SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of
The Securities Exchange Act of 1934

Date of Report (Date of earliest event reported) July 30, 2001

PERMA-FIX ENVIRONMENTAL SERVICES, INC.

(Exact name of registrant as specified in its charter)

Delaware	1-11596	58-1954497
(State or other jurisdiction of incorporation)	(Commission File Number)	(IRS Employer Identification No.)

1940 N.W. 67th Place, Suite A, Gainesville, Florida	32653
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code (352) 373-4200

Not applicable

(Former name or former address, if changed since last report)

Item 5. Other Events and Regulation FD Disclosure.

Senior Subordinated Note.

On July 31, 2001, the Company issued approximately $5.6 million of its 13.50% Senior Subordinated Notes due July 31, 2006 (the "Notes"). The Notes were issued pursuant to the terms of a Note and Warrant Purchase Agreement, dated July 31, 2001 (the "Purchase Agreement"), between the Company, Associated Mezzanine Investors - PESI, L.P. ("AMI"), and Bridge East Capital, L.P. ("BEC"). The Notes are unsecured and are unconditionally guaranteed by the subsidiaries of the Company. The Company's payment obligations under the Notes are subordinate to the Company's payment obligations to its primary lender and to certain other debts of the Company up to an aggregate amount of $25 million. The net proceeds from the sale of the Notes were used to repay certain short-term loans.

Under the terms of the Purchase Agreement, the Company also issued to AMI and BEC warrants to purchase up to 1,281,731 shares of the Company's common stock ("Warrant Shares") at an initial exercise price of $1.50 per share (the "Warrants"), subject to adjustment under certain conditions. The Warrants may be exercised at any time during a seven-year term and provide for cashless exercise. The number of shares issuable upon exercise of the Warrants is subject to adjustment pursuant to certain anti-dilution provisions.

The Notes may be prepaid at any time, subject to a 13.50% premium prior to July 31, 2003, a 6.75% premium prior to July 31, 2004, a 3.375% premium prior to July 31, 2005, and no premium thereafter. Upon a Change of Control of the Company (as defined in the Purchase Agreement) or if Dr. Louis F. Centofanti ceases for any reason to be the President and Chief Executive Officer of the Company, the holders of the Notes have the option to require the Company to prepay all amounts owing under the Notes plus, if the prepayment is a result of a Change of Control, the applicable prepayment premium.

The holders of at least 25% of the Warrants or the Warrant Shares may, at any time and from time to time during the term of the Warrants, request on two occasions registration with the Securities and Exchange Commission of the Warrant Shares. In addition, the holders of the Warrants are entitled, subject to certain conditions, to include the Warrant Shares in a registration statement covering other securities which the Company proposes to register.

In connection with the sale of the Notes, Ann L. Sullivan Living Trust, dated September 6, 1978, and the Thomas P. Sullivan Living Trust, dated September 8, 1978 (collectively the "Sullivan Trusts") each have entered into a certain Subordination Agreement, dated July 30, 2001. Thomas P. Sullivan, a trustee of the Thomas P. Sullivan Living Trust, is a director of the Company. Under the terms of the Subordination Agreement, the Sullivan Trusts have subordinated all amounts owing by the Company to the Sullivan Trusts in favor of the Company's obligations under the Notes. Notwithstanding the subordination, the Company may (a) as long as no event of default under the Purchase Agreement has occurred and is continuing and if such

payments would not create an event of default, continue to make regularly scheduled payments of principal and interest owing under certain promissory notes, dated May 28, 1999, in the original aggregate principal amount

of $4.7 million, which were issued to the Sullivan Trusts in connection with the Company's acquisition of Perma-Fix of Michigan, Inc., Perma-Fix of South Georgia, Inc., and Perma-Fix of Orlando, Inc.; and (b) make such payments as may be required pursuant to a certain Mortgage, dated May 28, 1999, by Perma-Fix of Michigan, Inc. in favor of the Sullivan Trusts. The outstanding principal amount due to the Sullivan Trusts is approximately $2.9 million.

The Notes and Warrants were sold pursuant to an exemption from registration under Section 4(2) of the Securities Act of 1933, as amended (the "Act"), and/or Rule 506 of Regulation D promulgated under the Act, and, therefore, were not registered under the Act. Accordingly, the Notes may not be offered or sold in the United States absent registration or pursuant to an applicable exemption from the registration requirements of the Act. The Company paid closing fees of $200,000 to AMI and $75,000 to Bridge East Capital Management, L.L.C. The Company also paid other closing fees of approximately $530,000 in addition to the Company's other expenses relating to this transaction.

In connection with the sale of the Notes, the Company, AMI, and BEC entered into an Option Agreement, dated July 31, 2001 (the "Option Agreement"). Pursuant to the Option Agreement, the Company granted each Purchaser an irrevocable option requiring the Company to purchase any or all of the Warrants or the shares of Common Stock issuable under the Warrants (the "Warrant Shares") then held by the Purchaser (the "Put Option"). The Put Option may be exercised at any time commencing July 31, 2004, and ending July 31, 2008. In addition, each Purchaser granted to the Company an irrevocable option to purchase all the Warrants or the Warrant Shares then held by the Purchaser (the "Call Option"). The Call Option may be exercised at any time commencing July 31, 2005, and ending July 31, 2008. The purchase price under the Put Option and the Call Option is based on the quotient obtained by dividing (a) the sum of six times the Company's consolidated EBITDA for the period of the 12 most recent consecutive months minus Net Debt plus the Warrant Proceeds by (b) the Company's Diluted Shares (as the terms EBITDA, Net Debt, Warrant Proceeds, and Diluted Shares are defined in the Option Agreement).

Private Placement.

On July 30, 2001, the Company completed a private placement offering of units (the "Offering") to accredited investors. Each unit is comprised of one share of the Company's common stock and one warrant to purchase one share of common stock. The purchase price for each unit was $1.75, and the exercise price of each warrant included in the units is $1.75, subject to adjustment under certain conditions. The Company accepted subscriptions for 4,397,566 of the maximum 4.4 million units offered, for an aggregate purchase price of $7,695,740. In order to comply with the NASDAQ rules, the warrants included in units may not be exercised until the Company has obtained shareholder approval of the exercise of such warrants. Pursuant to the terms of the Offering, the Company intends to promptly solicit for such shareholder approval.

The Offering was made pursuant to an exemption from registration under Section 4(2) of the

Securities Act of 1933, as amended (the "Act"), and/or Rule 506 of Regulation D promulgated under the Act. The Offering was made only to accredited investors through one or more broker/dealer placement agents.

Debt-for-Stock Exchange Agreement.

On July 9, 2001, the Company entered into an agreement (the "Exchange Agreement") with Capital Bank-Grawe Gruppe AG (f/k/a RBB Bank Aktiengesellschaft), organized under the laws of Austria ("Capital Bank"), to issue to Capital Bank, as agent for certain of its accredited investors, 1,893,505 shares of the Company's common stock and a warrant to purchase up to 1,839,405 shares of common stock at an exercise price of $1.75 per share (the "Capital Warrant") in satisfaction of all amounts due or to become due under the Loan Agreement, dated August 29, 2000, between the Company and Capital Bank (the "$3 Million Loan") and a related Unsecured Promissory Note, dated August 29, 2000, issued by the Company in favor of Capital Bank in the original principal amount of $3,000,000 (the "$3 Million Note"), including the Company's obligations to issue to Capital Bank shares of common stock if the $3 Million Note was not paid by certain due dates. The $3 Million Note was due on July 1, 2001.

Pursuant to the terms of the Exchange Agreement, the closing is to be held after the Company is informed that the NASDAQ did not object to the listing of the shares of the Company's common stock issuable pursuant to the Exchange Agreement and issuable upon the exercise of the Capital Warrant to be issued under the Exchange Agreement. On August 6, 2001, the Nasdaq advised the Company that it did not have any objection to the listing of such shares. The Company will (a) pay to Capital Bank a closing fee of $325,000, payable $75,000 cash and by the issuance by the Company of 105,932 shares of the Company's common stock, such number of shares being equal to the quotient of $250,000 divided by the last closing bid price of the common stock as quoted on the Nasdaq on June 26, 2001, and (b) issue certain five-year warrants for the purchase of up to 625,000 shares of common stock at a purchase price of $1.75 per share.

The issuance of the common stock and the Capital Warrant under the terms of the Exchange Agreement was made pursuant to Section 4(2) and/or Rule 506 under Regulation D promulgated under the Securities Act of 1933, as amended. Capital Bank has advised the Company that it is precluded by Austrian law from disclosing the identities of its investors, but that all of its investors are accredited investors under Rule 501 of Regulation D promulgated under the Act. In addition, Capital Bank has advised the Company that none of its investors beneficially own more than 4.9% of the Company's common stock.

In addition to the shares and Capital Warrant issuable to Capital Bank pursuant to the Exchange Agreement, Capital Bank purchased 842,995 units under the Offering. As of August 6, 2001, Capital Bank owned of record, as agent for certain accredited investors, 6,928,393 shares of common stock representing 26.6% of the Company's issued and outstanding common stock. Upon issuance of the shares of common stock to Capital Bank purchased in connection with the units sold and issuable pursuant to the Exchange Agreement, Capital Bank will own of record, as agent for certain accredited investors, 9,783,326 shares of common stock, representing 30.1% percent of the Company's issued and outstanding stock. Capital Bank also has the right to

acquire an additional 8,175,317 shares of common stock, comprised of (a) 842,995 warrants included in the units purchased in the offering, (b) 5,665,655 shares of common stock issuable under various other warrants held by Capital Bank, and (c) 1,666,667 shares of common stock issuable to Capital Bank upon the conversion of 2,500 shares of the Company's Series 17 Class Q Convertible Preferred Stock (the "Series 17

Preferred") held by Capital Bank. If Capital Bank were to acquire all of the shares of common stock issuable upon exercise of the various warrants held by Capital Bank and the shares of common stock issuable upon conversion of the Series 17 Preferred, then Capital Bank would own of record 17,958,643 shares of common stock. Assuming all of the Company's outstanding warrants and options as of the date of this Form 8-K or to be issued in the unit offering are, or have been, exercised, including those warrants held by Capital Bank, Capital Bank would own of record 34% of the issued and outstanding common stock of the Company. The number of shares and percentages set forth in the preceding paragraph assume no other issuances of common stock other than those described.

Capital Bank may have become a beneficial owner (as that term is defined under Rule 13d-3 as promulgated under the Exchange Act of 1934, as amended (the "Exchange Act")) of more than 10% of the Company's Common Stock on February 9, 1996, as a result of its acquisition of 1,100 shares of Series 1 Class A Convertible Preferred Stock ("Series 1 Preferred") that were convertible into a maximum of 1,282,798 shares of Common Stock commencing 45 days after issuance of the Series 1 Preferred. Capital Bank has advised the Company that it is a banking institution regulated by the banking regulations of Austria which holds the Company's Common Stock on behalf of numerous clients and no one client is the beneficial owner of more than 4.9% of the Company's outstanding Common Stock, and thus, Capital Bank believes it is not required to file reports under Section 16(a).

If Capital Bank became a beneficial owner of more than 10% of the Company's Common Stock on February 9, 1996, and thereby required to file reports under Section 16(a) of the Exchange Act, then Capital Bank failed to file with the Securities and Exchange Commission (among other reports) (a) an initial Form 3, (b) any Form 4's or 5's for years 1996 through 1999; (c) a Form 4 for one transaction which occurred in February 2000; (d) a Form 4 for one transaction which occurred in August 2000; (e) a Form 4 for one transaction which occurred in September 2000; (f) a Form 4 for one transaction which occurred in October 2000; (g) a Form 4 for one transaction which occurred in November 2000; and (h) a Form 4 for two transactions which occurred in December 2000.

As of the date of this report, Capital Bank has not filed a Schedule 13D or Schedule 13G, pursuant to Section 13(d) of the Exchange Act and Regulation 13D as promulgated thereunder, reporting Capital Bank as the beneficial owner of Common Stock of the Company. Capital Bank has informed the Company that its clients (and not Capital Bank) maintain full voting and dispositive power over such shares. Consequently, Capital Bank has advised the Company that it believes it is not the beneficial owner, as such term is defined in Rule 13d-3 under the Exchange Act ("Rule 13d-3"), of the shares of stock registered in the name of Capital Bank because it has neither voting nor investment power, as such terms are defined in Rule 13d-3, over such shares. As a result, Capital Bank has informed the Company that it does not believe

that it is required to file either Schedule 13D or Schedule 13G in connection with the shares of the Company's Common Stock registered in the name of Capital Bank.

Item 7. Financial Statements and Exhibits.

(c) Exhibits.

99.1 Note and Warrant Purchase Agreement, dated July 31, 2001, among the Company, AMI, and BEC.

99.2 Form of 13.50% Senior Subordinated Note Due 2006.

99.3 Form of Common Stock Purchase Warrant, expiring July 31, 2008, to be issued by the Company to AMI and BEC to purchase up to 1,281,731 shares of the Company's common stock at an initial exercise price of $1.50 per share.

99.4 Form of Guaranty Agreement, dated as of July 31, 2001, of each of the Company's subsidiaries, Perma-Fix of Florida, Inc., Perma-Fix of Fort Lauderdale, Inc., Perma-Fix of Dayton, Inc., Perma-Fix Treatment Services, Inc., Perma-Fix of Memphis, Inc., Perma-Fix, Inc., Perma-Fix of New Mexico, Inc., Reclamation Systems, Inc., Industrial Waste Management, Inc., Schreiber, Yonley & Associates, Mintech, Inc., Perma-Fix of Orlando, Inc., Perma-Fix of South Georgia, Inc., Perma-Fix of Michigan, Inc., Diversified Scientific Services, Inc., and East Tennessee Materials and Energy Corporation guaranteeing the Company's obligations under the Notes.

99.5 Registration Rights Agreement, dated July 31, 2001, among the Company, AMI, and BEC.

99.6 Subordination Agreement, dated July 30, 2001, among the Company, AMI, and the Sullivan Trusts. The Company and the Sullivan Trusts entered into a substantially similar Subordination Agreement, dated July 30, 2001, with BEC. A copy of this Subordination Agreement will be provided to the Commission upon request.

99.7 Senior Subordination Agreement, dated July 31, 2001, among the Company, PNC Bank, National Association, AMI, and BEC.

99.8 Option Agreement, dated July 31, 2001, among the Company, AMI, and BEC.

SIGNATURES

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

PERMA-FIX ENVIRONMENTAL SERVICES, INC.

By: /s/ Richard T. Kelecy
Richard T. Kelecy
Chief Financial Officer

Dated: August 7, 2001

PERMA-FIX ENVIRONMENTAL SERVICES, INC.

$5,625,000
13.50% Senior Subordinated Notes due 2006

NOTE AND WARRANT
PURCHASE AGREEMENT

Dated as of July 31, 2001

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PERMA-FIX ENVIRONMENTAL SERVICES, INC.
1940 N.W. 67th PLACE
GAINSVILLE, FLORIDA 32653

13.50% Senior Subordinated Notes due July 31, 2006
Warrants to Purchase Common Stock

Dated as of July 31, 2001

TO EACH OF THE PURCHASERS LISTED IN
THE ATTACHED SCHEDULE A

Ladies and Gentlemen:

Perma-Fix Environmental Services, Inc., a Delaware corporation (the "Company"), agrees with each of the Purchasers as follows:

1. Authorization of Notes and Warrants. The Company will authorize the issue and sale of (a) $5,625,000 aggregate principal amount of its 13.50% Senior Subordinated Notes due July 31, 2006 (the "Notes", such term to include any such notes issued in substitution therefor pursuant to section 15), to be substantially in the form of the Note set out in Exhibit A, with such changes therefrom, if any, as may be approved by the Purchasers and the Company, and (b) warrants (the "Warrants", such term to include any warrants issued in substitution therefor pursuant to section 15) to purchase 1,281,731 shares of the Common Stock, par value $.001 per

share (the "Common Stock"), of the Company at an initial exercise price of $1.50 per share, to be substantially in the form of the Warrant set out in Exhibit B, with such changes therefrom, if any, as may be approved by the Purchasers and the Company. Certain capitalized terms used in this Agreement are defined in section 14; references to a "Schedule" or an "Exhibit" are, unless otherwise specified, to a Schedule or an Exhibit attached to this Agreement.

2. Sale and Purchase of Notes and Warrants. 2.1. Purchase Price. The Company will issue and sell to each of the Purchasers and, subject to the terms and conditions of this Agreement, each of the Purchasers will purchase from the Company, at the Closing provided for in section 3, (a) Notes in the principal amount specified opposite its name in Schedule A and (b) Warrants for the number of shares of Common Stock specified opposite its name in Schedule A; at the purchase price of 100% of the principal amount of such Notes.

2.2. Issue Price. The Company and the Purchasers agree for U.S. federal income tax purposes (a) that (x) the present value as of the Closing Date of all payments under the Notes, using a discount rate based on a yield which the Company and the Purchasers agree is the original yield of comparable debt instruments not issued as part of an investment unit (which rate is not less than the applicable federal rate on the date the Notes are issued), is $712 per $1,000 principal amount, and that (y) the aggregate "issue price" under Section 1273(b) of the Code of all of the Notes to be issued hereunder is $4,002,903; and (b) that the aggregate purchase price under Section 1273(b) of the Code of all of the Warrants to be issued hereunder. The Company and the Purchasers agree to use the foregoing issue price, purchase price, value and the yield which results in such issue price for U.S. federal income tax purposes with respect to this transaction.

3. Closing; Fees.

3.1. Closing. The sales of the Notes and the Warrants to be purchased by the Purchasers shall take place at the offices of Becker, Glynn, Melamed & Muffly LLP, 200 Park Avenue, New York, New York, at 10:00 a.m., New York City time, at a closing (the "Closing") on July 31, 2001 or on such other Business Day thereafter as may be agreed upon by the Company and the Purchasers (the "Closing Date"). At the Closing the Company will deliver to each of the Purchasers (a) the Notes purchased by it in the form of a single Note (or such greater number of Notes in denominations of at least $100,000 as shall be set forth in Schedule A or as such Purchaser may request) dated the date of the Closing and registered in its name (or in the name of its nominee), and (b) the Warrants purchased by it in the form of a single warrant certificate (or such greater number of warrant certificates as shall be set forth in Schedule A

or as such Purchaser may request) dated the date of the Closing and registered in its name (or in the name of its nominee); against delivery by such Purchaser to the Company or its order of immediately available funds in the amount of the purchase price therefor. If at the Closing the Company shall fail to tender such Notes or such Warrants to each such Purchaser as provided above in this section 3, or any of the conditions specified in section 4 shall not have been fulfilled to its satisfaction, each such Purchaser shall, at its election, be relieved of all further obligations under this Agreement, without thereby waiving any other rights it may have by reason of such failure or such nonfulfillment.

3.2. Transaction Fees. Upon the Closing, the Company will pay a transaction fee, in immediately available funds, to (a) AMI in an amount equal to $200,000 and (b) Bridge East Management,

LLC in an amount equal to $75,000. The Company will also pay to the Purchasers and their respective partners, if applicable, upon the Closing in immediately available funds, the out-of pocket expenses incurred in connection with the transactions contemplated by this Agreement, as set forth in a statement delivered to the Company on or prior to the date of the Closing.

3.3. Legal Fees. Upon the Closing, the Company will pay the fees and disbursements of the special counsel of each Purchaser incurred in connection with the transactions contemplated by this Agreement and set forth in a statement delivered to the Company on or prior to the date of the Closing.

4. Conditions to Closing. The obligation of each Purchaser to purchase and pay for the Notes and Warrants to be sold to it at the Closing is subject to the fulfillment to its satisfaction, prior to or at the Closing, of the following conditions:

4.1. Representations and Warranties. The representations and warranties of the Company contained in this Agreement shall be correct when made and at the time of the Closing.

4.2. Performance; No Default. The Company shall have performed and complied with all agreements and conditions contained in this Agreement required to be performed or complied with by it prior to or at the Closing and at the time of the Closing no Event of Default shall have occurred and be continuing.

4.3. Compliance Certificate. The Company shall have delivered to the Purchasers an Officers' Certificate, dated the date of the Closing, certifying that the conditions specified in sections 4.1 and 4.2 have been fulfilled.

4.4. Opinion of Counsel. Each Purchaser shall have received from Conner & Winters, a Professional Corporation, counsel for the Company, a favorable opinion, dated the date of the Closing and addressed to the Purchasers, substantially in the form set forth in Exhibit C.

4.5. Certain Agreements. (a) Guaranty Agreement. Each of the Company's Subsidiaries shall have executed and delivered to the Purchasers the Guaranty Agreement, substantially in the form of Exhibit D, unconditionally and irrevocably guaranteeing to the

Purchasers the full and prompt payment and performance of the Company's obligations under the Notes.

(b) Registration Rights Agreement. The Company shall have executed and delivered to the Purchasers the Registration Rights Agreement, substantially in the form of Exhibit E.

(c) Junior Subordination Agreement. The Company and the Junior Subordinated Lenders shall have executed and delivered to the Purchasers the Junior Subordination Agreements, substantially in the form of Exhibit F.

(d) Option Agreement. The Company shall have executed and delivered to the Purchasers the Option Agreement, substantially in the form of Exhibit G.

4.6. Concurrent Transactions. The Company shall have received, through the issuance and sale of shares of Common Stock and warrants pursuant to the Equity Offering Memorandum, an aggregate amount in cash of not less than $7,000,000.

4.7. Satisfaction of Company Obligations. All of the obligations of the Company shown on Schedule 5.7 as obligations that are required or intended to be satisfied on or prior to the Closing Date shall have been satisfied in full and all Liens securing any of such obligations shall have been released or the Purchasers shall have received a letter from the holder or holders of such Liens authorizing the release thereof upon the payment in full of such obligations. The Company shall have received payoff letters, reasonably satisfactory in form and substance to such Purchaser, from the holders of the Company's Debt being retired, each stating that upon the payment of the amount set forth in such letter, all of the Company's obligations with respect to such Debt will be fully and irrevocably discharged.

4.8. Consents, Agreements. The Company shall have obtained all consents and waivers, under any term of any agreement or instrument to which it is a party or by which it or any of its

properties is bound, or any term of any applicable law, ordinance, rule or regulation of any governmental authority, or any term of any applicable order, judgment or decree of any court, arbitrator or governmental authority, necessary or appropriate in connection with the transactions contemplated by this Agreement, including without limitation, the consent of PNC, as Agent for the Lenders under the Credit Agreement; and such consents and waivers shall be in full force and effect on the Closing Date. A complete and

correct copy of each of such consents and waivers shall have been delivered to the Purchasers.

4.9. Compliance with Securities Laws. The offering and sale of the Notes and Warrants to the Purchasers shall have complied with all applicable requirements of federal and state securities laws.

4.10. No Adverse U.S. Legislation, Action or Decision, etc. No legislation shall have been enacted by either house of Congress or favorably reported by any committee thereof, no other action shall have been taken by any governmental authority, whether by order, regulation, rule, ruling or otherwise, and no decision shall have been rendered by any court of competent jurisdiction, which would materially and adversely affect the Notes or the Warrants being purchased by the Purchasers hereunder.

4.11. No Actions Pending. There shall be no suit, action, investigation, inquiry or other proceeding by any governmental body or any other Person or any other legal or administrative proceeding pending or, to the Company's knowledge, threatened which questions the validity or legality of the transactions contemplated by this Agreement or the other Operative Agreements or which seeks damages in a material amount or injunctive or other equitable relief in connection therewith.

