expense of the Company, the Company, or the Holders of at least 10% in aggregate principal amount of the then outstanding Notes may petition any court of competent jurisdiction, at the expense of the Company, for the appointment of a successor Trustee.

(e) If the Trustee, after written request by any Holder who has been a Holder for at least six months, fails to comply with Section 7.10 hereof, such Holder may petition any court of competent jurisdiction for the removal of the Trustee and the appointment of a successor Trustee.

(f) A successor Trustee will deliver a written acceptance of its appointment to the retiring Trustee and to the Company. Thereupon, the resignation or removal of the retiring Trustee will become effective, and the successor Trustee will have all the rights, powers and duties of the Trustee under this Indenture. The successor Trustee will mail a notice of its succession to Holders. The retiring Trustee will promptly transfer all property held by it as Trustee to the successor Trustee; *provided all* sums owing to the Trustee hereunder have been paid and subject to the lien provided for in Section 7.07 hereof. Notwithstanding replacement of the Trustee pursuant to this Section 7.08, the Company's obligations under Section 7.07 hereof will continue for the benefit of the retiring Trustee.

26

Section 7.09 *Successor Trustee by Merger, etc.*

If the Trustee consolidates, merges or converts into, or transfers all or substantially all of its corporate trust business to, another corporation, the successor corporation without any further act will be the successor Trustee.

Section 7.10 *Eligibility; Disqualification.*

There will at all times be a Trustee hereunder that is a corporation organized and doing business under the laws of the United States of America or of any state thereof that is authorized under such laws to exercise corporate trustee power, that is subject to supervision or examination by federal or state authorities and that has a combined capital and surplus of at least \$100.0 million as set forth in its most recent published annual report of condition.

This Indenture will always have a Trustee who satisfies the requirements of TIA § 310(a)(1), (2) and (5). The Trustee is subject to TIA § 310(b).

Section 7.11 *Preferential Collection of Claims Against Company.*

The Trustee is subject to TIA § 311(a), excluding any creditor relationship listed in TIA § 311(b). A Trustee who has resigned or been removed shall be subject to TIA § 311(a) to the extent indicated therein.

ARTICLE 8 LEGAL DEFEASANCE AND COVENANT DEFEASANCE

Section 8.01 *Option to Effect Legal Defeasance or Covenant Defeasance.*

The Company may at any time, at the option of its Board of Directors evidenced by a resolution set forth in an Officer's Certificate, elect to have either Section 8.02 or 8.03 hereof be applied to all outstanding Notes upon compliance with the conditions set forth below in this Article 8.

Section 8.02 *Legal Defeasance.*

Upon the Company's exercise under Section 8.01 hereof of the option applicable to this Section 8.02, the Company will, subject to the satisfaction of the conditions set forth in Section 8.04 hereof, be deemed to have been discharged from its obligations with respect to all outstanding Notes of such Series on the date the conditions set forth below are satisfied (hereinafter, "*Legal Defeasance*"). For this purpose, Legal Defeasance means that the Company will be deemed to have paid and discharged the entire indebtedness represented by the outstanding Notes of such Series, which will thereafter be deemed to be "*outstanding*" only for the purposes of Section 8.05 hereof and the other Sections of this Indenture referred to in clauses (a) and (b) below, and to have satisfied all their other obligations under such Notes and this Indenture (and the Trustee, on written demand of and at the expense of the Company, shall execute proper instruments acknowledging the same), except for the following provisions which will survive until otherwise terminated or discharged hereunder:

- (a) the rights of Holders of outstanding Notes to receive payments in respect of the principal of, or interest or premium, if any, on, such Notes when such payments are due from the trust referred to in Section 8.04 hereof;
- (b) the Company's obligations with respect to such Notes under Article 2 and Section 4.02 hereof;

27

- (c) the rights, powers, trusts, duties and immunities of the Trustee hereunder and the Company's obligations in connection therewith; and
- (d) this Article 8.

Subject to compliance with this Article 8, the Company may exercise its option under this Section 8.02 notwithstanding the prior exercise of its option under Section 8.03 hereof.

Section 8.03 Covenant Defeasance.

Upon the Company's exercise under Section 8.01 hereof of the option applicable to this Section 8.03, the Company will, subject to the satisfaction of the conditions set forth in Section 8.04 hereof, be released from their obligations under any covenants contained in Article 4 with respect to the outstanding Notes of the applicable Series on and after the date the conditions set forth in are satisfied (hereinafter, "*Covenant Defeasance*"), and the Notes shall thereafter be deemed not "outstanding" for the purposes of any direction, waiver, consent or declaration or act of Holders (and the consequences of any thereof) in connection with such covenants, but shall continue to be deemed "*outstanding*" for all other purposes hereunder (it being understood that such Notes shall not be deemed outstanding for accounting purposes). For this purpose, *Covenant Defeasance* means that, with respect to the outstanding Notes of such Series, the Company may omit to comply with and shall have no liability in respect of any term, condition or limitation set forth in any such covenant, whether directly or indirectly, by reason of any reference elsewhere herein to any such covenant or by reason of any reference in any such covenant to any other provision herein or in any other document and such omission to comply shall not constitute a Default or an Event of Default under Section 6.01 hereof, but, except as specified above, the remainder of this Indenture and such Notes shall be unaffected thereby. In addition, upon the Company's exercise under Section 8.01 hereof of the option applicable to this Section 8.03 hereof, subject to the satisfaction of the conditions set forth in Section 8.04 hereof, Section 6.01(c) hereof shall not constitute an Event of Default.