4.12. Proceedings and Documents. All corporate and other proceedings in connection with the transactions contemplated by this Agreement and all documents and instruments incident to such transactions shall be satisfactory to the Purchasers and their special counsel, and the Purchasers and their special counsel shall have received all such counterpart originals or certified or other copies of such documents as it or they may reasonably request.

4.13. Fees. The fees required to be paid by sections 3.2 and 3.3 shall have been paid as therein provided.

5. Representations and Warranties, etc. The Company represents and warrants that:

5.1. Organization, Standing, etc.; Due Authorization; Enforceability. (a) The Company is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware and has all requisite corporate power and authority to own and operate its properties, to carry on its business, to enter

into this Agreement, to issue and sell the Notes and the Warrants and to carry out the terms of this Agreement, the Notes and the Warrants.

(b) This Agreement, the Notes and the Warrants have been duly authorized by all necessary corporate action on the part of the Company and do not require any shareholder approval. This Agreement, the Notes and the Warrants have been duly executed and delivered by the Company and constitute legal, valid and binding obligations of the Company, enforceable against the Company in accordance with their respective terms, except (i) that such enforceability may be limited by applicable bankruptcy, insolvency, reorganization, moratorium, fraudulent conveyance and transfer and similar laws of general application relating to or affecting the rights and remedies of creditors, (ii) that acceleration of the Notes may affect the collectibility of that portion of the stated principal amount thereof which might be determined to constitute unearned interest thereon.

5.2. Subsidiaries. (a) Schedule 5.2(a) correctly lists as to each Subsidiary on the date of this Agreement (a) its name, (b) the jurisdiction of its incorporation and (c) the percentage of its issued and outstanding shares owned by the Company or another Subsidiary (specifying such other Subsidiary). Each Subsidiary is a corporation duly organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation and has all requisite corporate power and authority to own and operate its properties, to carry on its business, to enter into the Guaranty Agreement and to carry out the terms of the Guaranty Agreement. All the outstanding shares of capital stock of each Subsidiary are validly issued, fully paid and non-assessable, and all such shares indicated in Schedule 5.2(a) as owned by the Company or by any other Subsidiary are so owned beneficially and of record by the Company or by such other Subsidiary and, except as otherwise disclosed on Schedule 5.2(a), free and clear of any Lien.

(b) The Guaranty Agreement has been duly authorized by all necessary corporate action on the part of the Subsidiaries. The Guaranty Agreement has been duly executed and delivered by each of the Subsidiaries and constitutes legal, valid and binding obligations of each of the Subsidiaries, enforceable against such Subsidiary in accordance with its terms, except (i) that such enforceability may be limited by applicable bankruptcy, insolvency,

reorganization, moratorium, fraudulent conveyance and transfer and similar laws of general application relating to or affecting the rights and remedies of creditors, (ii) that

acceleration of the Notes may affect the collectibility of that portion of the stated principal amount thereof which might be determined to constitute unearned interest thereon.

(c) Except as disclosed on Schedule 5.2(c), as of the Closing Date, none of the Subsidiaries will have outstanding securities convertible into or exchangeable for any shares of its capital stock, nor will it have outstanding any rights to subscribe for or to purchase, or any options for the purchase of, or any agreements providing for the issuance (contingent or otherwise) of, or any calls, commitments or claims of any character relating to, any shares of its capital stock or any securities convertible into or exchangeable for any shares of its capital stock.

5.3. Qualification. Each of the Company and its Subsidiaries is duly qualified and in good standing as a foreign corporation authorized to do business in each jurisdiction (other than the jurisdiction of its incorporation) in which the nature of its activities or the character of the properties it owns or leases makes such qualification necessary and in which the failure so to qualify would have a materially adverse effect on the Company and its Subsidiaries, taken as a whole.

5.4. Business; Financial Statements. The Company has delivered to the Purchasers complete and correct copies of (a) its annual report to stockholders for the fiscal year ended December 31, 2000 (the "Annual Report") and its annual report on Form 10-K for such fiscal year as filed with the Securities and Exchange Commission (the "Form 10-K"), (b) its quarterly report to stockholders for the fiscal quarter ended March 31, 2001 (the "Quarterly Report") and its quarterly report on Form 10-Q for such fiscal quarter as filed with the Securities and Exchange Commission (the "Form 10-Q") and (c) the Disclosure Documents. The Annual Report, the Form 10-K and the Disclosure Documents correctly describe, in all material respects, as of their respective dates, the business then conducted and proposed to be conducted by the Company. There are included in the Form 10-K and the Form 10-Q consolidated financial statements of the Company and its Subsidiaries for the fiscal year ended December 31, 2000 and for the fiscal quarter ended March 31, 2001, respectively, accompanied in the case of the Form 10-K by the opinion thereon of BDO Seidman, LLP, independent public accountants and financial statements of the Company. All financial statements included in the foregoing materials delivered to the Purchasers (except as otherwise specified

therein) have been prepared in accordance with generally accepted accounting principles applied on a consistent

basis throughout the periods specified and present fairly the financial position of the Company and its Subsidiaries as of the respective dates specified and the results of their operations and cash flows for the respective periods specified.

5.5. Changes, etc. Except as disclosed on Schedule 5.5, since December 31, 2000, (a) there has been no change in the assets, liabilities or financial condition of the Company and its Subsidiaries, taken as a whole, other than changes which have not been, either in any case or in the aggregate, materially adverse to the Company and its Subsidiaries, taken as a whole, (b) neither the business, operations or affairs nor any of the properties or assets of the Company or its Subsidiaries have been affected by any occurrence or development (whether or not insured against) which has been, either in any case or in the aggregate, materially adverse to the Company and its Subsidiaries, taken as a whole, and (c) the Company has not as of the date of this Agreement directly or indirectly declared, ordered, paid, made or set apart any sum or property for any Restricted Payment or agreed to do so.

5.6. Tax Returns and Payments. Except as disclosed on Schedule 5.6, the Company and its Subsidiaries have filed all tax returns required by law to be filed by them and have paid all taxes, assessments and other governmental charges levied upon the Company and its Subsidiaries, and any of their respective properties, assets, income or franchises which are due and payable, other than those presently payable without penalty or interest and those presently being contested in good faith by appropriate proceedings diligently conducted for which such reserves or other appropriate provision, if any, as shall be required by generally accepted accounting principles shall have been made. The federal income tax liabilities of the Company and its Subsidiaries have been finally determined by the Internal Revenue Service and satisfied (or appropriate arrangements have been made with respect to the satisfaction of such liabilities), or the time for audit has expired, for all fiscal periods through December 31, 1994. Except as disclosed on Schedule 5.6, the charges, accruals and reserves on the books of the Company and its Subsidiaries in respect of federal, state and foreign income taxes for all fiscal periods are adequate in the opinion of the Company, and the Company knows of no unpaid assessment for additional federal, state or foreign income taxes for any period which would have a material adverse effect on the Company and its Subsidiaries, taken as a whole, or any basis for any such assessment.

5.7. Debt. Schedule 5.7-A correctly describes all secured and unsecured Debt of the Company and its Subsidiaries outstanding on the date of this Agreement, and identifies the collateral securing any secured Debt. Schedule 5.7-B correctly describes all such Debt that, on the Closing Date and after giving effect to the transactions contemplated by this Agreement, will remain outstanding. Neither the Company nor any of its Subsidiaries is in default with respect to any Debt, which default would have a material adverse effect on the Company and its Subsidiaries, taken as a whole.

5.8. Capital Stock and Related Matters. As of the Closing Date, the authorized capital stock of the Company will consist of 50,000,000 shares of Common Stock and 2,000,000 shares of Preferred Stock, par value $.001 per share. On the Closing Date after giving effect to the transactions contemplated by this Agreement and the Operative Agreements, 32,470,000 shares of the Common Stock and 2,500 shares of such Preferred Stock will be issued and outstanding. The shares of Common Stock issuable upon exercise of the Warrants have been duly authorized and validly reserved for issuance upon such exercise and, when so issued, will be validly issued, fully paid and non-assessable. As of the Closing Date, the Company will not have outstanding securities convertible into or exchangeable for any shares of its capital stock, nor will it have outstanding any rights to subscribe for or to purchase, or any options for the purchase of, or any agreements providing for the issuance (contingent or otherwise) of, or any calls, commitments or claims of any character relating to, any shares of its capital stock or any securities convertible into or exchangeable for any shares of its capital stock, other than (i) options issued or to be issued to certain employees and directors of the Company and its Subsidiaries from time to time in the manner contemplated by the Option Plans and (ii) the options, warrants, convertible notes and shares of Preferred Stock described on Schedule 5.8.

5.9. Title to Properties; Liens. Each of the Company and its Subsidiaries has good and sufficient title to its properties and assets, including the properties and assets reflected in the financial statements referred to in section 5.4 (except properties and assets disposed of since the date of such statements in the ordinary course of business and properties and assets held under Capitalized Leases referred to in Schedule 5.7), and none of such properties or assets is subject to any Liens except such as are of the character permitted by section 10.3. The Company and its Subsidiaries enjoy peaceful and undisturbed possession under all leases necessary in any material respect for

the operation of their respective properties and assets, and all such leases are valid and subsisting and are in full force and effect.

5.10. Litigation, etc. Other than those set forth in Schedule 5.10, there is no action, proceeding or investigation pending or threatened (or any basis therefor known to the Company) which questions the validity of this Agreement, the Notes or the Warrants or any action taken or to be taken pursuant to this Agreement, the Notes or the Warrants, or which would result, either in any case or in the aggregate, in any material adverse change in the business, operations, affairs, condition (financial or otherwise), properties or assets of the Company and its Subsidiaries, taken as a whole.

5.11. Compliance with Other Instruments, etc. Neither the Company nor any of its Subsidiaries is in violation of any term of its certificate or articles of incorporation or by-laws, and neither the Company nor any of its Subsidiaries is in violation of any term of any agreement or instrument to which it is a party or by which it is bound or any term of any applicable law, ordinance, rule or regulation of any governmental authority or any term of any applicable order, judgment or decree of any court, arbitrator or governmental authority, the consequences of which violation would have a materially adverse effect on the business, operations, affairs, condition (financial or otherwise), properties or assets of the Company and its Subsidiaries, taken as a whole; the execution, delivery and performance of this Agreement, the Notes and the Warrants will not result in any violation of or be in conflict with or constitute a default under any such term or result in the creation of (or impose any obligation on the Company or any of its Subsidiaries to create) any Lien upon any of the properties or assets of the Company or any of its Subsidiaries pursuant to any such term, in each case which would result in a material adverse effect on the Company and its Subsidiaries, taken as a whole; and there is no such term which materially adversely affects or in the future may (so far as the Company can now foresee) materially adversely affect the business, operations, affairs, condition (financial or otherwise), properties or assets of the Company and its subsidiaries, taken as a whole.

5.12. Governmental Consent. No consent, approval or authorization of, or declaration or filing with, any governmental authority on the part of the Company or any of its Subsidiaries is required for the valid execution and delivery of this Agreement or the valid offer, issue, sale and delivery of the Notes or the

Warrants pursuant to this Agreement except such as have been obtained or made or, on or prior to the date of the Closing, will have been obtained or made, and except for the filing of a Form D with the Securities and Exchange Commission at the required time.

5.13. Patents, Trademarks, Authorizations, etc. The Company and its Subsidiaries own or possess all patents, trademarks, service marks, trade names, copyrights, licenses and authorizations, and all rights with respect to the foregoing, necessary for the conduct of their respective businesses as now conducted, without any known material conflict with the rights of others.

5.14. Offer of Notes. (a) The Company, Ryan, Beck & Co. and Larkspur Capital Corporation (the only Persons authorized or employed by the Company as financial adviser or otherwise as agent in connection with the offering or sale of the Notes or Warrants or other securities of the Company that are part of this offering of Notes and Warrants) have not directly or indirectly offered the Notes or the Warrants, or any part thereof, or any other securities of the Company that are part of this offering of Notes and Warrants, for sale to, or solicited any offer to buy any of the same from, or otherwise approached or negotiated in respect thereof with, anyone other than each of the Purchasers and other institutional investors. Neither the Company nor anyone acting on its behalf has taken or will take any action which would subject the issuance and sale of the Notes or the Warrants to the registration and prospectus delivery provisions of the Securities Act.

(b) The qualification of an indenture in respect of the Notes under the Trust Indenture Act of 1939, as amended, is not required in connection with the offer, issue, sale and delivery of the Notes under the circumstances contemplated by this Agreement.

5.15. Use of Proceeds. The Company will apply the proceeds of the sale of the Notes and Warrants, simultaneously with the Closing to the repayment of the existing Debt of the Company.

5.16. Federal Reserve Regulations. The Company will not, directly or indirectly, use any of the proceeds of the sale of the Notes and Warrants for the purpose, whether immediate, incidental or ultimate, of buying a "margin stock" or of maintaining, reducing or retiring any indebtedness originally incurred to purchase a stock that is currently a "margin stock", or for any other purpose which might constitute this transaction a

"purpose credit", in each case within the meaning of Regulation G of the Board of Governors of the Federal Reserve System (12 C.F.R. 207,

as amended) or Regulation U of such Board (12 C.F.R. 221, as amended), or otherwise take or permit to be taken any action which would involve a violation of such Regulation G or Regulation U or of Regulation T (12 C.F.R. 220, as amended) or Regulation X (12 C.F.R. 224, as amended) or any other regulation of such Board. No Debt being reduced or retired out of the proceeds of the sale of the Notes and Warrants was incurred for the purpose of purchasing or carrying any such "margin stock", and neither the Company nor any of its Subsidiaries either owns or has any present intention of acquiring any such "margin stock".

5.17. Environmental Matters. (a) Except as disclosed on Schedule 5.17, the Company and each of its Subsidiaries has duly complied with, and its operations, facilities, business, Property, leaseholds and equipment are in compliance in all material respects with, the provisions of the Federal Occupational Safety and Health Act and all applicable Environmental Laws (including any authorizations, registrations, approvals, licenses, certificates or permits required thereunder), the failure of which could have a material adverse effect on the Company and its Subsidiaries, taken as a whole, and all judgments, decrees, Environmental Complaints and other enforcement orders and directives relating thereto; there have been and are no outstanding or threatened citations, investigations, notices, other attestations or orders of non-compliance issued to the Company or any of its Subsidiaries relating to such Person's business, Property, leaseholds or pursuant to any Hazardous Discharge that would have a material adverse effect on the Company and its Subsidiaries, taken as a whole.

(b) Except as disclosed on Schedule 5.17, the Company and each of its Subsidiaries has been issued for the conduct of its business and activities (or, if not yet so issued, has timely applied for) all required federal, state and local authorizations, registrations, approvals, licenses, certificates or permits relating to all applicable Environmental Laws, each of which is in effect, the failure of which could have a material adverse effect on the Company and its Subsidiaries, taken as a whole.

(c) Except as disclosed on Schedule 5.17, there are no facts, events or circumstances which suggest releases, spills, discharges, leaks or disposal (collectively referred to as "Releases") of Hazardous Substances at, upon, under or within any real property owned or leased, or any Property or facilities used or operated, by the Company or any of its Subsidiaries which could

have a material adverse effect on the Company and its Subsidiaries, taken as whole.

(d) Except as disclosed on Schedule 5.17, neither the

Company nor any of its Subsidiaries has retained or assumed, contractually or by operation of law, any liability for any Hazardous Discharge or any Environmental Complaint, that could have a material adverse effect on the Company and its Subsidiaries, taken as a whole.

5.18. Status Under Certain Federal Statutes. The Company is not (a) an "investment company", or a company "controlled" by an "investment company", within the meaning of the Investment Company Act of 1940, as amended; (b) a "holding company" or a "subsidiary company" of a "holding company", or an "affiliate" of a "holding company" or of a "subsidiary company" of a "holding company", as such terms are defined in the Public Utility Holding Company Act of 1935, as amended; (c) a "public utility" as such term is defined in the Federal Power Act, as amended; or (d) a "rail carrier or a person controlled by or affiliated with a rail carrier", within the meaning of Title 49, U.S.C., or a "carrier" to which 49 U.S.C. Section 11301(b)(1) is applicable.

5.19. Foreign Assets Control Regulations, etc. Neither the issue and sale of the Notes and Warrants by the Company nor its use of the proceeds thereof as contemplated by this Agreement will violate the Trading with the Enemy Act, as amended, or any of the foreign assets control regulations of the United States Treasury Department (31 CFR, Subtitle B, Chapter V, as amended) or any enabling legislation or executive order relating thereto.

5.20. Compliance with ERISA. (a) Except as otherwise disclosed on Schedule 5.20, neither the Company nor any of its Subsidiaries has breached the fiduciary rules of ERISA or engaged in any prohibited transaction in connection with which the Company or any of its Subsidiaries could be subjected to (in the case of any such breach) a suit for damages or (in the case of any such prohibited transaction) either a civil penalty assessed under section 502(i) of ERISA or a tax imposed by section 4975 of the Code, which suit, penalty or tax, in any case, would have a material adverse effect on the Company and its Subsidiaries, taken as a whole.

(b) Except as otherwise disclosed on Schedule 5.20, no Plan (other than a Multiemployer Plan) or any trust created under any such Plan has been terminated since September 2, 1974. Neither the Company nor any Related Person has within the past six years

contributed to a single employer plan which has at least two contributing sponsors not under common control or ceased operations at a facility in a manner which would result in liability under section 4062(f) of ERISA. No liability to the PBGC has been or is expected by the Company to be incurred with respect to any Plan

(other than a Multiemployer Plan) by the Company or its Subsidiaries which is or would be materially adverse to the Company and its Subsidiaries, taken as a whole. There has been no reportable event (within the meaning of section 4043(b) of ERISA) or any other event or condition with respect to any Plan (other than a Multiemployer Plan) which presents a risk of termination of any such Plan by the PBGC under circumstances which in any case could result in liability which would be materially adverse to the Company and its Subsidiaries, taken as a whole.

(c) Except as otherwise disclosed on Schedule 5.20, full payment has been made of all amounts which the Company or any Related Person is required under the terms of each Plan to have paid as contributions to such Plan as of the last day of the most recent fiscal year of such Plan ended prior to the date hereof, and no accumulated funding deficiency (as defined in section 302 of ERISA and section 412 of the Code), whether or not waived, exists with respect to any Plan (other than a Multiemployer Plan).

(d) Except as disclosed on Schedule 5.20, the present value of all vested accrued benefits under all Plans (other than Multiemployer Plans), determined as of the end of the Company's most recently ended fiscal year on the basis of reasonable actuarial assumptions, did not exceed the current value of the assets of such Plans allocable to such vested accrued benefits. The terms "present value", "current value", and "accrued benefit" have the meanings specified in section 3 of ERISA.

(e) The Company is not and has never been obligated to contribute to any "multiemployer plan" (as such term is defined in section 4001(a)(3) of ERISA).

(f) The execution and delivery of this Agreement and the issue and sale of the Notes hereunder will not involve any transaction which is subject to the prohibitions of section 406 of ERISA or in connection with which a tax could be imposed pursuant to section 4975 of the Code. The representation by the Company in the preceding sentence is made in reliance upon and subject to the accuracy of the representation of each Purchaser in section 6.2 of this Agreement as to the source of the funds used to pay the purchase price of the Notes purchased by such Purchaser. The Company has delivered to each Purchaser, if requested by it, a

complete and correct list of all employee benefit plans with respect to which the Company is a party in interest and with respect to which its securities are employer securities. As used in this section 5.20(f), the terms "employee benefit plans" and "party in interest" have the respective meanings specified in section 3 of ERISA and the term "employer securities" has the meaning specified

in section 407(d)(1) of ERISA.

5.21. Certain Fees. Except for the fees referred to in section 3 and except for placement fees payable to Ryan, Beck & Co. and Larkspur Capital Corporation, no broker's or finder's fee or commission has been paid or will be payable by the Company with respect to the offer, issue and sale of the Notes or the Warrants, and the Company hereby indemnifies the Purchasers against, and will hold each of the Purchasers harmless from, any claim, demand or liability asserted against such Purchaser for broker's or finder's fees alleged to have been incurred by the Company or any other Person (other than such Purchaser or its affiliates) in connection with any such offer, issue and sale or any of the other transactions contemplated by this Agreement or any of the other Operative Agreements.

5.22. Disclosure. Neither this Agreement, the Disclosure Documents, the Annual Reports, the Form 10-K, the Form 10-Q nor any other document, certificate or instrument delivered to the Purchasers by or on behalf of the Company in connection with the transactions contemplated by this Agreement contains (in each case, as of its date) any untrue statement of a material fact or omits to state a material fact necessary in order to make the statements contained in this Agreement and in such other documents, certificates or instruments not misleading.

6. Representations of Purchasers.

6.1. Purchase Intent. Each of the Purchasers represents that it is purchasing the Notes and Warrants hereunder for its own account, not with a view to the distribution thereof or with any present intention of distributing or selling any of such Notes or Warrants except in compliance with the Securities Act and any applicable state securities laws, provided that the disposition of its property shall at all times be within its control.

6.2. Source of Funds. Each Purchaser represents that all or a portion of the funds to be used by it to pay the purchase price of the Notes and Warrants consists of funds which do not constitute assets of any employee benefit plan and the remaining portion, if any, of such funds consists of funds which may be

deemed to constitute assets of one or more specific employee benefit plans, complete and accurate information as to the identity of each of which such Purchaser has delivered to the Company. As used in this section 6.2, the terms "employee benefit plan" and "government plan" shall have the respective meanings assigned to such terms in section 3 of ERISA.

6.3. Restrictive Legend. Each of the Purchasers acknowledges that upon issuance, and until such time as no longer required under the applicable requirements of the Securities Act, the Notes shall bear a legend, substantially in the form set forth below:

THIS NOTE HAS NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933 AND MAY NOT BE TRANSFERRED IN THE ABSENCE OF SUCH REGISTRATION OR AN EXEMPTION THEREFROM UNDER SUCH ACT.

6.4. Sophisticated Investor. Each of the Purchasers represents and warrants that (i) it is an "accredited investor" (as such term is defined in Regulation D of the Securities Act), (ii) it has such knowledge and experience in financial and business matters as are necessary in order to evaluate the merits and risks of an investment in the Notes and Warrants and is purchasing the Notes and Warrants pursuant to a private sale exempt from registration under the Securities Act and (iii) it has not and will not solicit offers for, or offer or sell, the Notes or Warrants by means of any form of general solicitation or general advertising or in any manner involving a public offering within the meaning of Section 4(2) of the Securities Act.