Section 8.04 Conditions to Legal or Covenant Defeasance.

In order to exercise either Legal Defeasance or Covenant Defeasance under either Section 8.02 or 8.03 hereof:

(a) the Company must irrevocably deposit with the Trustee, in trust, for the benefit of the Holders, cash in U.S. dollars, non-callable Government Securities, or a combination thereof, in such amounts as will be sufficient, in the opinion of a nationally recognized investment bank, appraisal firm, or firm of independent public accountants, to pay the principal of, premium, if any, and interest on, the outstanding Notes on the stated date for payment thereof or on the applicable redemption date, as the case may be, and the Company must specify whether the Notes are being defeased to such stated date for payment or to a particular redemption date;

(b) in the case of an election under Section 8.02 hereof, the Company must deliver to the Trustee an Opinion of Counsel confirming that:

- (1) the Company has received from, or there has been published by, the Internal Revenue Service a ruling; or
- (2) since the date of this Indenture, there has been a change in the applicable federal income tax law,

in either case to the effect that, and based thereon such Opinion of Counsel shall confirm that, the beneficial owners of the outstanding Notes will not recognize income, gain or loss for federal income tax purposes as a result of such Legal Defeasance and will be subject to federal income tax on the same amounts, in the same manner and at the same times as would have been the case if such Legal Defeasance had not occurred;

28

(c) in the case of an election under Section 8.03 hereof, the Company must deliver to the Trustee an Opinion of Counsel confirming that the beneficial owners of the outstanding Notes will not recognize income, gain or loss for federal income tax purposes as a result of such Covenant Defeasance and will be subject to federal income tax on the same amounts, in the same manner and at the same times as would have been the case if such Covenant Defeasance had not occurred;

(d) no Default or Event of Default shall have occurred and be continuing on the date of such deposit (other than a Default or Event of Default resulting from the borrowing of funds to be applied to such deposit) and the deposit will not result in a breach or violation of, or constitute a default under, any other instrument to which the Company is a party or by which the Company is bound;

(e) such Legal Defeasance or Covenant Defeasance will not result in a breach or violation of, or constitute a default under, any material agreement or instrument (other than this Indenture) to which the Company or any of its Subsidiaries is a party or by which the Company or any of its Subsidiaries is bound;

(f) the Company must deliver to the Trustee an Officer's Certificate stating that the deposit was not made by the Company with the intent of preferring the Holders of Notes over the other creditors of the Company with the intent of defeating, hindering, delaying or defrauding any creditors of the Company or others; and

(g) the Company must deliver to the Trustee an Officer's Certificate and an Opinion of Counsel, each stating that all conditions precedent relating to the Legal Defeasance or the Covenant Defeasance have been complied with.

Section 8.05 Deposited Money and Government Securities to be Held in Trust; Other Miscellaneous Provisions.

Subject to Section 8.06 hereof, all money and non-callable Government Securities (including the proceeds thereof) deposited with the Trustee (or other qualifying trustee, collectively for purposes of this Section 8.05, the "*Trustee*") pursuant to Section 8.04 hereof in respect of the outstanding Notes of any Series will be held in trust and applied by the Trustee, in accordance with the provisions of such Notes and this Indenture, to the payment, either directly or through any Paying Agent (including the Company acting as Paying Agent) as the Trustee may determine, to the Holders of such Notes of all sums due and to become due thereon in respect of principal, premium, if any, and interest; but such money need not be segregated from other funds except to the extent required by law.

The Company will pay and indemnify the Trustee against any tax, fee or other charge imposed on or assessed against the cash or non-callable Government Securities deposited pursuant to Section 8.04 hereof or the principal and interest received in respect thereof other than any such tax, fee or other charge which by law is for the account of the Holders of the outstanding Notes of the applicable Series.

Notwithstanding anything in this Article 8 to the contrary, the Trustee will deliver or pay to the Company from time to time upon the request of the Company any money or non-callable Government Securities held by it as provided in Section 8.04 hereof which, in the opinion of a nationally recognized firm of independent public accountants expressed in a written certification thereof delivered to the Trustee (which may be the opinion delivered under Section 8.04(a) hereof), are in excess of the amount thereof that would then be required to be deposited to effect an equivalent Legal Defeasance or Covenant Defeasance.

29

Section 8.06 Repayment to Company.

Any money deposited with the Trustee or any Paying Agent, or then held by the Company, in trust for the payment of the principal of, premium, if any, or interest on, any Series of Notes and remaining unclaimed for two years after such principal, premium, if any, or interest has become due and payable shall be paid to the Company on its request or (if then held by the Company) will be discharged from such trust, and the Holder of such Note will thereafter be permitted to look only to the Company for payment thereof, and all liability of the Trustee or such Paying Agent with respect to such trust money, and all liability of the Company as trustee thereof, will

thereupon *cease*; *provided, however*, that the Trustee or such Paying Agent, before being required to make any such repayment, may at the expense of the Company cause to be published once, in *The New York Times* and *The Wall Street Journal* (national edition), notice that such money remains unclaimed and that, after a date specified therein, which will not be less than 30 days from the date of such notification or publication, any unclaimed balance of such money then remaining will be repaid to the Company.

Section 8.07 *Reinstatement.*

If the Trustee or Paying Agent is unable to apply any U.S. dollars or non-callable Government Securities in accordance with Section 8.02 or 8.03 hereof, as the case may be, by reason of any order or judgment of any court or governmental authority enjoining, restraining or otherwise prohibiting such application, then the Company's obligations under this Indenture and the applicable Notes will be revived and reinstated as though no deposit had occurred pursuant to Section 8.02 or 8.03 hereof until such time as the Trustee or Paying Agent is permitted to apply all such money in accordance with Section 8.02 or 8.03 hereof, as the case may be; *provided, however*; that, if the Company makes any payment of principal of, premium, if any, or interest on, any Note following the reinstatement of its obligations, the Company will be subrogated to the rights of the Holders of such Notes to receive such payment from the money held by the Trustee Paying Agent.

ARTICLE 9
AMENDMENT, SUPPLEMENT AND WAIVER

Section 9.01 *Without Consent of Holders of Notes.*

Notwithstanding Section 9.02 of this Indenture, the Company and the Trustee may amend or supplement this Indenture or the Notes of one or more Series without the consent of any Holder of Note:

(a) to cure any ambiguity or to correct or supplement any provision contained herein or in any supplemental indenture that may be defective or inconsistent with any other provision contained herein or in any supplemental indenture; *provided, however*, that any amendment made solely to conform the provisions of this Indenture to the description of the Notes contained in the prospectus or other offering document pursuant to which the Notes of one or more Series were sold will not be deemed to adversely affect the interests of the Holders of such Notes, as evidenced by an Officer's Certificate stating that such text constitutes an unintended conflict with the description of the corresponding provision in the offering document;

(b) to provide for uncertificated Notes in addition to or in place of certificated Notes;

(c) to provide for the assumption of the Company's obligations to the Holders of the Notes by a successor to the Company pursuant to Article 5 hereof;

30

(d) to make any change that would provide any additional rights or benefits to the Holders of Notes or that does not adversely affect the legal rights hereunder of any Holder;

(e) to comply with requirements of the SEC in order to effect or maintain the qualification of this Indenture under the TIA;

(f) to provide for the issuance of and establish the form and terms and conditions of Notes of any Series as permitted by this Indenture;

(g) to add guarantees with respect to the Notes of any Series or to provide security for the Notes of any Series; or

(h) to evidence and provide for the acceptance of appointment hereunder by a successor Trustee with respect to the Notes of one or more Series and to add to or change any of the provisions of this Indenture as shall be necessary to provide for or facilitate the administration of the trusts hereunder by more than one Trustee.

Upon the request of the Company accompanied by a Board Resolution authorizing the execution of any such amended or supplemental indenture, and upon receipt by the Trustee of the documents described in Section 7.02 hereof, the Trustee will join with the Company in the execution of any amended or supplemental indenture authorized or permitted by the terms of this Indenture and to make any further appropriate agreements and stipulations that may be therein contained, but the Trustee will not be obligated to enter into such amended or supplemental indenture that affects its own rights, duties or immunities under this Indenture or otherwise.

Section 9.02 *With Consent of Holders of Notes.*

The Company and the Trustee may enter into a supplemental indenture with the written consent of the Holders of at least a majority in aggregate principal amount of the outstanding Notes of each Series affected by such supplemental indenture (including consents obtained in connection with a tender offer or exchange offer for the Notes of such Series), for the purpose of adding any provisions to or changing in any manner or eliminating any of the provisions of this Indenture or of any supplemental indenture or of modifying in any manner the rights of the Holders of Notes of each such Series. Except as otherwise provided herein, the Holders of at least a majority in aggregate principal amount of the outstanding Notes of each Series, by notice to the Trustee (including consents obtained in connection with a tender offer or exchange offer for the Notes of such Series) may waive compliance by the Company with any provision of this Indenture or the Notes with respect to such Series.

It shall not be necessary for the consent of the Holders of Notes under this Section 9.02 to approve the particular form of any proposed supplemental indenture or waiver, but it shall be sufficient if such consent approves the substance thereof. Upon the request of the Company accompanied by a resolution of its Board of Directors authorizing the execution of any such amended or supplemental indenture, and upon the filing with the Trustee of evidence satisfactory to the Trustee of the consent of the Holders of Notes as aforesaid, and upon receipt by the Trustee of the documents described in Section 7.02 hereof, the Trustee will join with the Company in the execution of such amended or supplemental indenture unless such amended or supplemental indenture directly affects the Trustee's own rights, duties or immunities under this Indenture or otherwise, in which case the Trustee may in its discretion, but will not be obligated to, enter into such amended or supplemental Indenture.