7. Accounting; Financial Statements; Board Observation Rights.

7.1. Accounting; Financial Statements and Other Information. The Company will maintain, and will cause each of its Subsidiaries to maintain, a system of accounting established and administered in accordance with generally accepted accounting principles, and will accrue, and will cause each of its Subsidiaries to accrue, all such liabilities as shall be required by generally accepted accounting principles. The Company will deliver (in duplicate) to each of the Purchasers, so long as each such Purchaser shall be entitled to purchase Notes under this Agreement or it or its nominee shall be the holder of any Notes, and to each other holder of any Notes:

(a) not later than the earlier to occur of (i) the fiftieth day after the end of each of the first three quarterly fiscal periods in each fiscal year of the Company and (ii) the date of the filing thereof with the

Securities and Exchange Commission, consolidated balance sheets of the Company and its Subsidiaries as at the end of such period and the related consolidated statements of income, stockholders' equity and cash flows of the Company and its Subsidiaries for such period and (in the case of the

second and third quarterly periods) for the period from the beginning of the current fiscal year to the end of such quarterly period, setting forth in each case in comparative form the consolidated figures for the corresponding periods of the previous fiscal year, all in reasonable detail and certified by a principal financial officer of the Company as presenting fairly, in accordance with generally accepted accounting principles (except for the absence of notes thereto) applied (except as specifically set forth therein) on a basis consistent with such prior fiscal periods, the information contained therein, subject to changes resulting from normal year-end audit adjustments; provided that so long as the Company is subject to the reporting provisions of the Exchange Act, timely delivery of copies of the Company's quarterly report on Form 10-Q for such period will satisfy the requirements of this paragraph (a);

(b) not later than the earlier to occur of (i) the one hundred twentieth day after the end of each fiscal year of the Company and (ii) the date of the filing thereof with the Securities and Exchange Commission, consolidated balance sheets of the Company and its Subsidiaries as at the end of such year and the related consolidated statements of income, stockholders' equity and cash flows of the Company and its Subsidiaries for such fiscal year, setting forth in each case in comparative form the consolidated figures for the previous fiscal year, all in reasonable detail and accompanied by a report thereon of BDO Seidman, LLP or other reputable firm of independent public accountants reasonably satisfactory to the Purchasers, which report shall state that such consolidated financial statements present fairly the financial position of the Company and its Subsidiaries as at the dates indicated and the results of their operations and their cash flows for the periods indicated in conformity with generally accepted accounting principles applied on a basis consistent with prior years (except as otherwise specified in such report) and that the audit by such accountants in connection with such consolidated financial statements has been made in accordance with generally accepted auditing standards; provided that so

long as the Company is subject to the reporting provisions of the Exchange Act, timely delivery of copies of the Company's annual report on Form 10-K for such period will satisfy the requirements of this paragraph (b);

(c) together with each delivery of financial statements pursuant to subdivisions (a) and (b) of this section 7, an

Officers' Certificate (i) stating that the signers have reviewed the terms of this Agreement and of the Notes and have made, or caused to be made under their supervision, a review in reasonable detail of the transactions and condition of the Company and its Subsidiaries during the accounting period covered by such financial statements and that such review has not disclosed the existence during or at the end of such accounting period, and that the signers do not have knowledge of the existence as at the date of the Officers' Certificate, of any condition or event which constitutes an Event of Default or Potential Event of Default, or, if any such condition or event existed or exists, specifying the nature and period of existence thereof and what action the Company has taken or is taking or proposes to take with respect thereto, (ii) demonstrating in reasonable detail compliance during and at the end of such accounting period with the restrictions contained in sections 10.1, 10.2 and 10.3, (iii) setting forth in comparative form the consolidated figures contained in the Company's forecast for the accounting period covered by such financial statements and (iv) setting forth the amount of the Investment Basket as of the end of the accounting period covered by such financial statements.

(d) together with each delivery of financial statements pursuant to subdivision (b) of this section 7, a written statement by the independent public accountants giving the report thereon (i) stating that their audit examination has included a review of the terms of this Agreement and of the Notes as they relate to accounting matters and that such review is sufficient to enable them to make the statement referred to in clause (iii) of this subdivision (d) (it being understood that no special audit procedures, other than those required by generally accepted auditing standards, shall be required), (ii) stating whether, in the course of their audit examination, they obtained knowledge (and whether, as of the date of such written statement, they have knowledge) of the existence of any condition or event which constitutes an Event of Default or Potential Event of Default, and, if so, specifying the nature and period of existence thereof,

and (iii) stating that they have examined the Officers' Certificate delivered in connection therewith pursuant to subdivision (c) of this section 7 and that the matters set forth in such Officers' Certificate pursuant to clauses (ii) and (iii) of such subdivision (c) have been properly stated in accordance with the terms of this Agreement;

(e) in addition to the financial statements required by subdivisions (a) and (b) of this section 7.1, within 30 days after the end of each month, consolidated balance sheets of the Company and its Subsidiaries as at the end of such month and the related consolidated statements of income, stockholders' equity and cash flows of the Company and its Subsidiaries for such month and (in the case of the second through twelfth month of the fiscal year) for the period from the beginning of the current fiscal year to the end of such month, setting forth in each case in comparative form the consolidated figures for the corresponding periods of the previous fiscal year, all in reasonable detail and certified by a principal financial officer of the Company as having been prepared in accordance with generally accepted accounting principles (except for the absence of notes thereto) applied (except as specifically set forth therein) on a basis consistent with such prior fiscal periods, subject to changes resulting from normal year-end audit adjustments;

(f) promptly upon receipt thereof, copies of all final reports submitted to the Company by independent public accountants in connection with each annual, interim or special audit of the books of the Company or any Subsidiary made by such accountants, including, without limitation, the comment letter submitted by such accountants to management in connection with their annual audit;

(g) promptly upon their becoming available, copies of all financial statements, reports, notices and proxy statements sent or made available generally by the Company to its public security holders, of all regular and periodic reports and all registration statements and prospectuses filed by the Company or any Subsidiary with any securities exchange or with the Securities and Exchange Commission or any governmental authority succeeding to any of its functions, and of all press releases and other statements made available generally by

the Company or any Subsidiary to the public concerning material developments in the business of the Company or its Subsidiaries;

(h) promptly upon any principal officer of the Company or any other officer of the Company involved in its financial administration obtaining knowledge of any condition or event which constitutes an Event of Default or Potential Event of Default, or that the holder of any Note

has given any notice or taken any other action with respect to a claimed Event of Default or Potential Event of Default under this Agreement or that any Person has given any notice to the Company or any Subsidiary or taken any other action with respect to a claimed default or event or condition of the type referred to in section 11(f), an Officers' Certificate describing the same and the period of existence thereof and what action the Company has taken, is taking and proposes to take with respect thereto;

(i) promptly upon any principal officer of the Company or any other officer of the Company involved in its financial administration obtaining knowledge of the occurrence of any (i) "reportable event", as such term is defined in section 4043 of ERISA, or (ii) "prohibited transaction", as such term is defined in section 4975 of the Code, in connection with any Plan or any trust created thereunder, (iii) "accumulated funding deficiency" (within the meaning of Section 412(a) of the Code) has been incurred with respect to a Plan, (iv) Plan having been terminated, reorganized or declared insolvent under Title IV of ERISA, (v) Plan having an unfunded current liability giving rise to a lien under ERISA or the Code, (vi) proceeding having been instituted pursuant to Section 515 of ERISA to collect a delinquent contribution to a Plan, (vii) liability which will or may be incurred by the Company or any Related Person under Section 4062, 4063, 4064 or 4975 of the Code or Section 409 or 502(i) of ERISA, a written notice specifying the nature thereof, what action the Company has taken, is taking and proposes to take with respect thereto, and, when known, any action taken or threatened by the Internal Revenue Service or the PBGC with respect thereto, provided that such written notice need be given (A) with respect to the occurrence of any "reportable event" as to which the PBGC has waived the 30-day reporting requirement, only at the time notice is given to the PBGC, and (B) with respect to the occurrences described in clauses (iii), (iv), (v), (vi) and (vii), only if such occurrences would have a material adverse effect on the Company and its Subsidiaries, taken as a whole;

(j) with reasonable promptness, such other financial reports and information and data with respect to the Company or any of its Subsidiaries as from time to time may be reasonably requested;

(k) promptly upon any principal officer of the Company obtaining knowledge of any action or proceeding which has

been commenced or threatened against the Company or any Subsidiary and which, if adversely determined, would have a material adverse effect on the Company and its Subsidiaries, taken as a whole, a written notice specifying the nature thereof and what action the Company has taken, is taking and proposes to take with respect thereto; and

(l) promptly upon any principal officer of the Company obtaining knowledge of any dispute which may exist between the Company or any Subsidiary and any governmental authority which may have a material adverse effect on the Company and its Subsidiaries, taken as a whole, a written notice specifying the nature thereof and what action the Company has taken, is taking and proposes to take with respect thereto.

7.2. Rule 144A. The Company agrees that, if at any time it is not subject either to Section 13 or to Section 15(d) of the Exchange Act, it will furnish to any holder of Notes or Warrants or to a prospective purchaser of any Note or Warrant designated by such a holder, upon the request of such holder or such prospective purchaser, on or prior to the date such Note or Warrant is to be sold to such prospective purchaser, subject to a confidentiality undertaking by such prospective purchaser, the following information (which shall be reasonably current in relation to the date of such sale under this paragraph); a very brief statement of the nature of the business of the Company and the products and services it offers; and the Company's most recent audited consolidated balance sheets and profit and loss and retained earnings statement, and similar financial statements for the two preceding fiscal years.

7.3. Board Observation Rights. Two authorized representatives of AMI-PESI and one authorized representative of Bridge East shall be entitled to attend each meeting of the Board. The Company will deliver to each Person entitled to attend meetings of the Board (a) at least five Business Days' notice of each regular meeting of the Board and such notice as is given to directors of each special or emergency meeting of the Board, in each case to enable such Person to attend such meeting, (b) all information given to the directors of the Company at or prior to

each such meeting and (c) as promptly as practicable after each such meeting, copies of the minutes of such meeting.

8. Inspection; Confidentiality.

8.1. Inspection. The Company will permit any authorized representatives designated by each Purchaser, so long as it shall be entitled to purchase Notes under this Agreement or it or its nominee

shall be the holder of any Notes, or by any other holder of any Notes, without expense to the Company, to visit and inspect any of the properties of the Company or any of its Subsidiaries, including its and their books of account, and to make copies and take extracts therefrom, and to discuss its and their affairs, finances and accounts with its and their officers and independent public accountants, all at such reasonable times and as often as may be reasonably requested; provided that prior thereto said representative if requested by the Company shall agree in writing to the bound by the terms of section 8.2 below.

8.2. Confidentiality. Each Purchaser agrees that it will not disclose, and will cause its representatives who attend Board meetings pursuant to section 7.3 to agree in writing not to disclose, without the prior consent of the Company (other than to its employees, officers, directors, advisors, auditors or counsel in the ordinary course of performing their respective duties on behalf of such Purchaser, or to another holder of the Notes, who in each case, prior to such disclosure, agreed in writing to be bound by the terms of this section 8.2) any information with respect to the Company or any Subsidiary which is furnished pursuant to section 7 or this section 8, provided that each Purchaser may disclose any such information (a) as has become generally available to the public, (b) as may be required or appropriate in any report, statement or testimony submitted to any municipal, state or federal regulatory body having or claiming to have jurisdiction over such Purchaser, (c) as may be required or appropriate in response to any summons or subpoena or in connection with any litigation, (d) to the extent that such Purchaser believes it appropriate in order to comply with any law, order, regulation or ruling applicable to it or (e) to the prospective transferee in connection with any contemplated transfer of any of the Notes by such Purchaser; provided that, in the case of any disclosure proposed to be made under the foregoing clause (c) or (d), the Purchaser will use its best efforts to give the Company five Business Days prior notice of such proposed disclosure and to afford to the Company the opportunity to contest the relevant requirements of law.

9. Prepayment of Notes.

9.1. Optional Prepayments with Premium. The Company may, at its option, upon notice as provided in section 9.4, prepay at any time all, or from time to time any part (in an amount of at least $500,000 in the aggregate or an integral multiple of $1,000 in excess thereof, or such lesser amount as may then be outstanding) of, the Notes at the principal amount so prepaid, plus the premium determined in accordance with 9.3.

9.2. Contingent Prepayments. In the event (a) of the

occurrence of a Change of Control or (b) Dr. Louis F. Centofanti ceases for any reason to be President and Chief Executive Officer of the Company, the Company shall give prompt written notice thereof to each holder of the Notes, by facsimile transmission or registered mail (and shall confirm such notice by prompt telephonic advice to an investment officer of each such holder), which notice shall contain a written, irrevocable offer by the Company to prepay, on a date specified in such notice (which date shall be not less than 30 days and not more than 90 days after the date of such notice), the Notes held by such holder in full (and not in part). Upon the acceptance of such offer by such holder mailed to the Company at least 10 days prior to the date of prepayment specified in the Company's offer, such prepayment shall be made at the principal amount of the Notes so prepaid, plus (i) all accrued and unpaid interest due thereon and (ii) if the offer of prepayment is made pursuant to clause (a) above, the premium determined in accordance with section 9.3. Any offer by the Company to prepay the Notes pursuant to this section 9.2 shall be accompanied by an Officers' Certificate certifying that the conditions of this section 9.2 have been fulfilled and specifying the particulars of such fulfillment. If the holder of any Notes shall accept such offer, the principal amount of such Notes shall become due and payable on the date specified in such offer. In the event that there shall have been a partial prepayment of the Notes under this section 9.2, the Company shall promptly give notice to the holders of the Notes, accompanied by an Officers' Certificate setting forth the principal amount of each of the Notes that was prepaid and specifying how each such amount was determined.

9.3. Premium Table. For the purposes of sections 9.1, 9.2 and 11, whenever a premium is required to be paid upon prepayment of any Note, the applicable premium shall be determined in accordance with the following table, depending upon the period in which the date fixed for such prepayment occurs:

12-Month Period Commencing July 31,	Premium
2001	13.500%
2002	13.500%
2003	6.750%
2004	3.375%
Thereafter	none

9.4. Notice of Optional Prepayments; Officers' Certificate. The Company will give each holder of any Notes written notice of each optional prepayment under section 9.1 not less than 30 days and not more than 60 days prior to the date fixed for such

prepayment, in each case specifying such date, the aggregate principal amount of the Notes to be prepaid, the principal amount of each Note held by such holder to be prepaid, and the premium, if any, applicable to such prepayment. Such notice shall be accompanied by an Officers' Certificate certifying that the conditions of such section have been fulfilled and specifying the particulars of such fulfillment.

9.5. Allocation of Partial Prepayments. In the case of each partial prepayment paid or to be prepaid (except a prepayment pursuant to section 9.2 of the Notes held by some but not all holders), the principal amount of the Notes to be prepaid shall be allocated (in integral multiples of $1,000) among all of the Notes at the time outstanding in proportion, as nearly as practicable, to the respective unpaid principal amounts thereof not theretofore called for prepayment, with adjustments, to the extent practicable, to compensate for any prior prepayments not made exactly in such proportion.

9.6. Maturity; Surrender, etc. In the case of each prepayment, the principal amount of each Note to be prepaid shall mature and become due and payable on the date fixed for such prepayment, together with interest on such principal amount accrued to such date and the applicable premium, if any. From and after such date, unless the Company shall fail to pay such principal amount when so due and payable, together with the interest and premium, if any, as aforesaid, interest on such principal amount shall cease to accrue. Any Note paid or prepaid in full shall be surrendered to the Company and canceled and shall not be reissued, and no Note shall be issued in lieu of any prepaid principal amount of any Note.

9.7. Acquisition of Notes. The Company will not, and will not permit any Subsidiary or Affiliate to, purchase, redeem or otherwise acquire any Note except upon the payment or

prepayment thereof in accordance with the terms of this Agreement and such Note.

10. Business and Financial Covenants. The Company covenants that from the date of this Agreement through the Closing and thereafter so long as any of the Notes are outstanding:

10.1. Financial Covenants. (a) Minimum Tangible Adjusted Net Worth (a) The Company and its Subsidiaries shall maintain at all times Tangible Adjusted Net Worth in an amount not less than $12,750,000 for the fiscal quarter ending September 30, 2001, $13,600,000 for the fiscal quarter ending December 31, 2001, $14,875,000 for the fiscal quarter ending March 31, 2002, and $15,725,000 at all times thereafter.

(b) Fixed Charge Coverage Ratio. The Company and its Subsidiaries shall maintain at all times a Fixed Charge Coverage Ratio, calculated on a trailing four quarters basis, of not less than: .935 to 1.0 for the fiscal quarter ending September 30, 2001, 1.02 to 1.0 for the fiscal quarter ending December 31, 2001 and 1.0625 to 1.0 for all fiscal quarters thereafter.

(c) Limitation on Capital Expenditures. The Company shall not, and shall not permit any of its Subsidiaries to, contract for, purchase or make any expenditure or commitments for fixed or capital assets (including Capitalized Leases) in any fiscal year commencing with the fiscal year ending December 31, 2001 in an aggregate amount for itself and its Subsidiaries in excess of: (i) in the case of Unfinanced Capital Expenditures, the sum of (x) $2,000,000 plus (y) one-half of the amount of the cash proceeds of issuances of subordinated debt or equity used to pay obligations to Capital Bank not in excess of $3,750,000, provided that during such fiscal year such proceeds are received, plus (z) the second-half of such amount of cash proceeds of issuances of subordinated debt or equity used to pay obligations to Capital Bank in any fiscal year succeeding a fiscal year when such proceeds were received, and (ii) in the case of all capital expenditures (whether financed or unfinanced), the sum of (i) the amount available under the Investment Basket or the amount of capital expenditures financed by capital lessors and (ii) the amount set forth in clause (a) above.

10.2. Debt. The Company will not, and will not permit any Subsidiary to, directly or indirectly, create, incur, assume,

guarantee, or otherwise become or remain directly or indirectly liable with respect to, any Debt, except that:

(a) the Company may become and remain liable with respect to the Debt evidenced by the Notes;

(b) the Company and its Subsidiaries may become and remain liable with respect to Debt outstanding pursuant to the Credit Agreement in an aggregate outstanding principal amount not to exceed at any time of determination $7,000,000 under the term loan portion and $15,000,000 under the revolving credit portion;

(c) the Company and its Subsidiaries may become and remain liable with respect to Debt incurred to refund the Debt outstanding under the Credit Agreement or any previous refunding thereof (any such Debt being referred to as "Refunding Debt") if (i) the principal amount of such Refunding Debt does not exceed the principal amount of the

Debt being refunded, (ii) the weighted average life to maturity of such Refunding Debt is not shorter than that of the Debt being refunded, and (iii) the rate or rates of interest applicable to such Refunding Debt does not exceed by more than 2% the interest rate or rates permitted to be charged under the Credit Agreement as in effect on the date hereof;

(d) the Subsidiaries of the Company may become and remain liable with respect to Guaranties of the Debt permitted to be outstanding under the foregoing paragraphs (a), (b) and (c);

(e) the Company may remain liable with respect to the Debt outstanding under the Junior Loan Agreements;

(f) certain Subsidiaries may remain liable with respect to Debt outstanding on the date of this Agreement under certain settlement agreements with the Internal Revenue Service in an aggregate amount not to exceed $4,800,000;

(g) the Company and its Subsidiaries may remain liable with respect Debt outstanding on the date of this Agreement and referred to in Schedule 5.7;

(h) the Company and any Subsidiary may become and remain liable with respect to Debt owing to the Company or another Subsidiary; and

(i) the Company may become and remain liable with respect to Debt in addition to that otherwise permitted by the foregoing provisions of this section 10.2, including Debt incurred to finance capital expenditures and Debt in respect of Capitalized Leases, so long as the aggregate principal amount of such additional Debt and Debt outstanding under the foregoing paragraphs (b), (c) and (g) (without duplication) shall not exceed at any time of determination $30,000,000.

For the purposes of this section 10.2, any Person becoming a Subsidiary after the date of this Agreement shall be deemed to have incurred all of its then outstanding Debt at the time it becomes a Subsidiary, and any Person extending, renewing or refunding any Debt shall be deemed to have incurred such Debt at the time of such extension, renewal or refunding.

10.3. Liens, etc. The Company will not, and will not permit any Subsidiary to, directly or indirectly create, incur, assume or permit to exist any Lien on or with respect to any

property or asset (including any document or instrument in respect of goods or accounts receivable) of the Company or any Subsidiary, whether now owned or held or hereafter acquired, or any income or profits therefrom, except:

(a) Liens for taxes, assessments, environmental investigations and remediation costs or other governmental charges the payment of which is not at the time required by section 10.10;

(b) statutory Liens of landlords and Liens of carriers, warehousemen, mechanics and materialmen incurred in the ordinary course of business for sums not yet due or the payment of which is not at the time required by section 10.10;

(c) Liens (other than any Lien imposed by ERISA or the Code in connection with a Plan) incurred or deposits made in the ordinary course of business (i) in connection with workers' compensation, unemployment insurance and other types of social security, or (ii) to secure (or to obtain letters of credit that secure) the performance of tenders, statutory obligations, surety and appeal bonds, bids, leases, performance bonds, purchase, construction or sales contracts and other similar obligations, in each case not incurred or made in connection with the borrowing of money, the obtaining of advances or credit or the payment of the deferred purchase price of property;

(d) any attachment or judgment Lien, unless the judgment it secures shall not, within 60 days after the entry thereof, have been discharged or execution thereof stayed pending appeal, or shall not have been discharged within 60 days after the expiration of any such stay;

(e) leases or subleases granted to others, easements, rights-of-way, restrictions and other similar charges or encumbrances, in each case incidental to, and not interfering with, the ordinary conduct of the business of the Company or any Subsidiary;

(f) Liens incurred to secure the Debt of the Company (other than Debt which by its terms is subordinate in right of payment to any other Debt of the Company) outstanding in compliance with paragraphs (b), (c), (d) and (i) of section 10.2;

(g) Liens existing on the date of this Agreement and securing the Debt of the Company and its Subsidiaries

referred to in Schedule 5.7.

For the purposes of this section 10.3, any Person becoming a Subsidiary after the date of this Agreement shall be deemed to have incurred all of its then outstanding Liens at the time it becomes a Subsidiary, and any Person extending, renewing or refunding any Debt secured by any Lien shall be deemed to have incurred such Lien at the time of such extension, renewal or refunding.

10.4. Investments, Guaranties, etc. The Company will not, and will not permit any Subsidiary to, directly or indirectly make or own any Investment in any Person, or create or become or be liable with respect to any Guaranty, except:

(a) the Company and its Subsidiaries may make and own Investments in

(i) marketable direct obligations issued or unconditionally guaranteed by the United States of America or issued by any agency thereof maturing within one year from the date of acquisition thereof,

(ii) marketable direct obligations issued by any state of the United States of America or any political subdivision of any such state or any public instrumentality thereof maturing within one year from the date of acquisition thereof and having as at any date of determination the highest rating obtainable from either Standard & Poor's Corporation or Moody's Investors Service, Inc.,

(iii) commercial paper maturing no more than 270 days from the date of creation thereof and having as at any date of determination the highest rating obtainable from either Standard & Poor's Corporation or Moody's Investors Service, Inc.,

(iv) certificates of deposit maturing within one year from the date of acquisition thereof issued by commercial banks incorporated under the laws of the United States of America or any state thereof or the District of Columbia, each having as at any date of determination combined capital and surplus of not less than $300,000,000 ("Permitted Banks") or a foreign branch thereof,

(v) bankers' acceptances eligible for rediscount under requirements of The Board of

Governors of the Federal Reserve System and accepted by Permitted Banks,

(vi) obligations of the type described in clauses (i) through (iv) above purchased from a securities dealer designated as a "primary dealer" by the Federal Reserve Bank of New York or a Permitted Bank as counterparty pursuant to a repurchase agreement obligating such counterparty to repurchase such obligations not later than 14 days after the purchase thereof and which provides that the obligations which are the subject thereof are held for the benefit of the Company and its Subsidiaries by a custodian which is a Permitted Bank and which is not the counterparty to the repurchase agreement in question, and

(vii) the securities of any investment company registered under the Investment Company Act of 1940 which is a "money market fund" within the meaning of regulations of the Securities and Exchange Commission, or an interest in a pooled fund maintained by a Permitted Bank having comparable investment restrictions;

(b) the Company and its Subsidiaries may make and own Investments in any Subsidiary or any Person which simultaneously therewith becomes a Subsidiary, if such Subsidiary or such Person is a corporation organized under

the laws of the United States or any state thereof or the District of Columbia or Canada and substantially all of whose assets are located and substantially all of whose business is conducted within the United States and Canada;

(c) the Company and its Subsidiaries may continue to own their respective Investments in Persons listed on Schedule 10.4;

(d) the Company's Subsidiaries may become and remain liable with respect to Guaranties of the Notes set forth in the Guaranty Agreement;

(e) the Company's Subsidiaries may become and remain liable with respect to Guaranties of Debt of the Company outstanding under paragraphs (b), (c), (d), (f) and (g) of section 10.2; and

(f) the Company and its Subsidiaries may make and own

Investments not otherwise permitted under this section 10.4 in an aggregate amount not to exceed $100,000.