After a supplemental indenture or waiver under this section becomes effective, the Company shall mail to the Holders of Notes affected thereby a notice briefly describing the supplemental indenture or waiver. Any failure by the Company to mail such notice, or any defect therein, shall not, however, in any way impair or affect the validity of any such supplemental indenture or waiver. However, without the consent of each Holder affected, an amendment or waiver under this Section 9.02 may not, with respect to any Notes held by a non-consenting Holder:

31

(a) reduce the principal amount or change the fixed maturity of any Note or alter or waive any of the provisions with respect to the redemption or repurchase of the Notes;

(b) reduce the rate (or alter the method of computation) of or extend the time for payment of interest, including default interest, on any Note;

(c) waive a Default or Event of Default in the payment of principal of or premium, if any, or interest on the Notes, except a rescission of acceleration of the Notes by the holders of at least a majority in aggregate principal amount of the then outstanding Notes and a waiver of the payment default that resulted from such acceleration;

(d) make the principal of or premium, if any or interest on any Note payable in currency other than that stated in the Notes;

(e) make any change in the provisions of this Indenture relating to waivers of past Defaults or the rights of Holders of the Notes to receive payments of principal of or premium, interest, if any, on the Notes and to institute suit for the enforcement of any such payments;

(f) make any change in the foregoing amendment and waiver provisions; or

(g) reduce the percentage in principal amount of any Notes, the consent of the Holders of which is required for any of the foregoing modifications or otherwise necessary to modify or amend the Indenture or to waive any past Defaults.

Section 9.03 Compliance with Trust Indenture Act.

Every amendment to this Indenture or the Notes of one or more Series will be set forth in a supplemental indenture hereto that complies with the TIA as then in effect.

Section 9.04 Revocation and Effect of Consents.

Until an amendment or waiver becomes effective, a consent to it by a Holder of a Note is a continuing consent by the Holder of a Note and every subsequent Holder of a Note or portion of a Note that evidences the same debt as the consenting Holder's Note, even if notation of the consent is not made on any Note. However, any such Holder of a Note or subsequent Holder of a Note may revoke the consent as to its Note if the Trustee receives written notice of revocation before the date the amendment or waiver becomes effective. An amendment or waiver becomes effective in accordance with its terms and thereafter binds every Holder.

Section 9.05 Notation on or Exchange of Notes.

The Trustee may place an appropriate notation about an amendment or waiver on any Note of any Series thereafter authenticated. The Company in exchange for Notes of that Series may issue and the Trustee shall authenticate upon request new Notes of that Series that reflect the amendment or waiver.

Failure to make the appropriate notation or issue a new Note will not affect the validity and effect of such amendment or waiver.

32

Section 9.06 Trustee to Sign Amendments, etc.

In executing, or accepting the additional trusts created by, any supplemental indenture permitted by this Article or the modifications thereby of the trusts created by this Indenture, the Trustee shall be entitled to receive, and (subject to Section 7.01) shall be fully protected in relying upon, in addition to the documents required by Section 11.04, an Opinion of Counsel and an Officer's Certificate each stating that the execution of such supplemental indenture is authorized or permitted by this Indenture. The Trustee shall sign all supplemental indentures, except that the Trustee need not sign any supplemental indenture that adversely affects its rights.

ARTICLE 10
SATISFACTION AND DISCHARGE

Section 10.01 Satisfaction and Discharge.

This Indenture will be discharged and will cease to be of further effect as to a Series of Notes issued hereunder, when:

(a) either:

(1) all such Notes that have been authenticated, except last, stolen or destroyed Notes that have been replaced or paid and Notes for whose payment money has theretofore been deposited in trust and thereafter repaid to the Company, have been delivered to the Trustee for cancellation; or

(2) all such Notes that have not been delivered to the Trustee for cancellation have become due and payable by reason of the mailing of a notice of redemption or otherwise or will become due and payable within one year and the Company has irrevocably deposited or caused to be deposited with the Trustee as trust funds in trust solely for the benefit of the Holders of such Notes, cash in U.S. dollars, non-callable Government Securities, or a combination thereof, in such amounts as will be sufficient, without consideration of any reinvestment of interest, to pay and discharge the entire indebtedness on the Notes not delivered to the Trustee for cancellation for principal, premium, if any, and accrued interest to the date of maturity or redemption;

(b) no Default or Event of Default has occurred and is continuing on the date of such deposit (other than a Default or Event of Default resulting from the borrowing of funds to be applied to such deposit) and the deposit will not result in a breach or violation of, or constitute, a default under, any other instrument to which the Company is a party or by which the Company is bound;

(c) the Company has paid or caused to be paid all sums payable by it under this Indenture; and

(d) the Company has delivered irrevocable instructions to the Trustee under this Indenture to apply the deposited money toward the payment of the Notes at maturity or on the redemption date, as the case may be.

In addition, the Company must deliver an Officer's Certificate and an Opinion of Counsel to the Trustee stating that all conditions precedent to satisfaction and discharge have been satisfied.

33

Notwithstanding the satisfaction and discharge of this Indenture, if money has been deposited with the Trustee pursuant to subclause (2) of clause (a) of this Section 10.01, the provisions of Sections 10.02 and 8.06 hereof will survive until such funds are properly applied. In addition, nothing in this Section 10.01 will be deemed to discharge those provisions of Section 7.07 hereof, that, by their terms, survive the satisfaction and discharge of this Indenture.

Section 10.02 Application of Trust Money.

Subject to the provisions of Section 8.06 hereof, all money deposited with the Trustee pursuant to Section 10.01 hereof shall be held in trust and applied by it, in accordance with the provisions of the Notes with respect to which such deposit was made and this Indenture, to the payment, either directly or through any Paying Agent (including the Company acting as its own Paying Agent) as the Trustee may determine, to the Persons entitled thereto, of the principal (and premium, if any) and interest for whose payment such money has been deposited with the Trustee; but such money need not be segregated from other funds except to the extent required by law.

If the Trustee or Paying Agent is unable to apply any money or Government Securities in accordance with Section 10.01 hereof by reason of any legal proceeding or by reason of any order or judgment of any court or governmental authority enjoining, restraining or otherwise prohibiting such application, the Company's obligations under this Indenture and the applicable Notes shall be revived and reinstated as though no deposit had occurred pursuant to Section 10.01 hereof; *provided* that if the Company has made any payment of principal of, premium, if any, or interest on, any Notes because of the reinstatement of its obligations, the Company shall be subrogated to the rights of the Holders of such Notes to receive such payment from the money or Government Securities held by the Trustee or Paying Agent.

ARTICLE 11
MISCELLANEOUS

Section 11.01 *Trust Indenture Act Controls.*

If any provision of this Indenture limits, qualifies or conflicts with the duties imposed by TIA § 318(c), the imposed duties will control.

Section 11.02 *Notices.*

Any notice or communication by the Company or the Trustee to the others is duly given if in writing and delivered in Person or by first class mail (registered or certified, return receipt requested), facsimile transmission or overnight air courier guaranteeing next day delivery, to the others' address: If to the Company:

Perma-Fix Environmental Services, Inc.
8302 Dunwoody Place, #250
Atlanta, Georgia 30350
Attention: Ben Nacarrato, Executive Vice President and Chief Financial Officer

With a copy to:

Step toe & Johnson PLLC
210 Park Avenue, Suite 2300
Oklahoma City, Oklahoma 73102
Attention: Irwin Steinhorn

If to the Trustee:

[•]
[•]
[•]
Facsimile No.: [•]
Attention: [•]

34

The Company or the Trustee, by notice to the others, may designate additional or different addresses for subsequent notices or communications.

All notices and communications (other than those sent to Holders) will be deemed to have been duly given at the time delivered by hand, if personally delivered; five Business Days after being deposited in the mail, postage prepaid, if mailed; when receipt acknowledged, if transmitted by facsimile; and the next Business Day after timely delivery to the courier, if sent by overnight air courier guaranteeing next day delivery.

Any notice or communication to a Holder will be mailed by first class mail, certified or registered, return receipt requested, or by overnight air courier guaranteeing next day delivery to its address shown on the register kept by the Registrar. Any notice or communication will also be so mailed to any Person described in TIA § 313(c), to the extent required by the TIA. Failure to deliver a notice or communication to a Holder or any defect in it will not affect its sufficiency with respect to other Holders.

If a notice or communication is delivered in the manner provided above within the time prescribed, it is duly given, whether or not the addressee receives it.

If the Company delivers a notice or communication to Holders, it will deliver a copy to the Trustee and each Agent at the same time.

The Trustee agrees to accept and act upon instructions or directions pursuant to this Indenture sent by unsecured e-mail, pdf, facsimile transmission or other similar unsecured electronic methods; *provided, however*, that the party providing such written instructions, subsequent to such transmission of written instructions, shall provide upon request the originally executed instructions or directions to the Trustee in a timely manner. If the party elects to give the Trustee email or facsimile instructions (or instructions by a similar electronic method) and the Trustee in its discretion elects to act upon such instructions, the Trustee's understanding of such instructions shall be deemed controlling. The Trustee shall not be liable for any losses, costs or expenses arising directly or indirectly from the Trustee's reliance upon and compliance with such instructions notwithstanding such instructions conflict or are inconsistent with a subsequent written instruction. The party providing electronic instructions agrees to assume all risks arising out of the use of such electronic methods to submit instructions and directions to the Trustee, including without limitation the risk of the Trustee acting on unauthorized instructions, and the risk of interception and misuse by third parties.

Section 11.03 *Communication by Holders of Notes with Other Holders of Notes.*

Holders may communicate pursuant to TIA § 312(b) with other Holders with respect to their rights under this Indenture or the Notes. The Company, the Trustee, the Registrar and anyone else shall have the protection of TIA § 312(c).

35

Section 11.04 *Certificate and Opinion as to Conditions Precedent.*

Upon any request or application by the Company to the Trustee to take any action under this Indenture, the Company shall furnish to the Trustee:

(1) an Officer's Certificate stating that, in the opinion of the signers, all conditions precedent, if any, provided for in this Indenture relating to the proposed action have been satisfied; and

(2) an Opinion of Counsel stating that, in the opinion of such counsel, all such conditions precedent and covenants have been satisfied.

Section 11.05 *Statements Required in Certificate or Opinion.*

Each certificate or opinion with respect to compliance with a condition or covenant provided for in this Indenture (other than a certificate provided pursuant to TIA § 314(a)(4)) must comply with the provisions of TIA § 314(e) and must include:

- (1) a statement that the Person making such certificate or opinion has read such covenant or condition;
- (2) a brief statement as to the nature and scope of the examination or investigation upon which the statements or opinions contained in such certificate or opinion are based;
- (3) a statement that, in the opinion of such Person, he or she has made such examination or investigation as is necessary to enable him or her to express an informed opinion as to whether or not such covenant or condition has been satisfied; and
- (4) a statement as to whether or not, in the opinion of such Person, such condition or covenant has been satisfied.

Section 11.06 No Personal Liability of Directors, Officers, Employees and Stockholders.

No past, present or future director, officer, employee, incorporator or stockholder of the Company, as such, will have any liability for any obligations of the Company under the Notes, this Indenture or for any claim based on, in respect of, or by reason of, such obligations or their creation. Each Holder of Notes by accepting a Note waives and releases all such liability. The waiver and release are part of the consideration for issuance of the Notes. The waiver may not be effective to waive liabilities under the federal securities laws.