Notwithstanding the foregoing, no Guaranty shall be permitted by this section 10.4 unless either the maximum dollar amount of the obligation being guaranteed is readily ascertainable by the terms of such obligation or the agreement or instrument evidencing such Guaranty specifically limits the dollar amount of the maximum exposure of the guarantor thereunder.

10.5. Restricted Payments. The Company will not, and will not permit its Subsidiaries to, declare, order, pay, make or set apart any sum or property for any Restricted Payment, except that the Company may make payments in respect of regularly scheduled dividends on the Series 17 Preferred Stock if, immediately after giving effect to such payment, no condition or event shall exist which constitutes an Event of Default or Potential Event of Default.

10.6. Transactions with Affiliates. The Company will not, and will not permit any Subsidiary to, directly or indirectly, engage in any transaction (or series of related transactions) material to the Company and its Subsidiaries, taken as a whole, (including, without limitation, the purchase, sale or exchange of assets or the rendering of any service) with any Affiliate of the Company, except as otherwise permitted by this Agreement and pursuant to the reasonable requirements of the Company's or such

Subsidiary's business and upon fair and reasonable terms that are no less favorable to the Company or such Subsidiary, as the case may be, than those which might be obtained, in the good faith judgment of the Company, in an arm's length transaction at the time from Persons which are not such an Affiliate.

10.7. Consolidation, Merger, Sale of Assets, etc. The Company will not, and will not permit any Subsidiary to, directly or indirectly:

(a) consolidate with or merge into any other Person or permit any other Person to consolidate with or merge into it, except that:

(i) any Subsidiary may consolidate with or merge into the Company or a Subsidiary if the Company or such Subsidiary, as the case may be, shall be the surviving corporation and if, immediately after giving effect to such transaction, no condition or event shall exist which constitutes an Event of Default or Potential Event of Default;

(ii) any corporation (other than a Subsidiary) may consolidate with or merge into the Company if the Company shall be the surviving corporation and if, immediately after giving effect to such transaction, (x) no condition or event shall exist which constitutes an Event of Default or Potential Event of Default, and (y) substantially all of the assets of the Company shall be located and substantially all of its business shall be conducted within the United States and Canada; and

(iii) the Company may consolidate with or merge into any other corporation if (x) the surviving corporation is a corporation organized and existing under the laws of the United States of America or a state thereof or Canada, with substantially all of its assets located and substantially all of its business conducted within the United States and Canada, (y) such corporation expressly assumes, by an agreement reasonably satisfactory to each of the Purchasers, the obligations of the Company under this Agreement and under the Notes, and (z) immediately after giving effect to such transaction (and such assumption) (A) such corporation shall not be liable with respect to any Debt or allow its property to be subject to any Lien which it could not become liable with respect to or allow its property to become subject to under this Agreement on the date of such transaction, and (B) no condition or event shall exist which constitutes an Event of Default or a Potential Event of Default; or

(b) sell, lease, abandon or otherwise dispose of all or substantially all its assets, except that:

(i) any Subsidiary may sell, lease or otherwise dispose of all or substantially all its assets to the Company or a Subsidiary;

(ii) the Company may sell, lease or otherwise dispose of all or substantially all its assets to any corporation into which the Company could be consolidated or merged in compliance with subdivision (a)(iii) of this section 10.7, provided that (x) each of the conditions set forth in such subdivision (a)(iii) shall have been fulfilled, and (y) no such disposition shall relieve the Company from its obligations under this Agreement or the Notes; or

(c) sell, lease, abandon or otherwise dispose of any of its assets (except in a transaction permitted by subdivision (b) of this section 10.7), except that the Company and its Subsidiaries may dispose of obsolete or damaged equipment.

10.8. Subsidiary Stock and Indebtedness. The Company will not, and will not permit any Subsidiary to:

(a) directly or indirectly sell, assign, pledge or otherwise dispose of any Debt of or any shares of stock of (or warrants, rights or options to acquire stock of) any Subsidiary, except to a Subsidiary or as directors' qualifying shares if required by applicable law;

(b) permit any Subsidiary directly or indirectly to sell, assign, pledge or otherwise dispose of any Debt of the Company or any other Subsidiary, or any shares of stock of (or warrants, rights or options to acquire stock of) any other Subsidiary, except to the Company or a Wholly-Owned Subsidiary or as directors' qualifying shares if required by applicable law;

(c) permit any Subsidiary to have outstanding any shares of Preferred Stock other than the Series B Preferred Stock, no par value per share, of M&EC outstanding on the date hereof and shares of Preferred Stock which are owned by the Company or a Subsidiary; or

(d) permit any Subsidiary directly or indirectly to issue or sell (including, without limitation, in connection with a merger or consolidation of a Subsidiary otherwise permitted by section 10.7(a)) any shares of its stock (or warrants, rights or options to acquire its stock) except to the Company or a Subsidiary or as directors' qualifying shares if required by applicable law, except as permitted in section 10.7.

10.9. Corporate Existence, etc.; Business. The Company will at all times preserve and keep in full force and effect its corporate existence, and rights and franchises deemed material to its business, and those of each of its Subsidiaries, except as otherwise specifically permitted by section 10.7 and except that the corporate existence of any Subsidiary may be terminated if, in the good faith judgment of the Board, such termination is in the best interest of the Company and is not disadvantageous to the holders of the Notes. The Company will not, and will not permit any Subsidiary to: (a) engage in any business other than (i) the treatment, storage, processing and disposal of hazardous, non-hazardous, low-

level radioactive and mixed (low-level radioactive and hazardous waste) wastes, (ii) the offering of industrial waste and wastewater management services, (iii) the performance of various environmental consulting and engineering services, (iv) conducting research and development with respect to the activities described in clauses (i) through (iii), and other activities incidental or related to such business; or (b) conduct the activities described in (a)(i) through (iv) in contravention of Environmental Laws or the terms and conditions of any permits, approvals, authorizations or consent decrees required by or entered into pursuant to Environmental Laws, except where such contravention would not be material to the Company and its Subsidiaries, taken as a whole.

10.10. Payment of Taxes and Claims. The Company will, and will cause each Subsidiary to, pay all taxes, assessments, environmental investigations and remediation costs and other governmental charges imposed upon it or any of its properties or assets or in respect of any of its franchises, business, income or

profits before any penalty or interest accrues thereon, and all claims (including, without limitation, claims for labor, services, materials and supplies) for sums which have become due and payable and which by law have or might become a Lien upon any of its properties or assets, provided that no such charge or claim need be paid if being contested in good faith by appropriate proceedings promptly initiated and diligently conducted and if such reserves or other appropriate provision, if any, as shall be required by generally accepted accounting principles shall have been made therefor.

10.11. Compliance with ERISA. Except as otherwise provided in Schedule 5.20, the Company will not, and will not permit any Subsidiary to,

(a) engage in any transaction in connection with which the Company or any Subsidiary could be subject to either a civil penalty assessed pursuant to section 502(i) of ERISA or a tax imposed by section 4975 of the Code, terminate or withdraw from any Plan (other than a Multiemployer Plan) in a manner, or take any other action with respect to any such Plan (including, without limitation, a substantial cessation of operations within the meaning of section 4062(f) of ERISA), which could result in any liability of the Company or any Subsidiary to the PBGC, to a trust established pursuant to section 4041(c)(3)(B)(ii) or (iii) or 4042(i) of ERISA, or to a trustee appointed under section 4042(b) or (c) of ERISA, incur any liability to the PBGC on account of a termination of a Plan under section 4064 of ERISA, fail to make full payment when due of all amounts which, under the

provisions of any Plan, the Company or any Subsidiary is required to pay as contributions thereto, or permit to exist any accumulated funding deficiency, whether or not waived, with respect to any Plan (other than a Multiemployer Plan), if, in any such case, such penalty or tax or such liability, or the failure to make such payment, or the existence of such deficiency, as the case may be, could have a material adverse effect on the Company and its Subsidiaries, taken as a whole;

(b) permit the present value of all vested accrued benefits under all Plans maintained at such time by the Company and any Subsidiary (other than Multiemployer Plans) guaranteed under Title IV of ERISA to exceed the current value of the assets of such Plans allocable to such vested accrued benefits by more than $100,000;

(c) permit the aggregate complete or partial withdrawal liability under Title IV of ERISA with respect to Multiemployer Plans incurred by the Company and its Subsidiaries to exceed $100,000; or

(d) permit the sum of (i) the amount by which the current value of all vested accrued benefits referred to in subdivision (b) of this section 10.11 exceeds the current value of the assets referred to in such subdivision (b) and (ii) the amount of the aggregate incurred withdrawal liability referred to in subdivision (c) of this section 10.11 to exceed $100,000.

For the purposes of subdivisions (c) and (d) of this section 10.11, the amount of the withdrawal liability of the Company and its Subsidiaries at any date shall be the aggregate present value of the amount claimed to have been incurred less any portion thereof as to which the Company reasonably believes, after appropriate consideration of possible adjustments arising under sections 4219 and 4221 of ERISA, it and its Subsidiaries will have no liability, provided that the Company shall obtain prompt written advice from independent actuarial consultants supporting such determination.

10.12. Maintenance of Properties; Insurance. The Company will maintain or cause to be maintained in good repair, working order and condition (including, without limitation, the prompt investigation and remediation of releases or threatened releases of Hazardous Substances) all properties used or useful in the business of the Company and its Subsidiaries and from time to time will make or cause to be made all appropriate repairs, renewals and replacements thereof, ordinary wear and tear excepted. The Company will maintain or cause to be maintained, with financially sound and

reputable insurers, insurance with respect to its properties and business and the properties and business of its Subsidiaries against loss or damage of the kinds customarily insured against by corporations of established reputation engaged in the same or similar business and similarly situated, of such types and in such amounts as are customarily carried under similar circumstances by such other corporations. Such insurance may be subject to co-insurance, deductibility or similar clauses which, in effect, result in self-insurance of certain losses, provided that such self-insurance is in accord with the approved practices of corporations similarly situated and adequate insurance reserves are maintained in connection with such self-insurance.

10.13. Additional Guaranties. The Company shall cause any Person that hereafter becomes a Subsidiary of the Company to execute and deliver to the holders of the Notes a Guaranty Agreement with respect to the obligations of the Company hereunder and under the Notes, substantially in the form of Exhibit D, with such changes to such form as may be appropriate to reflect the identity and circumstances of the guarantor.

10.14. Junior Loan Agreements; Credit Agreement. The Company will not enter into any amendment or modification of any of the Junior Loan Agreements which increases the principal amount thereof, increases the interest rate or rates or the fees and charges applicable thereto, shortens the final maturity or the maturity of any prepayment of any of the loans thereunder, amends or modifies the subordination terms thereof or the events of default or remedies granted to the holder upon breach or default thereof, or amends or modifies the covenants such that, after giving effect to such amendment or modification, the covenants in any of such Junior Loan Agreements, taken as a whole, would be materially more restrictive to the Company. The Company will promptly deliver to each holder of the Notes a copy of each amendment to the Credit Agreement, each amendment of any of the Junior Loan Agreements and each agreement or instrument evidencing any other Debt of the Company entered into after the Closing Date.

11. Events of Default; Acceleration. If any of the following conditions or events ("Events of Default") shall occur and be continuing:

(a) if the Company shall default in the payment of any principal of or premium, if any, on any Note when the same becomes due and payable, whether at maturity or at a date fixed for prepayment or by declaration or otherwise; or

(b) if the Company shall default in the payment of any interest on any Note for more than five days after the same

becomes due and payable; or

(c) if the Company shall default in the performance of or compliance with any term contained in sections 10.1 through 10.8, inclusive; or

(d) if the Company shall default in the performance of or compliance with any term contained in this Agreement other than those referred to above in this section 11 and

such default shall not have been remedied within 30 days after such failure shall first have become known to any officer of the Company or written notice thereof shall have been received by the Company from any holder of any Note; or

(e) if any representation or warranty made in writing by or on behalf of the Company in this Agreement or in any instrument furnished in compliance with this Agreement shall prove to have been false or incorrect in any material respect on the date as of which made; or

(f) if the Company or any Subsidiary shall default (as principal or guarantor or other surety) in the payment of any principal of or premium or interest on any Debt which is outstanding in a principal amount of at least $1,000,000 (other than the Notes), or if any event shall occur or condition shall exist in respect of any such Debt which is outstanding in a principal amount of at least $1,000,000 or under any evidence of any such Debt or of any mortgage, indenture or other agreement relating thereto, and as a result of such default, event or condition the holder or holders of such Debt shall have caused the acceleration of the payment of such Debt before its regularly scheduled dates of payment; or

(g) if any Guaranty Agreement shall be unenforceable or shall cease to be in full force and effect as to any Subsidiary; or

(h) if a final judgment or judgments shall be rendered against the Company or any Subsidiary for the payment of money in excess of $250,000 (in excess of insurance coverage) in the aggregate and any one of such judgments shall not be discharged or execution thereon stayed pending appeal, within 60 days after entry thereof, or, in the event of such a stay, such judgment shall not be discharged within 60 days after such stay expires; or

(i) if the Company or any material Subsidiary shall (i)

admit in writing its inability, generally, to pay its debts as they become due, (ii) file, or consent by answer or otherwise to the filing against it of, a petition for relief or reorganization or arrangement or any other petition in bankruptcy, for liquidation or to take advantage of any bankruptcy or insolvency law of any jurisdiction, (iii) make an assignment for the benefit of its creditors, (iv) consent to the appointment of a

custodian, receiver, trustee or other officer with similar powers with respect to it or with respect to any substantial part of its property, (v) be adjudicated insolvent or (vi) take corporate action for the purpose of any of the foregoing; or

(j) if a court or governmental authority of competent jurisdiction shall enter an order appointing, without consent by the Company or any material Subsidiary, a custodian, receiver, trustee or other officer with similar powers with respect to it or with respect to any substantial part of its property, or if an order for relief shall be entered in any case or proceeding for liquidation or reorganization or otherwise to take advantage of any bankruptcy or insolvency law of any jurisdiction, or ordering the dissolution, winding-up or liquidation of the Company or any material Subsidiary, or if any petition for any such relief shall be filed against the Company or a material Subsidiary and such petition shall not be dismissed within 60 days;

then, (x) upon the occurrence of any Event of Default described in subdivision (i) or (j) of this section 11 with respect to the Company (other than such an Event of Default described in clause (i) of subdivision (i) or described in clause (vi) of subdivision (i) by virtue of the reference in such clause (vi) to such clause (i)), the unpaid principal amount of and accrued interest on the Notes shall automatically become due and payable or (y) upon the occurrence of any other Event of Default, any holder or holders of more than 66 2/3% in principal amount of the Notes at the time outstanding (subject to section 15.4) may at any time (unless all defaults shall theretofore have been remedied) at its or their option, by written notice or notices to the Company, declare all the Notes to be due and payable, whereupon the Notes shall forthwith mature and become due and payable, together with interest accrued thereon; and, in the case of any Event of Default described in this section 11, there shall also be due and payable, to the extent permitted by applicable law, a premium as set forth in section 9.3, all without presentment, demand, protest or notice, which are hereby waived; provided that

during the existence of an Event of Default described in subdivision (a) or (b) of this section 11, then, irrespective of whether the holder or holders of more than 50% in principal amount of Notes then outstanding shall have declared all the Notes to be due and payable pursuant to this section 11, any holder of the Notes may, at its option, by notice in writing to the Company, declare the Notes then held by such holder to be due and payable, whereupon the Notes then held by such holder shall forthwith mature and

become due and payable, together with interest accrued thereon and, to the extent permitted by applicable law, a premium as set forth in section 9.3, without presentment, demand, protest or notice, all of which are hereby waived.

12. Remedies on Default, etc. In case any one or more Events of Default or Potential Events of Default shall occur and be continuing, the holder of any Note at the time outstanding may proceed to protect and enforce the rights of such holder by an action at law, suit in equity or other appropriate proceeding, whether for the specific performance of any agreement contained herein or in such Note, or for an injunction against a violation of any of the terms hereof or thereof, or in aid of the exercise of any power granted hereby or thereby or by law or otherwise. In case of a default in the payment of any principal of or premium, if any, or interest on any Note, the Company will pay to the holder thereof such further amount as shall be sufficient to cover the cost and expenses of collection, including, without limitation, reasonable attorneys' fees, expenses and disbursements. No course of dealing and no delay on the part of any holder of any Note in exercising any right, power or remedy shall operate as a waiver thereof or otherwise prejudice such holder's rights, powers or remedies. No right, power or remedy conferred by this Agreement or by any Note upon any holder thereof shall be exclusive of any other right, power or remedy referred to herein or therein or now or hereafter available at law, in equity, by statute or otherwise.

13. Subordination of Subordinated Notes. The indebtedness evidenced by the Notes is subordinated to the prior payment in full of the "Obligations" (as defined in the Senior Subordination Agreement) pursuant to, and to the extent provided in, the Senior Subordination Agreement.

14. Definitions. As used herein the following terms have the following respective meanings:

Affiliate: any Person directly or indirectly controlling or controlled by or under common control with the Company or any Subsidiary, including (without limitation) any Person beneficially owning or holding 15% or more of any class of voting securities of

the Company or any Subsidiary or any other corporation of which the Company or any Subsidiary owns or holds 15% or more of any class of voting securities, provided that, for purposes of this definition, "control" (including, with correlative meanings, the terms "controlled by" and "under common control with"), as used with respect to any Person, shall mean the possession, directly or

indirectly, of the power to direct or cause the direction of the management and policies of such Person, whether through the ownership of voting securities or by contract or otherwise, and provided, further, that neither the Purchasers nor any other Person which is an institution shall be deemed to be an Affiliate of the Company or any of its Subsidiaries solely by reason of ownership of the Notes or other securities issued in exchange for the Notes or by reason of having the benefits of any agreements or covenants of the Company contained in this Agreement.

AMI: Associated Mezzanine Investors, LLC, a limited liability company organized and existing under the laws of the State of Delaware.

AMI-PESI: Associated Mezzanine Investors-PESI (I), L.P., a limited partnership organized and existing under the laws of the State of Delaware.

Board: the Board of Directors of the Company or a committee of three or more directors lawfully exercising the relevant powers of the Board.

Bridge East: Bridge East Capital, L.P., a limited partnership organized and existing under the laws of the Cayman Islands.

Business Day: any day except a Saturday, a Sunday or other day on which commercial banks in New York City are required or authorized by law to be closed.

Capital Bank: Capital Bank-Grave Gruppe AG, a financial institution organized and existing under the laws of Austria and formerly know as RBB Bank Aktiengesellschaft.

Capitalized Lease: any lease of Property that in accordance with generally accepted accounting principles should be capitalized on the balance sheet of the lessee thereunder.

CERCLA: the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended from time to time.

Change of Control: (a) the acquisition by any Person or "group" (within the meaning of Section 13(d) of the Exchange Act (hereinafter a "Group")), other than Capital Bank, together with any Affiliates thereof, of in excess of 30% of the Voting Stock of the Company, or (b) the success by any Person or Group, including Capital Bank, together with any Affiliates thereof, in causing its

or their nominees to be elected to the Board such that its or their nominees, together with any director remaining on the Board who is an Affiliate or Related Person of such Person or Group, shall constitute 50% or more of the Board.

Code: the Internal Revenue Code of 1986, as amended from time to time.

Common Stock: the meaning specified in section 1.

Credit Agreement: the Revolving Credit, Term Loan and Security Agreement, dated December 22, 2000, entered into by the Company, the Lenders named therein, and PNC, as Agent for the Lenders, pursuant to which the Company obtained a term loan of $7,000,000 and a revolving line of credit of up to $15,000,000, as amended from time to time.

Debt: as applied to any Person (without duplication):

(a) any indebtedness for borrowed money which such Person has directly or indirectly created, incurred or assumed; and

(b) any indebtedness secured by any Lien in respect of property owned by such Person, whether or not such Person has assumed or become liable for the payment of such indebtedness; and

(c) any indebtedness with respect to which such Person has become directly or indirectly liable and which represents or has been incurred to finance the purchase price (or a portion thereof) of any property or business acquired by such Person, whether by purchase, consolidation, merger or otherwise (excluding accounts payable incurred in the ordinary course of business); and

(d) any indebtedness of any other Person of the character referred to in subdivision (a), (b) or (c) of this definition with respect to which the Person whose Debt is being determined has become liable by way of a Guaranty.

Disclosure Documents: collectively, the Private Placement

Memorandum and the Equity Offering Memorandum, in each case as may be updated by the information contained in the quarterly, annual and current reports filed by the Company with the Securities and Exchange Commission pursuant to the Securities Exchange Act of 1934.

Earnings Before Interest and Taxes: for any period, the sum of (a) net income (or loss) of the Company on a consolidated basis for such period (excluding extraordinary gains and losses), plus (b) all interest expense of the Company on a consolidated basis for such period, plus (c) all charges against income of the Company on a consolidated basis for such period for federal, state and local income taxes actually paid.

EBITDA: for any period, the sum of (a) Earnings Before Interest and Taxes for such period, plus (b) depreciation expenses of the Company on a consolidated basis for such period, plus (c) amortization expenses of the Company on a consolidated basis for such period.

Environmental Complaints: any notice of violation or request for information or notification that the Company or any of its Subsidiaries is potentially responsible for investigation or cleanup of environmental conditions at any real property owned or leased by the Company or any of its Subsidiaries or demand letter or complaint, order, citation, or other written notice with regard to any Hazardous Discharge or violation of Environmental Laws affecting such real property or any interest therein of the Company or any of its Subsidiaries.

Environmental Laws: (a) all federal, state and local environmental, zoning, health, chemical use, safety and sanitation laws, statutes, ordinances and codes relating to the protection of the environment, health and safety and/or governing the use, storage, treatment, recycling, generation, transportation, processing, handling, production or disposal of Hazardous Substances, (b) the rules, regulations, policies, guidelines, interpretations, decisions, orders and directives of federal, state and local governmental agencies and authorities with respect thereto, and (c) any common law or equitable doctrine that may impose material liability or obligations for injuries or damages due to, or threatened as a result of, the presence of or exposure to any Hazardous Substances.