Section 11.07 Governing Law.

THE INTERNAL LAW OF THE STATE OF NEW YORK WILL GOVERN AND BE USED TO CONSTRUE THIS INDENTURE, THE NOTES, AND THE GUARANTEES, IF ANY, WITHOUT GIVING EFFECT TO APPLICABLE PRINCIPLES OF CONFLICTS OF LAW TO THE EXTENT THAT THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION WOULD BE REQUIRED THEREBY.

36

Section 11.08 No Adverse Interpretation of Other Agreements.

This Indenture may not be used to interpret any other indenture, loan or debt agreement of the Company or its Subsidiaries or of any other Person. Any such indenture, loan or debt agreement may not be used to interpret this Indenture.

Section 11.09 Successors.

All agreements of the Company in this Indenture and the Notes will bind its successors. All agreements of the Trustee in this Indenture will bind its successors.

Section 11.10 Severability.

In case any provision in this Indenture or in the Notes is invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions will not in any way be affected or impaired thereby.

Section 11.11 Counterpart Originals.

The parties may sign any number of copies of this Indenture. Each signed copy will be an original, but all of them together represent the same agreement.

Section 11.12 Table of Contents, Headings, etc.

The Table of Contents, Cross-Reference Table and Headings of the Articles and Sections of this Indenture have been inserted for convenience of reference only, are not to be considered a part of this Indenture and will in no way modify or restrict any of the terms or provisions hereof.

Section 11.13 Waiver of Jury Trial.

EACH OF THE COMPANY AND THE TRUSTEE HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY AND ALL RIGHT TO TRIAL BY JURY IN ANY LEGAL PROCEEDING ARISING OUT OF OR RELATING TO THIS INDENTURE, THE NOTES OR THE TRANSACTIONS CONTEMPLATED HEREBY.

Section 11.14 Patriot Act Compliance.

The parties hereto acknowledge that in accordance with Section 326 of the USA Patriot Act the Trustee, like all financial institutions and in order to help fight the funding of terrorism and money laundering, is required to obtain, verify, and record information that identifies each person or legal entity that establishes a relationship or opens an account, which information includes the name, address, tax identification number and formation documents and other information that will allow Trustee to identify the person or legal entity in accordance with the USA Patriot Act. The parties to this Agreement agree that they will provide the Trustee with such information in order for the Trustee to satisfy the requirements of the USA Patriot Act.

[Signatures on following page]

37

SIGNATURES

Dated as of [●], 202[●].

PERMA-FIX ENVIRONMENTAL SERVICES, INC.

By: _____

Name: [●]

Title: [●]

[_____] , as Trustee

By: _____

Name: [●]

Title: [●]



210 Park Avenue, Suite 2300
Oklahoma City, Oklahoma 73102
405-930-5151
Fax 405-212-5843
www.steptoeh-johnson.com

Writer's Contact Information
Irwin.Steinhom@steptoeh-johnson.com
405-825-9048

December 2, 2024

Perma-Fix Environmental Services, Inc.
8302 Dunwoody Place, Suite 250
Atlanta, Georgia 30350

RE: Registration Statement on Form S-3

Ladies and Gentlemen:

We have acted as counsel for Perma-Fix Environmental Services, Inc., a Delaware corporation ("the Company"), in connection with the authorization of the possible issuance and sale from time to time, on a continuous or delayed basis, by the Company of the following securities (together, the "Securities"): (i) shares of common stock, par value \$0.001 per share, of the Company ("Common Stock"); (ii) debt securities of the Company ("Debt Securities"), in one or more series, which may be issued as either senior or subordinated debt or as senior or subordinated convertible debt convertible into or exchangeable for Common Stock or other securities of the Company; (iii) shares of preferred stock of the Company, par value \$0.001 per share (the "Preferred Stock"), including Preferred Stock issuable upon conversion of Debt Securities or upon exercise of Warrants or Purchase Contracts (as each such term is defined below); (iv) depository shares representing a fractional share or multiple shares of Preferred Stock evidenced by depository receipts (the "Depository Shares"); (v) warrants to purchase Common Stock, Preferred Stock, Debt Securities, or Depository Shares (the "Warrants"); (vi) rights to purchase Common Stock (the "Rights"); (vii) purchase contracts representing the Company's obligation to sell Debt Securities, Common Stock or Preferred Stock, Depository Shares, or government securities (the "Purchase Contracts"), and (viii) units consisting of any combination of Debt Securities, Preferred Stock, Common Stock, Depository Shares, Warrants, Purchase Contracts or debt obligations of third parties, including government securities (the "Units").

The offering and sale from time to time of the Securities as provided by Rule 415 under the Securities Act of 1933, as amended (the "Act"), are being registered under the Company's Registration Statement on Form S-3 (the "Registration Statement"), filed today with the Securities and Exchange Commission pursuant to the Act and the rules and regulations thereunder (the "Rules"). The Debt Securities will be issued pursuant to one or more indentures in substantially the form filed as an exhibit to the Registration Statement, as amended or supplemented from time to time, between the Company, as obligor, and a trustee chosen by the Company and qualified to act as such under the Trust Indenture Act of 1939, as amended. The Prospectus contained within the Registration Statement provides that it will be supplemented in the future by one or more prospectus supplements (each, a "Prospectus Supplement"). The Prospectus, as supplemented by the various Prospectus Supplements, will provide for the issuance and sale from time to time by the Company of up to an aggregate of \$100,000,000 of Securities.

In connection with the furnishing of this opinion, we have examined originals, or copies certified or otherwise identified to our satisfaction, of the following documents:

1. the Registration Statement; and December 2, 2024; and

West Virginia • Ohio • Kentucky • Pennsylvania • Texas • Colorado • Oklahoma

December 2, 2024
Page 2

2. the form of the Indenture attached as Exhibit 4.1 to the Registration Statement.

In addition, we have examined (i) such corporate records of the Company that we have considered appropriate, including a copy of the Restated Certificate of Incorporation, as amended, and the Second Amended and Restate Bylaws, as amended, of the Company, certified by the Company as in effect on the date of this letter, and copies of resolutions of the board of directors of the Company relating to the issuance of the Securities certified by the Company and (ii) such other certificates, agreements and documents as we deemed relevant and necessary as a basis for the opinions expressed below. We have also relied upon the factual matters contained in the representations and warranties of the Company made in the documents reviewed by us and upon certificates of public officials and the officers of the Company.

In our examination of the documents referred to above, we have assumed, without independent investigation, the genuineness of all signatures, the legal capacity of all individuals who have executed any of the documents reviewed by us, the authenticity of all documents submitted to us as originals, the conformity to the originals of all documents submitted to us as certified, photostatic, reproduced or conformed copies of valid existing agreements or other documents, the authenticity of all such latter documents and that the statements regarding matters of fact in the certificates, records, agreements, instruments and documents that we have examined are accurate and complete.

We have also assumed, without independent investigation, that (i) the Indenture will be duly authorized, executed and delivered by the parties to them in substantially the form filed as exhibit 4.1 to the Registration Statement and will be duly qualified under the Trust Indenture Act of 1939, as amended, (ii) each of the Depository Agreements, the Warrant Agreements, the Rights Agent Agreements, the Purchase Contract Agreements, the Unit Agreements and any other agreement entered into, or officer's certificates or board resolutions delivered, in connection with the issuance of the Securities will be duly authorized, executed and delivered by the parties to such agreements (such agreements and documents, together with the Indenture, are referred to collectively as the "Operative Agreements"), (iii) each Operative Agreement, as well as any underwriting agreement, when so authorized, executed and delivered, will constitute a legal, valid and binding obligation of the parties thereto (other than the Company), (iv) the Depository Shares, the Warrants, the Rights, the Purchase Contracts, the Units and any related Operative Agreements will be governed by the laws of the State of New York, (v) in the case of Purchase Contracts or Units consisting at least in part of debt obligations of third parties, such debt obligations at all relevant times constitute the legal, valid and binding obligations of the issuers thereof enforceable against the issuers thereof in accordance with their terms and (vi) the execution, delivery and performance of the Operative Agreements and the Securities and issuance of the Securities do not conflict with or constitute a breach of the terms of any agreement or instrument to which the Company is subject or violate applicable law or contravene any requirement or restriction imposed by any court or governmental body having jurisdiction over the Company.

December 2, 2024
Page 3

With respect to the Securities of a particular series or issuance, we have assumed that (i) the issuance, sale, number or amount, as the case may be, and terms of the Securities to be offered from time to time will be duly authorized and established, in accordance with the organizational documents of the Company, the laws of the State of Delaware and the laws of the State of New York, and any applicable Operative Agreement, (ii) prior to the issuance of a series of Preferred Stock, an appropriate certificate of designation or board resolution relating to such series of Preferred Stock will have been duly authorized by the Company and filed with the Secretary of State of Delaware, (iii) the Securities will be duly authorized, executed, issued and delivered by the Company and, in the case of Debt Securities, Depositary Shares, Warrants, Rights, Purchase Contracts and Units, duly authenticated or delivered by the applicable trustee or agent, in each case, against payment by the purchaser at the agreed-upon consideration, and (iv) the Securities will be issued and delivered as contemplated by the Registration Statement and the applicable prospectus supplement.

Based upon the above, and subject to the stated assumptions, exceptions and qualifications, we are of the opinion that:

1. Upon due authorization by the Company of the issuance and sale of shares of Common Stock, and, if applicable, upon exercise, exchange or conversion of any Security for or into shares of Common Stock in accordance with its terms, and payment of the consideration or exercise price therefor, such shares of Common Stock will be validly issued, fully paid and non-assessable.
2. When the specific terms of a particular issuance of Debt Securities (including any Debt Securities duly issued upon exercise, exchange or conversion of any Security in accordance with its terms) have been duly authorized by the Company and such Debt Securities have been duly executed, authenticated, issued and delivered, and, if applicable, upon exercise, exchange or conversion of any Security in accordance with its terms, such Debt Securities will constitute legal, valid and binding obligations of the Company enforceable against the Company in accordance with their terms.
3. Upon due authorization by the Company of the issuance and sale of shares of a series of Preferred Stock, and, if applicable, upon exercise, exchange or conversion of any Security for or into shares of Preferred Stock in accordance with its terms, and payment of the consideration or exercise price therefor, such shares of Preferred Stock will be validly issued, fully paid and non-assessable.
4. When any Depositary Shares evidenced by depositary receipts are issued and delivered in accordance with the terms of a Depositary Agreement against the deposit of duly authorized, validly issued, fully paid and non-assessable shares of Preferred Stock, such Depositary Shares will entitle the holders thereof to the rights specified in the Depositary Agreement.
5. When the specific terms of a particular issuance of Warrants have been duly authorized by the Company and such Warrants have been duly executed, authenticated, issued and delivered, such Warrants will constitute legal, valid and binding obligations of the Company enforceable against the Company in accordance with their terms.