Equity Offering Memorandum: the Confidential Private Placement Memorandum, dated April 6, 2001, prepared by the Company in connection with the offer and sale by the Company of units consisting of shares of Common Stock and warrants, as amended by Amendment No. 1 thereto dated June 15, 2001.

ERISA: the Employee Retirement Income Security Act of 1974, as amended from time to time.

Exchange Act: the Securities Exchange Act of 1934, as amended from time to time.

Event of Default: the meaning specified in section 11.

Fixed Charge Coverage Ratio: with respect to any fiscal period, the ratio of (a) EBITDA to (b) the sum (without duplication) of (i) all Senior Debt Payments, Subordinated Debt Payments and dividends paid on Preferred Stock of the Company during such period, plus (ii) Unfinanced Capital Expenditures made during such period, plus (iii) federal, state and local income taxes actually paid during such period.

Guaranty: as applied to any Person, any direct or indirect liability, contingent or otherwise, of such Person with respect to any indebtedness, lease, dividend or other obligation of another, including, without limitation, any such obligation directly or indirectly guaranteed, endorsed (otherwise than for collection or deposit in the ordinary course of business) or discounted or sold with recourse by such Person, or in respect of which such Person is otherwise directly or indirectly liable, including, without limitation, any such obligation in effect guaranteed by such Person through any agreement (contingent or otherwise) to purchase, repurchase or otherwise acquire such obligation or any security therefor, or to provide funds for the payment or discharge of such obligation (whether in the form of loans, advances, stock purchases, capital contributions or otherwise), or to maintain the solvency or any balance sheet or other financial condition of the obligor of such obligation, or to make payment for any products, materials or supplies or for any transportation or services regardless of the non-delivery or nonfurnishing thereof, in any such case if the purpose or intent of such agreement is to provide assurance that such obligation will be paid or discharged, or that any agreements relating thereto will be complied with, or that the holders of such obligation will be protected against loss in respect thereof. The amount of any Guaranty shall be equal to the outstanding principal amount of the obligation guaranteed.

Guaranty Agreement: the Guaranty Agreement, dated as of July 31, 2001, executed and delivered by the Subsidiaries of the Company, substantially in the form of Exhibit D, as may be amended from time to time.

Hazardous Discharge: any Release or threat of Release of a reportable quantity of any Hazardous Substance at any of the real property owned or leased by the Company and its Subsidiaries.

Hazardous Substances: means (a) any flammable explosives, radon, radioactive materials, asbestos, lead-based paint, urea formaldehyde foam insulation, polychlorinated bipheynyls, petroleum and petroleum products or methane, and (b) any product, substance, mixture, material, chemical, compound or waste that has the characteristic of or is defined as a hazardous material, hazardous waste, mixed waste, special waste, or a hazardous or toxic substance under any applicable Environmental Law, including without limitation, CERCLA, the Hazardous Materials Transportation Act, as amended (49 U.S.C. Section 1801, et seq.), RCRA, the Clean Water Act, as amended (33 U.S.C. Sections 1251, et seq.), the Clean Air Act, as amended (42 U.S.C. Sections 7401, et seq.), the Toxic Substance Control Act, as amended (15 U.S.C. Sections 2601, et seq.) and the Atomic Energy Act, as amended (42 U.S.C. Section 2011, et seq.).

Investment: as applied to any Person, any direct or indirect purchase or other acquisition by such Person of stock or other securities of any other Person, or any direct or indirect loan, advance (other than advances to employees for moving and travel expenses, drawing accounts and similar expenditures in the ordinary course of business) or capital contribution by such Person to any other Person, including all Debt and accounts receivable from such other Person which are not current assets or did not arise from sales to such other Person in the ordinary course of business. In computing the amount involved in any Investment at the time outstanding, (a) undistributed earnings of, and interest accrued in respect of Debt owing by, such other Person accrued after the date of such Investment shall not be included, (b) there shall not be deducted from the amounts invested in such other Person any amounts received as earnings (in the form of dividends, interest or otherwise) on such Investment or as loans from such other Person, and (c) unrealized increases or decreases in value, or write-ups, write-downs or write-offs, of Investments in such other Person shall be disregarded.

Investment Basket: the cumulative "Investment Basket" account balance maintained by the Company pursuant to the requirements of the Credit Agreement as in effect on the date hereof.

Junior Subordinated Lenders: the Ann L. Sullivan Living Trust dated September 6, 1978; and the Thomas P. Sullivan Living Trust dated September 6, 1978.

Junior Loan Agreements: the Promissory Note, dated May 28, 1999, by the Company to the Ann L. Sullivan Living Trust dated September 6, 1978 in the principal amount of $1,230,000; the Promissory Note, dated May 28, 1999, by the Company to the Ann L. Sullivan Living Trust dated September 6, 1978 in the principal amount of $1,970,000; and the Promissory Note, dated May 28, 1999, by the Company to the Thomas P. Sullivan Living Trust dated September 6, 1978 in the principal amount of $1,500,000; and the related guarantees and subordination agreements.

Junior Subordination Agreements: the Subordination Agreements, dated as of July 31, 2001, executed and delivered by the Company, the Junior Subordinated Lenders, and each of AMI-PESI and Bridge East, respectively, substantially in the form of Exhibit F, as may be amended from time to time.

Lien: as to any Person, any mortgage, lien, pledge, adverse claim, charge, security interest or other encumbrance in or on, or any interest or title of any vendor, lessor, lender or other secured party to or of such Person under any conditional sale or other title retention agreement or Capitalized Lease with respect to, any property or asset owned or held by such Person, or the signing or filing of a financing statement which names such Person as debtor, or the signing of any security agreement authorizing any other party as the secured party thereunder to file any financing statement.

M&EC: East Tennessee Materials and Energy Corporation, a corporation organized and existing under the laws of the State of Tennessee.

Multiemployer Plan: any Plan which is a "multiemployer plan" (as such term is defined in section 4001(a)(3) of ERISA).

Officers' Certificate: a certificate executed on behalf of the Company by the Chairman of the Board of Directors (if an officer) or its President or one of its Vice Presidents and its Treasurer or one of its Assistant Treasurers.

Operative Agreements: the Warrants, the Guaranty Agreement, the Option Agreement and the Registration Rights Agreement.

Option Agreement: the Option Agreement, dated as of July 31, 2001, between the Company and the Purchasers, substantially in the form of Exhibit G.

Option Plans: the Company's 1991 Performance Equity Plan, 1992 Outside Directors' Stock Option Plan, 1993 Non-Qualified Stock Option Plan, 1996 Employee Stock Purchase Plan, as each may be amended from time to time, providing for the grant to employees and directors of the Company and its Subsidiaries from time to time of options to purchase shares of Common Stock.

PBGC: the Pension Benefit Guaranty Corporation or any governmental authority succeeding to any of its functions.

Person: a corporation, an association, a partnership, an organization, a business, an individual, a government or political subdivision thereof or a governmental agency.

Plan: an "employee pension benefit plan" (as defined in section 3 of ERISA) which is or has been established or maintained, or to which contributions are or have been made, by the Company or any of its Related Persons, or an employee pension benefit plan as to which the Company or any of its Related Persons would be treated as a contributory sponsor under section 4069 of ERISA if it were to be terminated.

PNC: PNC Bank, National Association.

Potential Event of Default: any condition or event which, with notice or lapse of time or both, would become an Event of Default.

Preferred Stock: as applied to any corporation, shares of such corporation which shall be entitled to preference or priority over any other shares of such corporation in respect of either the payment of dividends or the distribution of assets upon liquidation or both.

Private Placement Memorandum: the Confidential Private Placement Memorandum, dated October, 2000, prepared by Ryan, Beck & Co. and Larkspur Capital Corporation for use in connection with the Company's private placement of the Notes and Warrants.

Property: with respect to any Person, any interest of such Person in any kind of property or asset, whether real, personal, or mixed, tangible or intangible.

Public Offering: an underwritten primary public offering of Common Stock of the Company pursuant to an effective registration statement under the Securities Act.

Purchasers: collectively, AMI-PESI and Bridge East.

RCRA: the Resource Conservation and Recovery Act, 42

U.S.C. Section 6901 et seq., as the same may be amended from time to time.

Registration Rights Agreement: the Registration Rights Agreement, dated as of July 31, 2001, executed and delivered by the Company, AMI-PESI and Bridge East, substantially in the form of Exhibit E, as may be amended from time to time.

Related Person: any trade or business, whether or not incorporated, which, together with the Company, is under common control, as described in section 414(b) or (c) of the Code.

Releases: the meaning specified in section 5.17.

Restricted Payment: (a) any declaration or payment of any dividend or other distribution, direct or indirect, on account of any shares of any class of capital stock of the Company, now or hereafter outstanding, except a dividend payable solely in shares of stock of the Company; (b) any redemption, retirement, purchase or other acquisition, direct or indirect, of any shares of any class of capital stock of the Company now or hereafter outstanding, or of any warrants, rights or options to acquire any such shares, except to the extent that the consideration therefor consists of shares of stock of the Company; and (c) any payment of or on account of any principal or premium on any subordinated Debt now or hereafter outstanding or any redemption, retirement, purchase or other acquisition of any subordinated Debt (except for any required prepayment or mandatory installment or final payment at maturity pursuant to the provisions thereof).

Securities Act: the Securities Act of 1933, as amended from time to time.

Senior Debt Payments: all cash actually expended by the Company or any of its Subsidiaries to make (a) interest payments on loans outstanding from time to time under the Credit Agreement, (b) scheduled principal payments of the term loan portion of the loans outstanding under the Credit Agreement, (c) payments for all fees, commissions and charges set forth in the Credit Agreement and with respect to any loans thereunder, (d) payments in respect of Capitalized Leases, and (e) payments with respect to any other

indebtedness for borrowed money other than Subordinated Debt Payments.

Senior Subordination Agreement: the Subordination Agreement, dated as of July 31, 2001, executed and delivered by the Company, AMI-PESI, Bridge East and PNC as Agent for the Lenders under the Credit Agreement, as amended from time to time.

Subordinated Debt: the meaning specified in section 13.1.

Subordinated Debt Payments: all cash actually expended to make payments of principal and interest with respect to (a) the Notes and (b) other Debt of the Company and its Subsidiaries which by its terms is subordinated in right of payment to other Debt of the Company and which is outstanding in compliance with section 10.2.

Subsidiary: any corporation at least 50% (by number of votes) of the Voting Stock of which is at the time owned by the Company or by one or more Subsidiaries or by the Company and one or more Subsidiaries.

Tangible Adjusted Net Worth: at a particular date, (a) the aggregate amount of all assets of the Company on a consolidated basis, as may be properly classified as such in accordance with generally accepted accounting principles consistently applied excluding such other assets as are properly classified as goodwill assets under such accounting principles, less (b) the aggregate amount of all liabilities of the Company on a consolidated basis. For purposes of this definition, any amounts noted in the Company's books and records for "Acquired Permits" shall not be deemed "goodwill."

Unfinanced Capital Expenditures: the aggregate amount of capital expenditures minus cash amounts spent for capital expenditures that are deducted from the Investment Basket, provided, however, that in no event shall such amount be less than zero.

Voting Stock: with reference to any corporation, stock of any class or classes (or equivalent interests), if the holders of the stock of such class or classes (or equivalent interests) are ordinarily, in the absence of contingencies, entitled to vote for the election of the directors (or Persons performing similar functions) of such corporation, even though the right so to vote has been suspended by the happening of such a contingency.

Warrants: the meaning specified in section 1.

Wholly-Owned: as applied to any Subsidiary, a Subsidiary all the outstanding shares (other than directors' qualifying shares, if required by law) of every class of stock of which are at the time owned by the Company or by one or more Wholly-Owned Subsidiaries or by the Company and one or more Wholly-Owned Subsidiaries.

15. Registration, Transfer and Substitution of Notes; Action by Noteholders.

15.1. Note Register; Ownership of Notes. The Company will keep at its principal office a register in which the Company will provide for the registration of Notes and the registration of transfers of Notes. The Company may treat the Person in whose name any Note is registered on such register as the owner thereof for the purpose of receiving payment of the principal of and the premium, if any, and interest on such Note and for all other purposes, whether or not such Note shall be overdue, and the Company shall not be affected by any notice to the contrary. All references in this Agreement to a "holder" of any Note shall mean the Person in whose name such Note is at the time registered on such register.

15.2. Transfer and Exchange of Notes. Upon surrender of any Note for registration of transfer or for exchange to the Company at its principal office, the Company at its expense will execute and deliver in exchange therefor a new Note or Notes in denominations of at least $100,000 (except one Note may be issued in a lesser principal amount if the unpaid principal amount of the surrendered Note is not evenly divisible by, or is less than $100,000), as requested by the holder or transferee, which aggregate the unpaid principal amount of such surrendered Note, registered as such holder or transferee may request, dated so that there will be no loss of interest on such surrendered Note and otherwise of like tenor.

15.3. Replacement of Notes. Upon receipt of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of any Note and, in the case of any such loss, theft or destruction of any Note, upon delivery of an indemnity bond in such reasonable amount as the Company may determine (or, in the case of any Note held by a Purchaser or another institutional holder or the nominee of such Purchaser or institutional holder, of an indemnity agreement from such Purchaser or such other holder) or, in the case of any such mutilation, upon the surrender of such Note for cancellation to

the Company at its principal office, the Company at its expense will execute and deliver, in lieu thereof, a new Note in the unpaid principal amount of such lost, stolen, destroyed or mutilated Note, dated so that there will be no loss of interest on such Note and otherwise of like tenor. Any Note in lieu of which any such new Note has been so executed and delivered by the Company shall not be deemed to be an outstanding Note for any purpose of this Agreement.

15.4. Notes held by Company, etc., Deemed Not Outstanding. For the purposes of determining whether the holders of the Notes of the requisite principal amount at the time outstanding have taken any action authorized by this Agreement with respect to the giving of consents or approvals or with respect to acceleration upon an Event of Default, any Notes directly or indirectly owned by

the Company or any of its Subsidiaries or Affiliates shall be disregarded and deemed not to be outstanding.

16. Payments on Notes.

16.1. Place of Payment. Payments of principal, premium, if any, and interest becoming due and payable on the Notes shall be made at the principal office of Bankers Trust Connecticut, Ltd., unless the Company, by written notice to each holder of any Notes, shall designate the principal office of another bank or trust company as such place of payment, in which case the principal office of such other bank or trust company shall thereafter be such place of payment.

16.2. Home Office Payment. So long as either Purchaser or its nominee shall be the holder of any Note, and notwithstanding anything contained in section 16.1 or in such Note to the contrary, the Company will pay all sums becoming due on such Note for principal, premium, if any, and interest by the method and at the address specified for such purpose in Schedule A, or by such other method or at such other address as each Purchaser shall have from time to time specified to the Company in writing for such purpose, without the presentation or surrender of such Note or the making of any notation thereon, except that any Note paid or prepaid in full shall be surrendered to the Company at its principal office or at the place of payment maintained by the Company pursuant to section 16.1 for cancellation. Prior to any sale or other disposition of any Note held by a Purchaser or its nominee such Purchaser will, at its election, either endorse thereon the amount of principal paid thereon and the last date to which interest has been paid thereon or surrender such Note to the Company in exchange for a new Note or Notes pursuant to section 15.2. The Company will afford the benefits of this section 16.2 to any institutional investor which is the direct or indirect

transferee of any Note purchased by a Purchaser under this Agreement and which has made the same agreement relating to such Note as such Purchaser has made in this section 16.2.

17. Expenses, etc. Whether or not the transactions contemplated by this Agreement shall be consummated, the Company will pay all expenses in connection with such transactions and in connection with any amendments or waivers (whether or not the same become effective) under or in respect of this Agreement or the Notes, including, without limitation: (a) the cost and expenses of preparing and reproducing this Agreement and the Notes, of furnishing all opinions by counsel for the Company (including any opinions requested by the special counsel of a Purchaser as to any legal matter arising hereunder) and all certificates on behalf of

the Company, and of the Company's performance of and compliance with all agreements and conditions contained herein on its part to be performed or complied with; (b) the cost of delivering to the principal office of each Purchaser, insured to the satisfaction of such Purchaser, the Notes sold to it hereunder and any Notes delivered to it upon any substitution of Notes pursuant to section 15 and of the delivery of any Notes by a Purchaser, insured to the satisfaction of such Purchaser, upon any such substitution; (c) the fees, expenses and disbursements of the special counsel for the holders of the Notes (and, in addition, any local counsel determined by the holders of the Notes to be necessary in the circumstances) in connection with such transactions and any such amendments or waivers; (d) the out-of-pocket expenses incurred by each of the Purchasers in connection with such transactions and any such amendments or waivers; and (e) the out-of-pocket expenses incurred by the Purchasers in connection with their representatives' attendance at meetings of the Board. The Company also will pay, and will save each of the Purchasers and each holder of any Notes harmless from, all claims in respect of the fees, if any, of brokers and finders and any and all liabilities with respect to any taxes (including interest and penalties) which may be payable in respect of the execution and delivery of this Agreement, the issue of the Notes and any amendment or waiver under or in respect of this Agreement or the Notes. The obligation of the Company under this section 17 shall survive any disposition or payment of the Notes and the termination of this Agreement.

18. Survival of Representations and Warranties. All representations and warranties contained in this Agreement or made in writing by or on behalf of the Company in connection with the transactions contemplated by this Agreement shall survive the execution and delivery of this Agreement, any investigation at any

time made by a Purchaser or on its behalf, the purchase of the Notes by the Purchasers under this Agreement and any disposition or payment of the Notes. All statements contained in any certificate or other instrument delivered by or on behalf of the Company pursuant to this Agreement or in connection with the transactions contemplated by this Agreement shall be deemed representations and warranties of the Company under this Agreement.

19. Amendments and Waivers. Any term of this Agreement or of the Notes may be amended and the observance of any term of this Agreement or of the Notes may be waived (either generally or in a particular instance and either retroactively or prospectively) only with the written consent of the Company and the holders of more than 66 2/3% in principal amount of the Notes at the time outstanding (subject to section 15.4), provided that, without the prior written

consent of the holders of all the Notes at the time outstanding (subject to section 15.4), no such amendment or waiver shall (a) change the maturity or the principal amount of, or reduce the rate or change the time of payment of interest on, or change the amount or the time of payment of any principal or premium payable on any prepayment of, any Note, or change the amount or the time of payment of any fee payable hereunder, (b) reduce the aforesaid percentages of the principal amount of the Notes the holders of which are required to consent to any such amendment or waiver, (c) change the percentage of the principal amount of the Notes the holders of which may declare the Notes to be due and payable as provided in section 11, (d) modify the proviso to the first sentence of section 11, or (e) decrease the percentage of the principal amount of the Notes the holders of which may rescind and annul any such declaration as provided in section 11. Any amendment or waiver effected in accordance with this section 19 shall be binding upon each holder of any Note at the time outstanding, each future holder of any Note and the Company.

20. Notices, etc. Except as otherwise provided in this Agreement, notices and other communications under this Agreement shall be in writing and shall be delivered by hand or courier service, or mailed by registered or certified mail, return receipt requested, addressed, (a) if to a Purchaser, at the address set forth for such Purchaser in Schedule A or at such other address as such Purchaser shall have furnished to the Company in writing, except as otherwise provided in section 16.2 with respect to payments on Notes held by such Purchaser or its nominee, or (b) if to any other holder of any Note, at such address as such other holder shall have furnished to the Company in writing, or, until any such other holder so furnishes to the Company an address, then

to and at the address of the last holder of such Note who has furnished an address to the Company, or (c) if to the Company, at its address set forth at the beginning of this Agreement, to the attention of Chief Financial Officer, or at such other address, or to the attention of such other officer, as the Company shall have furnished to each of the Purchasers and each such other holder in writing. Any notice so addressed and delivered by hand or courier shall be deemed to be given when received, and any notice so addressed and mailed by registered or certified mail shall be deemed to be given three business days after being so mailed.

21. Indemnification. The Company will indemnify and hold harmless each of the Purchasers and each person who controls each of the Purchasers within the meaning of the Securities Act or the Exchange Act and each of the subsidiaries of each Purchaser and each of the respective directors, officers, employees, agents and

advisors of each of the Purchasers and of each such subsidiary (any and all of whom are referred to as the "Indemnified Party") from and against any and all losses, claims, damages and liabilities, whether joint or several (including, if pursuant to the next following paragraph the Indemnified Party is entitled to employ counsel at the expense of the Company, all legal fees or other expenses reasonably incurred by one counsel for any Indemnified Party in connection with the preparation for or defense of any pending or threatened third party claim, action or proceeding, whether or not resulting in any liability), to which such Indemnified Party may become subject (whether or not such Indemnified Party is a party thereto) under any applicable federal or state law or otherwise, caused by or arising out of, or allegedly caused by or arising out of, this Agreement or any transaction contemplated hereby or thereby, other than, with respect to any Indemnified Party, losses, claims, damages or liabilities that are the result of any representation made by such Indemnified Party in section 6 or the result of the gross negligence or willful misconduct of such Indemnified Party.

Promptly after receipt by an Indemnified Party of notice of any claim, action or proceeding with respect to which an Indemnified Party is entitled to indemnity hereunder, such Indemnified Party will notify the Company of such claim or the commencement of such action or proceeding, provided that the failure of an Indemnified Party to give notice as provided herein shall not relieve the Company of its obligations under this section 21 with respect to such Indemnified Party, except to the extent that the Company is actually prejudiced by such failure.

The Company will assume the defense of such claim, action or proceeding and will employ counsel satisfactory to the Indemnified Party and will pay the fees and expenses of such counsel. Notwithstanding the preceding sentence, the Indemnified Party will be entitled, at the expense of the Company, to employ counsel separate from counsel for the Company and for any other party in such action if the Indemnified Party reasonably determines that a conflict of interest or other reasonable basis exists which makes representation by counsel chosen by the Company not advisable, but the Company will not be obligated to pay the fees and expenses of more than one counsel for all Indemnified Parties.

22. Miscellaneous. This Agreement shall be binding upon and inure to the benefit of and be enforceable by the respective successors and assigns of the parties hereto, whether so expressed or not, and, in particular, shall inure to the benefit of and be enforceable by any holder or holders at the time of the Notes or any part thereof. Except as stated in section 18, this Agreement embodies the entire agreement and understanding between the Company

and each of the Purchasers and supersedes all prior agreements and understandings relating to the subject matter hereof. This Agreement and the Notes shall be construed and enforced in accordance with and governed by the law of the State of New York. The headings in this Agreement are for purposes of reference only and shall not limit or otherwise affect the meaning hereof. This Agreement may be executed in any number of counterparts, each of which shall be an original, but all of which together shall constitute one instrument.

[SIGNATURES APPEAR ON THE FOLLOWING PAGE]

If you are in agreement with the foregoing, please sign the form of agreement on the accompanying counterparts of this letter and return one of the same to the Company, whereupon this letter shall become a binding agreement between the Company and each of the Purchasers.

Very truly yours,

PERMA-FIX ENVIRONMENTAL SERVICES, INC.

By:_____
Name:
Title:

The foregoing Agreement is
hereby agreed to as of the
date thereof.

ASSOCIATED MEZZANINE INVESTORS-PESI(I), L.P.

By: Associated Mezzanine Investors, LLC
its General Partner

By:_____
Name:
Title:

BRIDGE EAST CAPITAL, L.P.

By: Bridge East Partners, LDC
its General Partner

By: Bridge East Holdings, LLC
its General Partner

By:_____
Name: John Oswald
Title: Director

PERMA-FIX ENVIRONMENTAL SERVICES, INC.

13.50% SENIOR SUBORDINATED NOTE DUE 2006

CUSIP# 714157 AA 2
R-
$

New York, New York
July 31, 2001

PERMA-FIX ENVIRONMENTAL SERVICES, INC., a Delaware corporation (the "Company"), for value received, hereby promises to pay to _____, or its registered assigns, the principal amount of $_____ on July 31, 2006, with interest (computed on the basis of twelve 30-day months) on the unpaid balance of such principal amount at the rate of 13.50% per annum from the date hereof, payable quarterly on each January 31, April 30, July 31 and October 31 after the date hereof, commencing October 31, 2001, until such unpaid balance shall become due and payable (whether at maturity or at a date fixed for prepayment or by declaration or otherwise), and with interest on any overdue principal (including any overdue prepayment of principal) and premium, if any, and (to the extent permitted by applicable law) on any overdue interest, at the rate of 15.50% per annum until paid, payable quarterly as aforesaid or, at the option of the holder hereof, on demand. Payments of principal and interest on this Note shall be made in the lawful currency of the United States of America at the principal office of Bankers Trust Connecticut, Ltd. or at such other office or agency as the Company shall have designated by written notice to the holder of this Note as provided in the Note and Warrant Purchase Agreements referred to below.

This Note is one of the Company's 13.50% Senior Subordinated Notes due 2006 (the "Notes"), originally issued in the aggregate principal amount of $5,625,000 pursuant to the Note and Warrant Purchase Agreement, dated as of July 31, 2001, as from time to time amended, among the Company and the institutional investors named therein. The holder of this Note is entitled to the benefits of such Note and Warrant Purchase Agreement, as from time to time amended, and may enforce the agreements of the Company contained therein and exercise the remedies provided for thereby or otherwise available in respect thereof.

This Note is a registered Note and is transferable only upon surrender of this Note for registration of transfer, duly endorsed, or accompanied by a written instrument of transfer duly executed, by the holder hereof or such holder's attorney duly authorized in writing. Reference in this Note to a "holder" shall mean the person in whose name this Note is at the time registered on the register kept by the Company as provided in such Note and

Warrant Purchase Agreement and the Company may treat such person as the owner of this Note for the purpose of receiving payment and for all other purposes, and the Company shall not be affected by any notice to the contrary.

The holder of this Note is entitled to the benefits of a certain Guaranty Agreement, dated as of July 31, 2001, by the Subsidiaries of the Company.

This Note is subject to the terms of a Subordination Agreement in favor of PNC Bank, National Association. Notwithstanding any contrary statement contained in the within instrument, no payment on account of any obligation arising from or in connection with the within instrument or any related agreement (whether of principal, interest or otherwise) shall be made, paid, received or accepted except in accordance with the terms of said Subordination Agreement.

The Notes are under certain circumstances subject to required and optional prepayment, in whole or in part, in certain cases with a premium and in other cases without a premium, all as specified in such Note and Warrant Purchase Agreement.

In case an Event of Default, as defined in such Note and Warrant Purchase Agreement, shall occur and be continuing, the unpaid balance of the principal of this Note may become due and payable in the manner and with the effect provided in such Note and Warrant Purchase Agreement.

This Note is made and delivered in New York, New York, and shall be governed by the laws of the State of New York.

PERMA-FIX ENVIRONMENTAL SERVICES, INC.

By:
Name: Richard T. Kelecy
Title: Vice President

CERTIFICATE OF GUARANTY
OF
PERMA-FIX OF FLORIDA, INC.
PERMA-FIX OF FORT LAUDERDALE, INC.
PERMA-FIX OF DAYTON, INC.
PERMA-FIX TREATMENT SERVICES, INC.
PERMA-FIX OF MEMPHIS, INC.
PERMA-FIX, INC.
PERMA-FIX OF NEW MEXICO, INC.
RECLAMATION SYSTEMS, INC.
INDUSTRIAL WASTE MANAGEMENT, INC.
SCHREIBER, YONLEY & ASSOCIATES
MINTECH, INC.
PERMA-FIX OF ORLANDO, INC.
PERMA-FIX OF SOUTH GEORGIA, INC.
PERMA-FIX OF MICHIGAN, INC.
DIVERSIFIED SCIENTIFIC SERVICES, INC.
EAST TENNESSEE MATERIALS & ENERGY CORPORATION

Dated: July 31, 2001

PERMA-FIX OF FLORIDA, INC., PERMA-FIX OF FORT LAUDERDALE, INC., PERMA-FIX OF ORLANDO, INC., each a Florida corporation, PERMA-FIX OF DAYTON, INC., an Ohio Corporation, PERMA-FIX TREATMENT SERVICES, INC., RECLAMATION SYSTEMS, INC., PERMA-FIX, INC., MINTECH, INC., each an Oklahoma corporation, PERMA-FIX OF MEMPHIS, INC., DIVERSIFIED SCIENTIFIC SERVICES, INC., EAST TENNESSEE MATERIALS & ENERGY CORPORATION, each a Tennessee corporation, PERMA-FIX OF NEW MEXICO, INC., a New Mexico corporation, INDUSTRIAL WASTE MANAGEMENT, INC., SCHREIBER, YONLEY & ASSOCIATES, each a Missouri corporation, PERMA-FIX OF SOUTH GEORGIA, INC., a Georgia corporation, and PERMA-FIX OF MICHIGAN, INC., a Michigan corporation (the "Guarantors"), for valuable consideration, hereby jointly and severally, irrevocably and unconditionally guarantee the due and punctual payment of the principal of and premium, if any, and interest on, and any other amounts due under, the 13.50% Senior Subordinated Note due 2006 (the "Note") of PERMA-FIX ENVIRONMENTAL SERVICES, INC., a Delaware corporation (the "Company"), to which this Certificate of Guaranty is attached, when and as the same shall become due and payable (whether at stated maturity or by required or optional prepayment or by declaration or otherwise), in accordance with the

terms of,

and subject to the limitations set forth in the Guaranty Agreement, dated as of July 31, 2001, of the Guarantors. This guaranty is an absolute, present and continuing guaranty of payment and not of collectibility, and if the Company shall fail to pay punctually any payment required to be made by it in respect of the Note, each Guarantor agrees immediately to pay the same to the holder of the Note and in any event prior to the date on which such failure shall constitute an Event of Default as defined in the Note and Warrant Purchase Agreement, dated as of July 31, 2001, among the Company and the institutional investors named therein, without demand, presentment, protest or notice of any kind, all of which are unconditionally waived by the Guarantors.

The holder of the Note is entitled to the benefits of the Note and Warrant Purchase Agreement referred to above.

PERMA-FIX OF FLORIDA, INC.

By:_____
Name: Richard T. Kelecy
Title: Vice President

PERMA-FIX OF FORT LAUDERDALE, INC.

By:_____
Name: Richard T. Kelecy
Title:Vice President

PERMA-FIX OF DAYTON, INC.

By:_____
Name: Richard T. Kelecy
Title: Vice President

PERMA-FIX TREATMENT SERVICES, INC.

By:_____

Name: Richard T. Kelecy
Title: Vice President

PERMA-FIX OF MEMPHIS, INC.

By:_____
Name: Richard T. Kelecy
Title: Vice President

PERMA-FIX, INC.

By:_____
Name: Richard T. Kelecy
Title: Vice President

PERMA-FIX OF NEW MEXICO, INC.

By:_____
Name: Richard T. Kelecy
Title: Vice President

RECLAMATION SYSTEMS, INC.

By:_____
Name: Richard T. Kelecy
Title: Vice President

INDUSTRIAL WASTE MANAGEMENT, INC.

By:_____
Name: Richard T. Kelecy
Title: Vice President

SCHREIBER, YONLEY & ASSOCIATES

By:_____
Name: Richard T. Kelecy

Title: Vice President

MINTECH, INC.

By:_____
Name: Richard T. Kelecy
Title: Vice President

PERMA-FIX OF ORLANDO, INC.

By:_____
Name: Richard T. Kelecy
Title: Vice President

PERMA-FIX OF SOUTH GEORGIA, INC.

By:_____
Name: Richard T. Kelecy
Title: Vice President

PERMA-FIX OF MICHIGAN, INC.

By:_____
Name: Richard T. Kelecy
Title: Vice President

DIVERSIFIED SCIENTIFIC
SERVICES, INC.

By:_____
Name: Richard T. Kelecy
Title: Vice President

EAST TENNESSEE MATERIALS
AND ENERGY CORPORATION

By:_____
Name: Richard T. Kelecy
Title: Vice President

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PERMA-FIX ENVIRONMENTAL SERVICES, INC.

COMMON STOCK PURCHASE WARRANT

Expiring July 31, 2008

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TABLE OF CONTENTS

Common Stock Purchase Warrant
Expiring July 31, 2008

New York, New York
_____, 20__

CUSIP# 714157 13 8
No. W-

PERMA-FIX ENVIRONMENTAL SERVICES, INC., a Delaware corporation (the "Company"), for value received, hereby certifies that _____ or registered assigns, is entitled to purchase from the Company _____ duly authorized, validly issued, fully paid and nonassessable shares of Common Stock, par value $.001 per share, of the Company (the "Common Stock") at the purchase price per share of $1.50, at any time or from time to time on or after July 31, 2001 and prior to 3 P.M., New York City time, on July 31, 2008, all subject to the terms, conditions and adjustments set forth below in this Warrant.

This Warrant is one of the Common Stock Purchase Warrants (the "Warrants", such term to include all Warrants issued in substitution therefor) originally issued in connection with the issue and sale by the Company of $5,625,000 aggregate principal amount of its 13.50% Notes due 2006 (together with all notes issued in substitution therefor, the "Notes"), pursuant to the Note and Warrant Purchase Agreement (the "Purchase Agreement"), dated as of July 31, 2001, between the Company and the institutional investors named therein. The Warrants originally so issued evidence rights to purchase an aggregate of 1,281,731 shares of Common Stock, subject to adjustment as provided herein. Certain capitalized terms used in this Warrant are defined in section 14.

1. Exercise of Warrant. 1.1. Manner of Exercise. This Warrant may be exercised by the holder hereof, in whole or in part, during normal business hours on any Business Day by surrender of this Warrant, with the form of subscription at the end hereof (or a reasonable facsimile thereof) duly executed by such holder, to the Company at its principal office (or, if such exercise shall be in connection with an underwritten Public Offering of shares of Common Stock (or Other Securities) subject to this Warrant, at the location at which the Company shall have

agreed to deliver the shares of Common Stock (or Other Securities) subject to such offering), accompanied by payment, in cash or by

certified or official bank check payable to the order of the Company or by the application of Notes in the manner provided in section 1.5 or by surrender of Warrants in the manner provided in section 1.6 (or by any combination of such methods), in the amount obtained by multiplying (a) the number of shares of Common Stock (without giving effect to any adjustment therein) designated in such form of subscription by (b) $1.50 and such holder shall thereupon be entitled to receive the number of duly authorized, validly issued, fully paid and nonassessable shares of Common Stock (or Other Securities) determined as provided in sections 2 through 4.

1.2. When Exercise Deemed Effected. Each exercise of this Warrant shall be deemed to have been effected immediately prior to the close of business on the Business Day on which this Warrant shall have been surrendered to the Company as provided in section 1.1, and at such time the person or persons in whose name or names any certificate or certificates for shares of Common Stock (or Other Securities) shall be issuable upon such exercise as provided in section 1.3 shall be deemed to have become the holder or holders of record thereof.

1.3. Delivery of Stock Certificates, etc. As soon as practicable after the exercise of this Warrant, in whole or in part, pursuant to the terms hereof, and in any event within ten Business Days thereafter (unless such exercise shall be in connection with an underwritten Public Offering of shares of Common Stock (or Other Securities) subject to this Warrant, in which event concurrently with such exercise), the Company at its expense (including the payment by it of any applicable taxes other than transfer taxes) will cause to be issued in the name of and delivered to the holder hereof or, subject to section 8, as such holder (upon payment by such holder of any applicable transfer taxes) may direct,

(a) a certificate or certificates for the number of duly authorized, validly issued, fully paid and nonassessable shares of Common Stock (or Other Securities) to which such holder shall be entitled upon such exercise plus, in lieu of any fractional share to which such holder would otherwise be entitled, cash in an amount equal to the same fraction of the Market

Price per share of such Common Stock (or Other Securities) on the Business Day next preceding the date of such exercise, and

(b) in case such exercise is in part only, a new Warrant or Warrants of like tenor, calling in the aggregate on the face or faces thereof for the number of shares of Common Stock equal (without giving effect to any adjustment therein) to the number of such shares called for on the face of this Warrant minus the number of such shares designated

by the holder upon such exercise as provided in section 1.1.

1.4. Company to Reaffirm Obligations. The Company will, at the time of or at any time after each exercise of this Warrant, upon the request of the holder hereof or of any shares of Common Stock (or Other Securities) issued upon such exercise, acknowledge in writing its continuing obligation to afford to such holder all rights (including, without limitation, any right of registration of any shares of Common Stock (or Other Securities) issuable upon exercise of this Warrant pursuant to section 9) to which such holder shall continue to be entitled after such exercise in accordance with the terms of this Warrant, provided that if any such holder shall fail to make any such request, the failure shall not affect the continuing obligation of the Company to afford such rights to such holder.

1.5. Payment by Application of the Notes. Upon any exercise of this Warrant, the holder hereof may, at its option, instruct the Company, by so specifying in the form of subscription submitted therewith as provided in section 1.1, to apply to the payment required by section 1.1 all or any part of the principal amount then unpaid and of the interest on such principal amount then accrued on any one or more Notes at the time held by such holder, in which case the Company will accept the aggregate amount of principal and accrued interest on such principal specified in such form of subscription in satisfaction of a like amount of such payment. In case less than the entire unpaid principal amount of any Note shall be so specified, the principal amount so specified shall be credited, as of the date of such exercise, against the installments of principal then remaining unpaid on such Note in the direct order of their maturity dates. Within ten Business Days after receipt of any such notice, the Company will pay to the

holder of the Notes submitting such form of subscription, in the manner provided in such Notes and the Purchase Agreement, all unpaid interest accrued to the date of exercise of such Warrant on the principal amount so specified in such form of subscription that is not applied to the payment required by section 1.1 under this section 1.5. In the event that the entire unpaid principal amount of any Note is applied to the payment required by section 1.1 under this section 1.5, such Note shall be promptly surrendered and canceled by the holder thereof in accordance with the provisions of section 15 of the Purchase Agreement.

1.6. Exercise by Surrender of Warrants (Cashless Exercise). Upon any exercise of this Warrant, the holder hereof may, at its option, effect the payment required by section 1.1 in whole or in part, by so specifying in the form of subscription submitted

therewith as provided in section 1.1, by surrendering this Warrant in exchange for the number of shares of Common Stock (prior to giving effect to any adjustments made therein pursuant to sections 2 through 4) equal to the product of (a) the number of shares of Common Stock designated in such form of subscription multiplied by (b) a fraction, the numerator of which is the Current Market Price less $1.50 and the denominator of which is such Current Market Price.

2. Adjustment of Common Stock Issuable Upon Exercise.

2.1. Number of Shares; Warrant Price. The number of shares of Common Stock which the holder of this Warrant shall be entitled to receive upon each exercise hereof shall be determined by multiplying the number of shares of Common Stock which would otherwise (but for the provisions of this section 2) be issuable upon such exercise, as designated by the holder hereof pursuant to section 1.1, by a fraction of which (i) the numerator is $1.50 and (ii) the denominator is the Warrant Price in effect on the date of such exercise. The "Warrant Price" shall initially be $1.50 per share, shall be adjusted and readjusted from time to time as provided in this section 2 and, as so adjusted or readjusted, shall remain in effect until a further adjustment or readjustment thereof is required by this section 2.

2.2. Adjustment of Warrant Price.

2.2.1. Issuance of Additional Shares of Common Stock. Except as otherwise provided in, and subject to, the terms of this Warrant, in case the Company at any time or from time to time

after July 31, 2001 (the "Initial Date") shall issue or sell Additional Shares of Common Stock (including Additional Shares of Common Stock deemed to be issued pursuant to section 2.3 or 2.4) without consideration or for a consideration per share less than the Market Price in effect, in each case, on the date of and immediately prior to such issue or sale, then, and in each such case, subject to section 2.7, such Warrant Price shall be reduced, concurrently with such issue or sale, to a price (calculated to the nearest .001 of a cent) determined by multiplying such Warrant Price by a fraction,

(a) the numerator of which shall be (i) the number of shares of Common Stock outstanding immediately prior to such issue or sale plus (ii) the number of shares of Common Stock which the aggregate consideration received by the Company for the total number of such Additional Shares of Common Stock so issued or sold would purchase at the Market Price, and

(b) the denominator of which shall be the number of shares of Common Stock outstanding immediately after such issue or sale,

provided that, for the purposes of this section 2.2.1, (x) immediately after any Additional Shares of Common Stock are deemed to have been issued pursuant to section 2.3 or 2.4, such Additional Shares shall be deemed to be outstanding, and (y) treasury shares shall not be deemed to be outstanding.

2.2.2. Extraordinary Dividends and Distributions. Except as otherwise provided in, and subject to the terms of, this Warrant, in case the Company at any time or from time to time after the Initial Date shall declare, order, pay or make a dividend or other distribution (including, without limitation, any distribution of other or additional stock or other securities or property or Options by way of dividend or spin-off, reclassification, recapitalization or similar corporate rearrangement) on any Common Stock, other than (a) a dividend payable in Additional Shares of Common Stock or in Options for Common Stock or (b) a regular, periodic dividend payable in cash and declared out of the earned surplus of the Company as at the date hereof as increased by any credits and decreased by any debits made thereto after such date, then, and in each such case, except as provided in, and subject to the terms of this Warrant,

the Warrant Price in effect immediately prior to the close of business on the record date fixed for the determination of holders of any class of securities entitled to receive such dividend or distribution shall be reduced, effective as of the close of business on such record date, to a price (calculated to the nearest .001 of a cent) determined by multiplying such Warrant Price by a fraction,

(i) the numerator of which shall be the Current Market Price in effect on such record date or, if the Common Stock trades on an ex-dividend basis, on the date prior to the commencement of ex-dividend trading, less the value of such dividend or distribution (as determined in good faith by the Board of Directors of the Company) applicable to one share of Common Stock, and

(ii) the denominator of which shall be such Current Market Price.

2.3. Treatment of Options and Convertible Securities. Except as otherwise provided in, and subject to the terms of, this Warrant, in case the Company at any time or from time to time after the Initial Date shall issue, sell, grant or assume any Options or Convertible Securities, then, and in each such case, the maximum number of Additional Shares of Common Stock (as set forth in the

instrument relating thereto, without regard to, any provisions contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or, in the case of Convertible Securities and Options therefor, the conversion or exchange of such Convertible Securities, shall be deemed to be issued for purposes of section 2.2.1 as of the time of such issue, sale, grant or assumption, provided that such Additional Shares of Common Stock shall not be deemed to have been issued unless the consideration per share (determined pursuant to section 2.5) of such shares would be less than the Market Price in effect, in each case, on the date of and immediately prior to such issue, sale, grant or assumption, as the case may be, and provided, further, that in any such case in which Additional Shares of Common Stock are deemed to be issued,

(a) no further adjustment of the Warrant Price shall be made upon the subsequent issue or sale of Additional Shares of Common Stock or Convertible Securities upon the

exercise of such Options or the conversion or exchange of such Convertible Securities;

(b) if such Options or Convertible Securities by their terms provide, with the passage of time or otherwise, for any increase in the consideration payable to the Company, or decrease in the number of Additional Shares of Common Stock issuable, upon the exercise, conversion or exchange thereof (by change of rate or otherwise), the Warrant Price computed upon the original issue, sale, grant or assumption thereof, and any subsequent adjustments based thereon, shall, upon any such increase or decrease becoming effective, be recomputed to reflect such increase or decrease insofar as it affects such Options, or the rights of conversion or exchange under such Convertible Securities, which are outstanding at such time;

(c) upon the expiration of any such Options or of the rights of conversion or exchange under any such Convertible Securities which shall not have been exercised (or upon purchase by the Company and cancellation or retirement of any such Options which shall not have been exercised or of any such Convertible Securities the rights of conversion or exchange under which shall not have been exercised), the Warrant Price computed upon the original issue, sale, grant or assumption thereof, and any subsequent adjustments based thereon, shall, upon such expiration (or such cancellation or retirement, as the case may be), be recomputed as if:

(i) in the case of Options for Common Stock or

of Convertible Securities, the only Additional Shares of Common Stock issued or sold were the Additional Shares of Common Stock, if any, actually issued or sold upon the exercise of such Options or the conversion or exchange of such Convertible Securities and the consideration received therefor was (x) an amount equal to (A) the consideration actually received by the Company for the issue, sale, grant or assumption of all such Options, whether or not exercised, plus (B) the consideration actually received by the Company upon such exercise, minus (C) the consideration paid by the Company for any purchase of such Options which were not exercised, or (y) an amount

equal to (A) the consideration actually received by the Company for the issue, sale, grant or assumption of all such Convertible Securities which were actually converted or exchanged, plus (B) the additional consideration, if any, actually received by the Company upon such conversion or exchange, minus (C) the consideration paid by the Company for any purchase of such Convertible Securities the rights of conversion or exchange under which were not exercised, and

(ii) in the case of Options for Convertible Securities, only the Convertible Securities, if any, actually issued or sold upon the exercise of such Options were issued at the time of the issue, sale, grant or assumption of such Options, and the consideration received by the Company for the Additional Shares of Common Stock deemed to have then been issued was an amount equal to (x) the consideration actually received by the Company for the issue, sale, grant or assumption of all such Options, whether or not exercised, plus (y) the consideration deemed to have been received by the Company (pursuant to section 2.5) upon the issue or sale of the Convertible Securities with respect to which such Options were actually exercised, minus (z) the consideration paid by the Company for any purchase of such Options which were not exercised;

(d) no readjustment pursuant to subdivision (b) or (c) above shall have the effect of increasing the Warrant Price by an amount in excess of the amount of the adjustment thereof originally made in respect of the issue, sale, grant

or assumption of such Options or Convertible Securities; and

(e) in the case of any such Options which expire by their terms not more than 30 days after the date of issue, sale, grant or assumption thereof, no adjustment of the Warrant Price shall be made until the expiration or exercise of all such Options, whereupon such adjustment shall be made in the manner provided in subdivision (c) above.

In case at any time after the Initial Date the Company shall be required to increase the number of Additional Shares of

Common Stock subject to any Option or into which any Convertible Securities (other than the Warrants) are convertible or exchangeable pursuant to the operation of anti-dilution provisions applicable thereto, such Additional Shares shall be deemed to be issued for purposes of section 2.1 as of the time of such increase.

2.4. Treatment of Stock Dividends, Stock Splits, etc. In case the Company at any time or from time to time after the Initial Date shall declare or pay any dividend or other distribution on any class of stock of the Company payable in Common Stock, or shall effect a subdivision of the outstanding shares of Common Stock into a greater number of shares of Common Stock (by reclassification or otherwise than by payment of a dividend in Common Stock), then, and in each such case, Additional Shares of Common Stock shall be deemed to have been issued (a) in the case of any such dividend, immediately after the close of business on the record date for the determination of holders of any class of securities entitled to receive such dividend, or (b) in the case of any such subdivision, at the close of business on the day immediately prior to the day upon which such corporate action becomes effective.