December 2, 2024
Page 4

6. When the specific terms of a particular issuance of Rights have been duly authorized by the Company and such Rights have been duly executed, authenticated, issued and delivered, such Rights will constitute legal, valid and binding obligations of the Company enforceable against the Company in accordance with their terms.
7. When any Purchase Contracts have been duly authorized, executed and delivered by the Company, such Purchase Contracts will constitute legal, valid and binding obligations of the Company enforceable against the Company in accordance with their terms.
8. When any Units have been duly authorized, issued and delivered by the Company, such Units will constitute legal, valid and binding obligations of the Company enforceable against the Company in accordance with their terms.

The opinions expressed above as to enforceability may be subject to (i) bankruptcy, insolvency, reorganization, fraudulent conveyance or transfer, moratorium or similar laws affecting creditors' rights generally, (ii) general principles of equity (regardless of whether enforceability is considered in a proceeding in equity or at law) and (iii) requirements that a claim with respect to any Securities in denominations other than in United States dollars (or a judgment denominated other than into United States dollars in respect of the claim) be converted into United States dollars at a rate of exchange prevailing on a date determined by applicable law.

The opinions expressed above are limited to the laws of the State of New York and the Delaware General Corporation Law. Our opinion is rendered only with respect to the laws, and the rules, regulations and orders under those laws, that are currently in effect, and we express no opinion as to the effect of the laws of any other jurisdiction.

We hereby consent to use of this opinion as an exhibit to the Registration Statement and to the use of our name under the heading "Legal Matters" contained in the prospectus included in the Registration Statement. In giving this consent, we do not hereby admit that we come within the category of persons whose consent is required by the Act or the Rules.

Very truly yours,

/s/ STEPTOE & JOHNSON PLLC

STEPTOE & JOHNSON PLLC

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We have issued our report dated March 13, 2024 with respect to the consolidated financial statements of Perma-Fix environmental Services, Inc. included in the Annual Report on Form 10-K for the year ended December 31, 2023, which are incorporated by reference in this Registration Statement. We consent to the incorporation by reference of the aforementioned report in this Registration Statement, and to the use of our name as it appears under the caption “Experts.”

/s/ GRANT THORNTON LLP

Atlanta, GA
December 2, 2024

Calculation of Filing Fee Tables

Form S-3
(Form Type)

Perma-Fix Environmental Services, Inc.
(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered and Carry Forward Securities

Security Type	Security Class Title	Fee Calculation or Carry Forward Rule	Amount Registered(1)	Proposed Maximum Offering Price Per Unit(2)	Maximum Aggregate Offering Price(2)	Fee Rate	Amount of Registration Fee (2)
Newly Registered Securities							
Primary Offering:							
Fees to be Paid	Equity	Common Stock, par value \$0.0001 per share	Rule 457(o)	-	-	-	-
	Equity	Preferred Stock	Rule 457(o)	-	-	-	-
	Debt	Debt Securities	Rule 457(o)	-	-	-	-
	Debt	Convertible into					
	Equity	Warrants	Rule 457(o)	-	-	-	-
	Other	Rights	Rule 457(o)	-	-	-	-
	Other	Purchase Contract	Rule 457(o)	-	-	-	-
	Other	Units	Rule 457(o)	-	-	-	-
	Primary Offering Total					\$ 100,000,000(3)	0.0001531
Fees Previously Paid	-	-	-	-	-	-	-
Carry Forward Securities							
Carry Forward Securities	-	-	-	-	-	-	-
Total Offering Amounts					\$ 100,000,000	0.0001531	\$ 15,310
Total Fees Previously Paid					-	-	-
Total Fee Offsets					-	-	-
Net Fees Due					-	-	\$ 15,310

- (1) There are being registered hereunder an indeterminate number of each identified class of securities of Perma-Fix Environmental Services, Inc., which securities may be offered and sold, on a primary basis, in such amount in U.S. dollars or the equivalent thereof in foreign currencies as shall result in an aggregate public offering price for all securities of \$100,000,000 after the date hereof. The securities registered hereunder also include such indeterminate amount of debt securities and shares of common stock and shares of preferred stock as may be issued upon conversion or exchange for any other debt securities or preferred stock that provide for conversion or exchange into other securities being registered hereunder. Any securities registered hereunder may be sold separately or as units with other securities registered hereunder. Pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), this Registration Statement shall be deemed to cover an indeterminate number of additional securities to be offered as a result of share splits, share dividends or similar transactions.
- (2) The proposed maximum offering price per security will be determined from time to time by the registrant in connection with the issuance of the securities registered by this Registration Statement. Prices, when determined, may be in U.S. dollars or the equivalent thereof in one or more foreign currencies, foreign currency units or composite currencies. If any debt securities or shares of preferred stock are issued at an original issue discount, then the amount registered will include the principal or liquidation amount of such securities measured by the initial offering price thereof.
- (3) The registration fee has been calculated in accordance with Rule 457(o) under the Securities Act.