2.5. Computation of Consideration. For the purposes of this section 2:

(a) The consideration for the issue or sale of any Additional Shares of Common Stock or for the issue, sale, grant or assumption of any Options or Convertible Securities, irrespective of the accounting treatment of such consideration, shall

(i) insofar as it consists of cash, be computed at the amount of cash received by the Company, without deducting any expenses paid or incurred by the Company or any commissions or compensation paid or concessions or discounts allowed to underwriters, dealers or others performing similar services and any accrued interest or dividends in connection with

such issue or sale,

(ii) insofar as it consists of consideration (including securities) other than cash, be computed at the Fair Value thereof at the time of such issue or sale, without deducting any expenses

paid or incurred by the Company for any commissions or compensation paid or concessions or discounts allowed to underwriters, dealers or others performing similar services and any accrued interest or dividends in connection with such issue or sale, and

(iii) in case Additional Shares of Common Stock are issued or sold or Convertible Securities are issued, sold, granted or assumed together with other stock or securities or other assets of the Company for a consideration which covers both, be the proportion of such consideration so received, computed as provided in subdivisions (i) and (ii) above, allocable to such Additional Shares of Common Stock or Convertible Securities, as the case may be, all as determined in good faith by the Board of Directors of the Company.

(b) All Options issued, sold, granted or assumed together with other stock or securities or other assets of the Company for a consideration which covers both, all Additional Shares of Common Stock, Options or Convertible Securities issued in payment of any dividend or other distribution on any class of stock of the Company and all Additional Shares of Common Stock issued to effect a subdivision of the outstanding shares of Common Stock into a greater number of shares of Common Stock (by reclassification or otherwise than by payment of a dividend in Common Stock) shall be deemed to have been issued without consideration.

(c) Additional Shares of Common Stock deemed to have been issued for consideration pursuant to section 2.3, relating to Options and Convertible Securities, shall be deemed to have been issued for a consideration per share determined by dividing

(i) the total amount, if any, received and receivable by the Company as consideration for the issue, sale, grant or assumption of the Options or Convertible Securities in question, plus the

aggregate amount of additional consideration (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such consideration) payable to the Company upon the exercise of such

Options or the conversion or exchange of such Convertible Securities or, in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities, in each case computing such consideration as provided in the foregoing subdivision (a),

by

(ii) the number of shares of Common Stock (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or the conversion or exchange of such Convertible Securities.

(d) Additional Shares of Common Stock issued or deemed to have been issued pursuant to the operation of anti-dilution provisions applicable to Convertible Securities (other than the Warrants), Options or other securities of the Company (either as a result of the adjustments provided for by the Warrants or otherwise) shall be deemed to have been issued without consideration.

2.6. Adjustments for Combinations, etc. In case the outstanding shares of Common Stock shall be combined or consolidated, by reclassification or otherwise, into a lesser number of shares of Common Stock, the Warrant Price in effect immediately prior to such combination or consolidation shall, concurrently with the effectiveness of such combination or consolidation, be proportionately increased.

2.7. Minimum Adjustment of Warrant Price. If the amount of any adjustment of the Warrant Price required pursuant to this section 2 would be less than one one-hundredth (.01) of a cent, such amount shall be carried forward and adjustment with respect thereto made at the time of and together with any subsequent adjustment which, together with such amount and any other amount or amounts so carried forward, shall aggregate at least one one-hundredth (.01) of a cent.

3. Consolidation, Merger, Sale of Assets, Reorganization, etc. In case the Company, after the Initial Date, (a) shall consolidate with or merge into any other Person and shall not be the continuing or surviving corporation of such consolidation or merger, or (b) shall permit any other Person to consolidate with or merge into the Company and the Company shall be the continuing or surviving Person but, in connection with such consolidation or merger, Common Stock or Other Securities shall be changed into or exchanged for cash, stock or other securities of any other Person or any other property, or (c) shall transfer all or substantially all of its properties and assets to any other Person, or (d) shall effect a capital reorganization or reclassification of Common Stock or Other Securities (other than a capital reorganization or reclassification resulting in the issue of Additional Shares of Common Stock for which adjustment in the Warrant Price is provided in section 2.2.1 or 2.2.2), then, and in the case of each such transaction, the Company shall give written notice thereof to each holder of any Warrant not less than 30 days prior to the consummation thereof and proper provision shall be made so that, upon the basis and the terms and in the manner provided in this section 3, the holder of this Warrant, upon the consummation of such transaction, shall be entitled to receive, at the aggregate Warrant Price in effect at the time of such consummation for all Common Stock (or Other Securities) issuable upon such exercise immediately prior to such consummation, in lieu of the Common Stock (or Other Securities) issuable upon such exercise prior to such consummation, the amount of cash, securities or other property to which such holder would actually have been entitled as a shareholder upon such consummation if such holder had exercised this Warrant immediately prior thereto, subject to adjustments (subsequent to such consummation) as nearly equivalent as possible to the adjustments provided for in section 2 and this section 3, provided that if a purchase, tender or exchange offer shall have been made to and accepted by the holders of Common Stock under circumstances in which, upon completion of such purchase, tender or exchange offer, the maker thereof, together with members of any group (within the meaning of Rule 13d-5(b)(1) under the Exchange Act) of which such maker is a part, and together with any affiliate or associate of such maker (within the meaning of Rule 12b-2 under the Exchange Act) and any members of any such group of which any such affiliate or associate is a part, own beneficially (within the meaning of Rule 13d-3 under the

Exchange Act) more than 50% of the outstanding shares of Common Stock, and if the holder of this Warrant so designates in such notice given to the Company, the holder of this Warrant shall be entitled to receive the amount of cash, securities or other property to which such holder would actually have been entitled as a shareholder if the holder of this Warrant had exercised this Warrant prior to the expiration of such purchase, tender or exchange offer, accepted such offer and all of the Common Stock held by such holder had been purchased pursuant to such purchase, tender or exchange offer, subject to adjustments (from and after the consummation of such purchase, tender or exchange offer) as nearly equivalent as possible to the adjustments provided for in section 2 and this section 3.

4. Other Dilutive Events. In case any event shall occur as to which the provisions of section 2 or section 3 are not strictly applicable but the failure to make any adjustment would not fairly protect the purchase rights represented by this Warrant in accordance with the essential intent and principles of such sections, then, in each such case, the Company shall appoint a firm of independent public accountants of recognized national standing (which may be the regular auditors of the Company), which shall give their opinion upon the adjustment, if any, on a basis consistent with the essential intent and principles established in sections 2 and 3, necessary to preserve, without dilution, the purchase rights represented by this Warrant. Upon receipt of such opinion the Company will promptly mail a copy thereof to the holder of this Warrant and shall make the adjustments described therein.

5. No Dilution or Impairment. The Company will not, by amendment of its certificate of incorporation or through any consolidation, merger, reorganization, transfer of assets, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms. Without limiting the generality of the foregoing, the Company (a) will not permit the par value of any shares of stock receivable upon the exercise of this Warrant to exceed the amount payable therefor upon such exercise, (b) will take all such action as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and nonassessable shares of stock upon the exercise of all of the Warrants from time to time outstanding,

(c) will not take any action which results in any adjustment of the Warrant Price if the total number of shares of Common Stock (or Other Securities) issuable after the action upon the exercise of all of the Warrants would exceed the total number of shares of Common

Stock (or other Securities) then authorized by the Company's certificate of incorporation and available for the purpose of issue upon such exercise and, (d) will not issue any capital stock of any class which has the right to more than one vote per share.

6. Accountants' Report as to Adjustments. In each case of any adjustment or readjustment in the shares of Common Stock (or Other Securities) issuable upon the exercise of the Warrants, the Company at its expense will promptly compute such adjustment or readjustment in accordance with the terms of the Warrants and, if requested in writing to do so by any holder of a Warrant, will cause independent public accountants of recognized national standing selected by the Company (which may be the regular auditors of the Company) to verify such computation. The Company or, if so requested, the Company's independent public accountants, will prepare a report setting forth such adjustment or readjustment and showing in reasonable detail the method of calculation thereof and the facts upon which such adjustment or readjustment is based, including without limitation a statement of (a) the consideration received or to be received by the Company for any Additional Shares of Common Stock issued or sold or deemed to have been issued, (b) the number of shares of Common Stock outstanding or deemed to be outstanding, and (c) the Warrant Price in effect immediately prior to such issue or sale and as adjusted and readjusted (if required by section 2) on account thereof. The Company will forthwith mail a copy of each such report to each holder of a Warrant and will, upon the written request at any time of any holder of a Warrant, furnish to such holder a like report setting forth the Warrant Price at the time in effect and showing in reasonable detail how it was calculated. The Company will also keep copies of all such reports at its principal office and will cause the same to be available for inspection at such office during normal business hours by any holder of a Warrant or any prospective purchaser of a Warrant designated by the holder thereof.

7. Notices of Corporate Action. In the event of

(a) any taking by the Company of a record of the holders of any class of securities for the purpose of determining the holders thereof who are entitled to receive any dividend (other than a regular periodic dividend payable in cash out of earned surplus) or other distribution, or any right to subscribe for, purchase or otherwise acquire any shares of stock of any class or any other securities or property, or to receive any other right, or

(b) any capital reorganization of the Company, any reclassification or recapitalization of the capital stock of the Company or any consolidation or merger involving the

Company and any other Person or any transfer of all or substantially all the assets of the Company to any other Person, or

(c) any voluntary or involuntary dissolution, liquidation or winding-up of the Company,

the Company will mail to each holder of a Warrant a notice specifying (i) the date or expected date on which any such record is to be taken for the purpose of such dividend, distribution or right, and the amount and character of such dividend, distribution or right, and (ii) the date or expected date on which any such reorganization, reclassification, recapitalization, consolidation, merger, transfer, dissolution, liquidation or winding-up is to take place and the time, if any such time is to be fixed, as of which the holders of record of Common Stock (or Other Securities) shall be entitled to exchange their shares of Common Stock (or Other Securities) for the securities or other property deliverable upon such reorganization, reclassification, recapitalization, consolidation, merger, transfer, dissolution, liquidation or winding-up. Such notice shall be mailed at least 20 days prior to the date therein specified, in the case of any date referred to in the foregoing subdivision (i), and at least 90 days prior to the date therein specified, in the case of the date referred to in the foregoing subdivision (ii).

8. Restrictions on Transfer.

8.1. Restrictive Legends. Except as otherwise permitted by this section 8, each Warrant originally issued pursuant to the Purchase Agreement and each Warrant issued upon direct or indirect

transfer or in substitution for any Warrant pursuant to section 13 shall be stamped or otherwise imprinted with a legend in substantially the following form:

"This Warrant and any shares acquired upon the exercise of this Warrant have not been registered under the Securities Act of 1933 and may not be transferred in the absence of such registration or an exemption therefrom under such Act."

Except as otherwise permitted by this section 8, each certificate for Common Stock (or Other Securities) issued upon the exercise of any Warrant and each certificate issued upon the direct or indirect transfer of any such Common Stock (or Other Securities) shall be stamped or otherwise imprinted with a legend in substantially the following form:

"The shares represented by this certificate have not been registered under the Securities Act of 1933 and may not be transferred in the absence of such registration or an exemption therefrom under such Act. Such shares are also subject to certain restrictions on transferability imposed by Common Stock Purchase Warrants expiring July 31, 2008, a copy of which is on file at the offices of the Company."

8.2. Notice of Proposed Transfer; Opinions of Counsel. Prior to any transfer of any Restricted Securities which are not registered under an effective registration statement under the Securities Act (other than a transfer pursuant to Rule 144 or any comparable rule under such Act), the holder thereof will give written notice to the Company of such holder's intention to effect such transfer and to comply in all other respects with this section 8.2. Each such notice (a) shall describe the manner and circumstances of the proposed transfer in sufficient detail to enable counsel to render the opinions referred to below, and (b) shall designate counsel for the holder giving such notice (which counsel shall be reasonably acceptable to the Company). The holder giving such notice will submit a copy thereof to the counsel designated in such notice. The following provisions shall then apply:

(i) If in the opinion of counsel for the holder the proposed transfer may be effected without registration, which opinion must be reasonably acceptable to counsel for

the Company, such holder shall thereupon be entitled to transfer such Restricted Securities in accordance with the terms of the notice delivered by such holder to the Company. Each Warrant or certificate, if any, issued upon or in connection with such transfer shall bear the appropriate restrictive legend set forth in section 8.1 unless, in the opinion of such counsel, which opinion must be reasonably acceptable to counsel for the Company, such legend is no longer required to insure compliance with the Securities Act. No transfer of Restricted Securities shall be made by the holder thereof and no legend may be removed from any certificates evidencing Restricted Securities unless the Company receives an opinion from its counsel indicating that the opinion of counsel received by the holder is reasonably acceptable to it and consistent with applicable law.

(ii) If the opinion of such counsel for the holder is not to the effect that the proposed transfer may legally be effected without registration of such Restricted Securities under the Securities Act, such holder shall not be entitled to transfer such Restricted Securities (other than in a

transfer pursuant to Rule 144 or any comparable rule under the Securities Act) until the conditions specified in subdivision (i) above shall be satisfied or until registration of such Restricted Securities under the Securities Act has become effective.

Notwithstanding the foregoing provisions of this section 8.2, the holder of any Restricted Securities shall be permitted to transfer any such Restricted Securities pursuant to Rule 144A under the Securities Act, provided that each transferee agrees in writing to be bound by all the restrictions on transfer of such Restricted Securities contained in this section 8.2 and the terms of this Warrant.

8.3. Termination of Restrictions. The restrictions imposed by this section 8 upon the transferability of Restricted Securities shall cease and terminate as to any particular Restricted Securities (a) when such securities shall have been effectively registered under the Securities Act and disposed of in accordance with the registration statement covering such Restricted Securities, (b) when, in the opinions of both counsel for the holder thereof and counsel for the Company, such restrictions are no longer required in order to insure compliance

with the Securities Act, or (c) when such securities have been beneficially owned, by a person who has not been an affiliate of the Company for at least three months, for a period of at least two years, all as determined under Rule 144 under the Securities Act. Whenever such restrictions shall terminate as to any Restricted Securities, as soon as practicable thereafter and in any event within ten Business Days, the holder thereof shall be entitled to receive from the Company, without expense (other than transfer taxes, if any), new securities of like tenor not bearing the applicable legend set forth in section 8.1 hereof.

9. Registration under Securities Act, etc. The holders of Registrable Securities shall have the rights with respect to the registration thereof set forth in the Registration Rights Agreement.

10. Availability of Information. The Company will cooperate with each holder of any Restricted Securities in supplying such information as may be necessary for such holder to complete and file any information reporting forms presently or hereafter required by the Commission as a condition to the availability of an exemption from the Securities Act for the sale of any Restricted Securities. The Company will furnish to each holder of any Warrants, promptly upon their becoming available, copies of all financial statements, reports, notices and proxy statements sent or made available generally by the Company to its stockholders, and copies of all

regular and periodic reports and all registration statements and prospectuses filed by the Company with any securities exchange or with the commission.

11. Reservation of Stock, etc. The Company will at all times reserve and keep available, solely for issuance and delivery upon exercise of the Warrants, the number of shares of Common Stock (or Other Securities) from time to time issuable upon exercise of all Warrants at the time outstanding. All shares of Common Stock (or Other Securities) shall be duly authorized and, when issued upon such exercise, shall be validly issued and, in the case of shares, fully paid and nonassessable with no liability on the part of the holders thereof.

12. Listing on Securities Exchange. The Company will list on each national securities exchange on which any Common

Stock may at any time be listed, subject to official notice of issuance upon exercise of the Warrants, and will maintain such listing of, all shares of Common Stock from time to time issuable upon exercise of the Warrants. The Company will also so list on each national securities exchange, and will maintain such listing of, any other securities if at the time any securities of the same class shall be listed on such national securities exchange by the Company.

13. Ownership, Transfer and Substitution of Warrants.

13.1. Ownership of Warrants. The Company may treat the person in whose name any Warrant is registered on the register kept at the principal office of the Company as the owner and holder thereof for all purposes, notwithstanding any notice to the contrary, except that, if and when any Warrant is properly assigned in blank, the Company may (but shall not be obligated to) treat the bearer thereof as the owner of such Warrant for all purposes, notwithstanding any notice to the contrary. Subject to section 8, a Warrant, if properly assigned, may be exercised by a new holder without first having a new Warrant issued.

13.2. Transfer and Exchange of Warrants. Upon the surrender of any Warrant, properly endorsed, for registration of transfer or for exchange at the principal office of the Company, the Company at its expense will (subject to compliance with section 8, if applicable) execute and deliver to or upon the order of the holder thereof a new Warrant or Warrants of like tenor, in the name of such holder or as such holder (upon payment by such holder of any applicable transfer taxes) may direct, calling in the aggregate on the face or faces thereof for the number of shares of Common Stock called for on the face or faces of the Warrant or Warrants so surrendered.

13.3. Replacement of Warrants. Upon receipt of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of any Warrant and, in the case of any such loss, theft or destruction of any Warrant held by a Person other than any institutional investor, upon delivery of indemnity reasonably satisfactory to the Company in form and amount or, in the case of any such mutilation, upon surrender of such Warrant for cancellation at the principal office of the Company, the Company at its expense will execute and deliver, in lieu thereof, a new Warrant of like tenor.

14. Definitions. As used herein, unless the context otherwise requires, the following terms have the following respective meanings:

Additional Shares of Common Stock: all shares (including treasury shares) of Common Stock issued or sold (or, pursuant to section 2.3 or 2.4, deemed to be issued) by the Company after the Initial Date hereof, whether or not subsequently reacquired or retired by the Company, other than (a) shares of Common Stock issued upon the exercise of Warrants, (b) shares of Common Stock issued upon the exercise, conversion or exchange of any Excluded Securities.

AMI-PESI: Associated Mezzanine Investors-PESI, L.P., a limited partnership organized and existing under the laws of the State of Delaware.

Bridge East: Bridge East Capital, L.P., a limited partnership organized and existing under the laws of the Cayman Islands.

Business Day: any day other than a Saturday or a Sunday or a day on which commercial banking institutions in the City of New York are authorized by law to be closed, provided that, in determining the period within which certificates or Warrants are to be issued and delivered pursuant to section 1.3 at a time when shares of Common Stock (or Other Securities) are listed or admitted to trading on any national securities exchange or in the over-the-counter market and in determining the Market Price of any securities listed or admitted to trading on any national securities exchange or in the over-the-counter market, "Business Day" shall mean any day when the principal exchange in which securities are then listed or admitted to trading is open for trading or, if such securities are traded in the over-the-counter market in the United States, such market is open for trading, and provided, further, that any reference to "days" (unless Business Days are specified) shall mean calendar days.

Closing Date: the meaning specified in section 10.3.

Commission: the Securities and Exchange Commission or any other Federal agency at the time administering the Securities Act or the Exchange Act, whichever is the relevant statute for the particular purpose.

Common Stock: the Company's Common Stock, par value $.001 per share, as constituted on the date hereof, any stock into which such Common Stock shall have been changed or any stock resulting from any reclassification of such Common Stock, and all other stock of any class or classes (however designated) of the Company the holders of which have the right, without limitation as to amount, either to all or to a share of the balance of current dividends and liquidating dividends after the payment of dividends and distributions on any shares entitled to preference.

Company: Perma-Fix Environmental Services, Inc., a Delaware corporation.

Convertible Securities: any evidences of indebtedness, shares of stock (other than Common Stock) or other securities directly or indirectly convertible into or exchangeable for Additional Shares of Common Stock.

Current Market Price: on any date specified herein, (a) with respect to Common Stock or to Voting Common Stock (or equivalent equity interests) of the Company, (i) the average daily Market Price during the period of the most recent 20 consecutive Business Days ending on such date, or (ii) if shares of Common Stock or such Voting Common Stock (or equivalent equity interests), as the case may be, are not then listed or admitted to trading on any national securities exchange and if the closing bid and asked prices thereof are not then quoted or published in the over-the-counter market, the Market Price on such date; and (b) with respect to any other securities, the Market Price on such date.

Exchange Act: the Securities Exchange Act of 1934, or any similar Federal statute, and the rules and regulations of the commission thereunder, all as the same shall be in effect at the time. Reference to a particular section of the Securities Exchange Act of 1934 shall include a reference to the comparable section, if any, of any such similar Federal statute.

Excluded Securities: the Options and Convertible Securities listed on the Schedule I hereto.

Fair Value: with respect to any securities or other property, the Fair Value thereof as of a date which is within 15

days of the date as of which the determination is to be made (a)

determined by an agreement between the Company and the Requisite Holders of Warrants or (b) if the Company and the Requisite Holders of Warrants fail to agree, determined jointly by an independent investment banking firm retained by the Company and by an independent investment banking firm retained by the Requisite Holders of Warrants, either of which firms may be an independent investment banking firm regularly retained by the Company or any such holder or (c) if the firms so retained by the Company and by such holders shall be unable to reach a joint determination within 15 Business Days of the retention of the last firm so retained, determined by another independent investment banking firm which is not a regular investment banking firm of the Company or any such holder chosen by the first two such firms.

Initial Date: the meaning specified in section 2.2.

Market Price: on any date specified herein, (a) with respect to Common Stock or Voting Common Stock (or equivalent equity interests) of the Company, the amount per share equal to (i) the last sale price of shares of such security, regular way, on such date or, if no such sale takes place on such date, the average of the closing bid and asked prices thereof on such date, in each case as officially reported on the principal national securities exchange on which the same are then listed or admitted to trading, or (ii) if no shares of such security are then listed or admitted to trading on any national securities exchange but such security is designated as a national market system security by the NASD, the last trading price of such security on such date, or if such security is not so designated, the average of the reported closing bid and asked prices thereof on such date as shown by the NASD automated quotation system or, if no shares thereof are then quoted in such system, as published by the National Quotation Bureau, Incorporated or any successor organization, and in either case as reported by any member firm of the New York Stock Exchange selected by the Company, or (iii) if no shares of such security are then listed or admitted to trading on any national exchange or designated as a national market system security and if no closing bid and asked prices thereof are then so quoted or published in the over-the-counter market, the higher of (x) the book value thereof as determined by agreement between the Company and the Requisite Holders of Warrants, or if the Company and the Requisite

Holders of Warrants fail to agree, by any firm of independent public accountants of recognized standing selected by the Board of Directors of the Company, as of the last day of any month ending within 60 days preceding the date as of which the determination is to be made or (y) the fair value thereof determined in good faith by the Board of Directors of the issuer thereof as of a date which is within 15 days of the date as of which the determination is to be made; and (b) with respect to any other securities, the fair value thereof determined in good faith by the Board of Directors of the Company as of a date which is within 15 days of the date as of which the determination is to be made.

NASD: the National Association of Securities Dealers.

Notes: the meaning specified in the opening paragraphs of this Warrant.

Options: rights, options or warrants to subscribe for, purchase or otherwise acquire either Additional Shares of Common Stock or Convertible securities.

Other Securities: any stock (other than Common Stock) and other securities of the Company or any other Person (corporate or otherwise) which the holders of the Warrants at any time shall be entitled to receive, or shall have received, upon the exercise of the Warrants, in lieu of or in addition to Common Stock, or which at any time shall be issuable or shall have been issued in exchange for or in replacement of Common Stock or Other Securities pursuant to section 3 or otherwise.

Person: an individual, a partnership, an association, a joint venture, a corporation, a limited liability company, a business, a trust, an unincorporated organization or a government or any department, agency or subdivision thereof.

Public Offering: any offering of Common Stock to the public pursuant to an effective registration statement under the Securities Act.

Purchase Agreement: the meaning specified in the opening paragraphs of this Warrant.

Registrable Securities: (a) any shares of Common Stock or Other Securities issued or issuable upon exercise of the Warrants and (b) any securities issued or issuable with respect to any Common Stock or Other Securities referred to in subdivision (a) by way of stock dividend or stock split or in connection with a combination of shares, recapitalization, merger, consolidation or other reorganization or otherwise. As to any particular Registrable

Securities, once issued such securities shall cease to be Registrable Securities when (x) a registration statement with respect to the sale of such securities shall have become effective under the Securities Act and such securities shall have been disposed of in accordance with such registration statement, (y) they shall have been distributed to the public pursuant to Rule 144 (or any successor provision) under the Securities Act, or (z) they shall have ceased to be outstanding.

Registration Rights Agreement: the Registration Rights Agreement, dated as of July 31, 2001, executed and delivered by the Company, AMI-PESI and Bridge East, substantially in the form of Exhibit E to the Purchase Agreement, as may be amended from time to time.

Requisite Holders of Warrants: the holders of at least 60% of all the Warrants at the time outstanding determined on the basis of the number of shares of Common Stock or Other Securities deliverable upon exercise thereof.

Restricted Securities: (a) any Warrants bearing the applicable legend set forth in section 8.1, (b) any shares of Common Stock (or Other Securities) which have been issued upon the exercise of Warrants and which are evidenced by a certificate or certificates bearing the applicable legend set forth in such section, and (c) unless the context otherwise requires, any shares of Common Stock (or Other Securities) which are at the time issuable upon the exercise of Warrants and which, when so issued, will be evidenced by a certificate or certificates bearing the applicable legend set forth in such section.

Securities Act: the Securities Act of 1933, or any similar Federal statute, and the rules and regulations of the Commission thereunder, all as the same shall be in effect at the time. Reference to a particular section of the Securities Act of

1933 shall include a reference to the comparable section, if any, of any such similar Federal statute.

Subsidiary: any corporation, association or other business entity at least 50% (by number of votes) of the Voting Common Stock of which is at the time owned by the Company or by one or more Subsidiaries or by the Company and one or more Subsidiaries.

Transfer: unless the context otherwise requires, any sale, assignment, pledge or other disposition of any security, or of any interest therein, which could constitute a "sale" as that term is defined in section 2(3) of the Securities Act.

Voting Common Stock: with respect to any corporation, association or other business entity, stock of any class or classes (or equivalent interest) , if the holders of the stock of such class or classes (or equivalent interests) are ordinarily, in the absence of contingencies, entitled to vote for the election of a majority of the directors (or persons performing similar functions) of such corporation, association or business entity, even if the right so to vote has been suspended by the happening of such a contingency.

Warrant Price: the meaning specified in section 2.1.

Warrants: the meaning specified in the opening paragraphs of this Warrant.

15. Remedies. The Company stipulates that the remedies at law of the holder of this Warrant in the event of any default or threatened default by the Company in the performance of or compliance with any of the terms of this Warrant are not and will not be adequate and that, to the fullest extent permitted by law, such terms may be specifically enforced by a decree for the specific performance of any agreement contained herein or by an injunction against a violation of any of the terms hereof or otherwise.

16. No Rights or Liabilities as Stockholder. Nothing contained in this Warrant shall be construed as conferring upon the holder hereof any rights as a stockholder of the Company or as imposing any liabilities on such holder to purchase any securities

or as a stockholder of the Company, whether such liabilities are asserted by the Company or by creditors or stockholders of the Company or otherwise.

17. Notices. All notices and other communications under this Agreement shall be in writing and shall be delivered by hand, facsimile transmission or courier service, or mailed by registered or certified mail, return receipt requested, addressed (a) if to any holder of any Warrant or any holder of any Common Stock (or Other Securities), at the registered address of such holder as set forth in the register kept at the principal office of the Company, or (b) if to the Company, to the attention of its Chief Financial Officer, at its principal office, provided that the exercise of any Warrant shall be effected in the manner provided in section 1.

18. Miscellaneous. This Warrant and any term hereof may be changed, waived, discharged or terminated only by an instrument in writing signed by the party against which enforcement of such change, waiver, discharge or termination is sought. The agreements of the Company contained in this Warrant, other than those applicable solely to the Warrants and the holders thereof, shall

inure to the benefit of and be enforceable by any holder or holders at the time of any Common Stock (or Other Securities) issued upon the exercise of Warrants, whether so expressed or not. This Warrant shall be construed and enforced in accordance with and governed by the laws of the State of New York (except with respect to such matters as are governed by the corporate law of the State of Delaware). The section headings in this Warrant are for purposes of convenience only and shall not constitute a part hereof.

[SIGNATURE APPEARS ON FOLLOWING PAGE]

19. Expiration. The right to exercise this Warrant shall expire at 3 P.M., New York City time, on July 31, 2008.

PERMA-FIX ENVIRONMENTAL SERVICES, INC.

By:_____

Title:

FORM OF SUBSCRIPTION

(To be executed only upon exercise of Warrant)

To _____

The undersigned registered holder of the within Warrant hereby irrevocably exercises such Warrant for, and purchases thereunder, _____ shares of Common Stock of PERMA-FIX ENVIRONMENTAL SERVICES, INC., a Delaware corporation, and herewith makes payment of $_____ therefor [by application pursuant to section 1.5 of such Warrant of $_____ aggregate principal amount of Notes (as defined in such Warrant) plus $_____ accrued interest thereon] [by cashless exercise pursuant to section 1.6 of such Warrant], and requests that the certificates for such shares be issued in the name of, and delivered to _____ whose address is _____.

[The undersigned hereby instructs you to credit the principal amount of each Note so applied against the installments of principal remaining unpaid on such Note in the _____ order of their maturity dates.]

Dated: _____

_____
(Signature must conform in all respects to name of holder as specified on the face of this Warrant)

[insert address]

_____

[1]Insert here the number of shares called for on the face of this Warrant (or, the case of a partial exercise, the portion thereof as to which thgis Warrant is being exercised), in either case without making any adjustment for (i) additional Common Stock or any other stock or other securities or property or cash which, pursuant to the adjustment provisions of this Warrant, may be delivered upon exercise of (ii) a payment effected by cashless exercise pursuant to section 1.6 of this Warrant. In the case of a partial exercise, a new warrant or Warrants will be issued and delivered, representing the unexercised portion of this Warrant, to the holder surrendering the same.

[2]Delete inapplicable language in brackets.

FORM OF ASSIGNMENT

(To be executed only upon transfer of Warrant)

For value received, the undersigned registered holder of the within Warrant hereby sells, assigns and transfers unto _____ the right represented by such Warrant to purchase shares _____ of Common Stock of PERMA-FIX ENVIRONMENTAL SERVICES, INC., a Delaware corporation, to which such Warrant relates, and appoints _____ Attorney to make such transfer on the books of _____ maintained for such purpose, with full power of substitution in the premises.

Dated: _____

_____

(Signature must conform in all respects to name of holder as specified on the face of this Warrant)

[insert address]

Signed in the presence of:

_____

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GUARANTY AGREEMENT

Perma-Fix of Florida, Inc.
Perma-Fix of Fort Lauderdale, Inc.
Perma-Fix of Dayton, Inc.
Perma-Fix Treatment Services, Inc.
Perma-Fix of Memphis, Inc.
Perma-Fix, Inc.
Perma-Fix of New Mexico, Inc.
Reclamation Systems, Inc.
Industrial Waste Management, Inc.
Schreiber, Yonley & Associates
Mintech, Inc.
Perma-Fix of Orlando, Inc.
Perma-Fix of South Georgia, Inc.
Perma-Fix of Michigan, Inc.
Diversified Scientific Services, Inc.
East Tennessee Materials & Energy Corporation

Dated as of July 31, 2001

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TABLE OF CONTENTS

GUARANTY AGREEMENT

GUARANTY AGREEMENT, dated as of July 31, 2001, made by each of the subsidiaries of Perma-Fix Environmental Services, Inc., a Delaware corporation (the "Company"), listed in the attached schedule (collectively, the "Guarantors").

W I T N E S S E T H :

WHEREAS, Company has entered into a Note and Warrant Purchase Agreement, dated as of July 31, 2001 (as amended or supplemented from time to time, the "Note Agreement"), with the purchasers referred to in such agreement (collectively, the "Purchasers"), providing, among other things, for issuance by the Company of up to $5,625,000 aggregate principal amount of its 13.50% Senior Subordinated Notes due 2006 (the "Notes") to the Purchasers;

WHEREAS, each of the Guarantors is a wholly-owned subsidiary of the Company or a wholly-owned subsidiary of such a subsidiary, as indicated in the attached Schedule;

WHEREAS, to induce the Purchasers to purchase the Notes and in consideration of the Purchasers' agreement to purchase the Notes, the Guarantors are entering into this Agreement and the Guaranty provided for herein;

WHEREAS, capitalized terms not otherwise defined herein

shall have the meanings specified therefor in the Note Agreement.

NOW, THEREFORE, in consideration of the premises and the covenants herein contained, the parties hereto agree as follows:

1. Guaranty.

1.1. Guaranty of Each of the Guarantors. The Guarantors, jointly and severally, unconditionally and irrevocably guarantee to each holder from time to time of any of the Notes:

(a) the due, prompt and complete payment by the Company of the principal of and interest on, and any other amount (including obligations which would become due except for the automatic stay under Section 362(a) of the federal Bankruptcy Code) due under, the Notes, whether now existing or hereafter arising, when and as the same shall become due and payable (whether at stated maturity or by prepayment or by declaration or otherwise) in accordance with the terms of the Notes and of the Note Agreement; and

(b) the due, prompt and faithful performance of, and compliance with, all obligations, covenants, terms, conditions and undertakings of the Company contained in the Notes and the Note Agreement and in any other agreement or document executed by the Company pursuant to the Note Agreement (the Note Agreement, the Notes and such other agreements and documents being sometimes collectively hereinafter referred to as the "Guaranteed Documents", and the amounts payable by the Company under any of the Guaranteed Documents and all other obligations of the Company thereunder being sometimes collectively hereinafter referred to as the "Guaranteed Obligations").

This guaranty is a guaranty of payment, performance and compliance and not of collectibility and is in no way conditioned or contingent upon any attempt to collect from or enforce performance or compliance by the Company or upon any other event, contingency, circumstance or condition whatsoever. If for any reason whatsoever the Company shall fail or be unable duly, punctually and fully to pay such amounts as and when the same shall become due and payable or to perform or comply with any other Guaranteed Obligation, whether or not such failure or inability shall constitute an "Event of Default" under any Guaranteed Document, the Guarantors, without demand, presentment, protest or notice of any kind, will forthwith pay or cause to be paid such amounts to the holders of the Notes entitled thereto under the terms of such Guaranteed Document, in lawful money of the United States, at the place specified in the Note Agreement, or perform or comply with such Guaranteed Obligations or cause such Guaranteed Obligations to be performed or

complied with, together with interest on any amount due and owing from the Company at the rate applicable under the Guaranteed Documents from the date the same becomes due and payable to the date of payment. The Guarantors, promptly after demand, will reimburse to each holder of the Notes all costs and expenses of collecting such amounts or otherwise enforcing the Note Agreement, including, without limitation, the reasonable fees and expenses of counsel.

1.2. Guarantors' Obligations Unconditional. The obligations of the Guarantors under this Agreement are primary, irrevocable, absolute and unconditional obligations of the Guarantors, are not subject to any counterclaim, set-off, deduction, diminution, abatement, recoupment, suspension, deferment, reduction or defense based upon any claim the Guarantors or any other Person may have against the Company or any other Person, and shall remain in full force and effect without regard to, and shall not be released, discharged or in any way affected by, any circumstance or condition whatsoever (whether or not any Guarantor or the Company shall have any knowledge or notice thereof), including, without limitation, in each case, to the extent permitted by law:

(a) any amendment of or change in, or waiver of, any of the Guaranteed Documents;

(b) any furnishing, acceptance or release of, or any defect in, any security for any of the Guaranteed Obligations;

(c) any failure, omission or delay on the part of the Company to conform or comply with any term of any of the Guaranteed Documents or any other instrument or agreement referred to in section 1.1 above, including, without limitation, failure to give notice to any Guarantor of the occurrence of a default or an "Event of Default" under any Guaranteed Document;

(d) any waiver of the payment, performance or observance of any of the obligations, conditions, covenants or agreements contained in any Guaranteed Document, or any other waiver, consent, extension, indulgence, compromise, settlement, release or other action or inaction under or in respect of any of the Guaranteed Documents or any other instrument or agreement referred to in section 1.1 above or any obligation or liability of the Company, or any exercise or non-exercise of any right, remedy, power or privilege under or in respect of any such instrument or agreement or any such obligation or liability;

(e) any failure, omission or delay on the part of the

holder of any of the Notes to enforce, assert or exercise any right, power or remedy conferred on it in the Note

Agreement, or any such failure, omission or delay on the part of such holder in connection with any Guaranteed Document, or any other action on the part of such holder;

(f) any voluntary or involuntary bankruptcy, insolvency, reorganization, arrangement, readjustment, assignment for the benefit of creditors, composition, receivership, conservatorship, custodianship, liquidation, marshalling of assets and liabilities or similar proceedings with respect to the Company, any Guarantor or any other Person or any of their respective properties or creditors, or any action taken by any trustee or receiver or by any court in any such proceeding;

(g) any limitation on the liability or obligations of the Company or any other Person under any of the Guaranteed Documents, or any discharge, termination, cancellation, frustration, irregularity, invalidity or unenforceability, in whole or in part, of any of the Guaranteed Documents or any other agreement or instrument referred to in section 1.1 above or any term hereof;

(h) any merger or consolidation of the Company or any Guarantor into or with any other corporation, or any sale, lease or transfer of any of the assets of the Company or any Guarantor to any other Person;

(i) any change in the ownership of any shares of capital stock of the Company, or any change in the corporate relationship between the Company and any Guarantor, or any termination of such relationship;

(j) any release or discharge, by operation of law, of any Guarantor from the performance or observance of any of the Guaranteed Obligations; or

(k) any other occurrence, circumstance, happening or event whatsoever, whether similar or dissimilar to the foregoing, whether foreseen or unforeseen, and any other circumstance which might otherwise constitute a legal or equitable defense or discharge of the liabilities of a guarantor or surety or which might otherwise limit recourse against the Guarantors (other than a defense of payment or performance).

1.3. Full Recourse Obligations. Except as provided herein, the obligations of the Guarantors set forth herein constitute the full recourse obligations of each of the Guarantors enforceable against it to the full extent of all its assets and properties.

1.4. Independent Obligations; Waiver. The obligations of the Guarantors set forth in this Agreement are independent of the Guaranteed Obligations or any other obligations of any other Person under the Guaranteed Documents. The obligations of each Guarantor hereunder are independent of the obligations of any other Guarantor, the Company or any other Person, and a separate action or actions may be brought and prosecuted against each Guarantor whether or not action is brought against any other Guarantor, the Company or any other Person and whether or not any other Guarantor, the Company or any other Person may be joined in any such action or actions. The Guarantors unconditionally waive, to the extent permitted by applicable law, (a) notice of any of the matters referred to in section 1.2, (b) notice to the Guarantors of the incurrence of any of the Guaranteed Obligations, notice to the Guarantors or the Company of any breach or default by the Company with respect to any of the Guaranteed Obligations or any other notice that may be required, by statute, rule of law or otherwise, to preserve any rights of any holder of any of the Notes against the Guarantors, (c) presentment to or demand of payment from the Company or the Guarantors with respect to any Note or protest for nonpayment or dishonor, (d) any right to the enforcement, assertion, exercise or exhaustion by any holder of any of the Notes of any right, power, privilege or remedy conferred in the Note Agreement or any other Guaranteed Document or otherwise, (e) any requirement of diligence on the part of any holder of any of the Notes, (f) any requirement to mitigate the damages resulting from any default under any Guaranteed Document, (g) any notice of any sale, transfer or other disposition of any right or title to or interest in any Note by any holder thereof or in any other Guaranteed Document, (h) any release of the Guarantors from its obligations hereunder resulting from any loss by it of its rights of subrogation hereunder and (i) any other circumstance whatsoever which might otherwise constitute a legal or equitable discharge, release or defense of a guarantor or surety or which might otherwise limit recourse against the Guarantors.

1.5. Subordination of Claims Against Company; Subrogation. (a) Each Guarantor agrees to subordinate and does hereby subordinate any and all claims it may have against the Company (whether or not

evidenced by promissory notes or other evidences of indebtedness or carried as intercompany accounts, whether for monies advanced, services performed or goods sold and delivered, whether for an indeterminate sum, a sum certain or a contingent claim) now existing or hereafter arising to any and all Guaranteed Obligations. Each Guarantor further agrees that until all Guaranteed Obligations and any amount owing hereunder shall have been paid and satisfied in full, each Guarantor shall not be entitled to receive any payments of or on account of the principal amount of any claim against the Company which is subordinated hereby. Each Guarantor undertakes to deliver such further documents as a holder of any of the Notes may request reasonably evidencing such subordination without reducing or affecting in any manner the liability of each Guarantor under the other provisions of this Agreement.

(b) Upon the payment in full of all principal of and interest on the Notes and any other amounts payable by the Company under the Guaranteed Documents, the Guarantors shall be subrogated to the rights of the holders of the Notes in respect of any payment or other obligation with respect to which an amount has been payable by the Guarantors hereunder. The Guarantors shall not seek to exercise any rights of subrogation, reimbursement or indemnity arising from payments made by the Guarantors pursuant to the provisions of this Agreement until the full and complete payment or performance and discharge of the Guaranteed Obligations.

1.6. Effect of Bankruptcy Proceedings, etc. (a) This Guaranty shall continue to be effective or be automatically reinstated, as the case may be, if at any time any payment made by any Person on account of any of the sums due any holder of any of the Notes pursuant to the terms of the Notes, the Note Agreement or any other Guaranteed Document is rescinded or must otherwise be restored or returned by such holder upon the insolvency, bankruptcy, dissolution, liquidation or reorganization of the Company or any other Person, or upon or as a result of the appointment of a custodian, receiver, trustee or other officer with similar powers with respect to the Company or other Person

or any substantial part of its property, or otherwise, all as though such payment had not been made.

(b) If an event permitting the acceleration of the maturity of the principal amount of the Notes shall at any time have occurred and be continuing, and such acceleration shall at such time be prevented by reason of the pendency against the Company or any other Person of any case or proceeding contemplated by section 1.6(a) then, for the purpose of defining the obligation of the Guarantors under this Guaranty, the maturity of the principal amount

of the Notes shall be deemed to have been accelerated with the same effect as if an acceleration had occurred in accordance with the terms of the Note Agreement, and the Guarantors shall forthwith pay such principal amount, all accrued and unpaid interest thereon and any other amounts guaranteed hereunder without further notice or demand.

1.7. Endorsement on Notes. The Guarantors will execute the guaranty appended to each Note upon the issuance of such Note. If any Note shall be issued in exchange for or in replacement of any other Note pursuant to the Note Agreement, the Guarantors will execute on the Note so issued its guaranty substantially identical to that set forth on the Note so exchanged. The absence of any such guaranty on any Note shall not, however, affect the obligations of the Guarantors hereunder.

1.8. Term of Guaranty. This Guaranty and all guarantees, covenants and agreements of the Guarantors contained herein shall continue in full force and effect and shall not be discharged until such time as all of the amounts due under the Notes shall be paid in full.

2. Maximum Liability. The liability of each of the Guarantors under this Agreement shall not exceed the greater of (a) the net benefit realized by such Guarantor or any Subsidiary of such Guarantor from the proceeds of the issuance of the Notes and (b) the greater of (i) 95% of the Adjusted Net Assets of such Guarantor on the date of this Agreement and (ii) 95% of the Adjusted Net Assets of such Guarantor on the date of any payment hereunder. For purposes of this Agreement, the term "Adjusted Net Assets" means, with respect to each of the Guarantors at any date of determination, the lesser of (x) the amount by which the fair value of the property and assets of such Guarantor exceeds the total amount of liabilities (including, without limitation,

contingent liabilities but excluding liabilities under the Guaranteed Documents) of such Guarantor at such date and (y) the amount by which the present fair salable value of the property and assets of such Guarantor at such date exceeds the amount that will be required to pay the probable liability of such Guarantor on its debts (excluding the Guaranteed Obligations), as they become absolute and matured.

3. Senior Subordination Agreement. The obligations of the Guarantors hereunder with respect to the Note Agreement and the Notes shall be subordinate and junior in right of payment to all "Obligations" (as defined in the Senior Subordination Agreement) to the extent and in the manner provided in the Senior Subordination Agreement.

4. Representations and Warranties. The Guarantors hereby jointly and severally represent and warrant as follows:

(a) Organization, Standing, etc.; Enforceability. Each Guarantor is a corporation duly organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation, and each has all requisite corporate power and authority to own and operate its properties, to carry on its business as now conducted and as proposed to be conducted and to enter into and to carry out the terms of this Agreement. This Agreement has been duly authorized by all necessary corporate action on the part of each Guarantor and has been duly executed and delivered by each Guarantor and constitutes the legal, valid and binding obligation of each Guarantor, enforceable against it in accordance with its respective terms, except that such enforceability may be limited by applicable bankruptcy, insolvency, reorganization, moratorium, fraudulent conveyance and transfer and similar laws of general application relating to or affecting the rights and remedies of creditors.

(b) Qualification. Each Guarantor is duly qualified and in good standing as a foreign corporation duly authorized to do business in each jurisdiction (other than the jurisdiction of its incorporation) in which the nature of its activities or the character of the properties it owns or leases makes such qualification necessary and in

which the failure so to qualify would have a materially adverse effect on the Company and the Guarantors, taken as a whole.

(c) Compliance with Other Instruments, etc. The execution, delivery and performance of this Agreement by each Guarantor will not result in any violation of or be in conflict with or constitute a default under any term of its certificate or articles of incorporation or by-laws or other governing instrument, any agreement or instrument to which such Guarantor is a party or by which it or any of its properties or assets is bound, or any term of any applicable law, ordinance, rule or regulation of any governmental authority or any term of any applicable order, judgment or decree of any court, arbitrator or governmental authority, the effect of which would be materially adverse to the Company and the Guarantors, taken as a whole.

(d) Governmental Consents, etc. No consent, approval or authorization of, or declaration or filing with, any

governmental authority on the part of any Guarantor is required for the valid execution and delivery of this Agreement and the due performance of the obligations of the Guarantors under this Agreement.

(e) Litigation. There is no action, proceeding or investigation pending or threatened (or any basis therefor known to any of the Guarantors) which questions the validity of this Agreement, or any action taken or to be taken pursuant to this Agreement, or which might result, either in any case or in the aggregate, in any material adverse change in the business, operations, affairs, condition (financial or otherwise), properties or assets of the Company and the Guarantors, taken as a whole.

5. Notices. All notices under the terms and provisions hereof shall be in writing, and shall be delivered by messenger or overnight courier or sent by fax or mailed by first-class mail, postage prepaid, addressed, (a) if to any Purchaser, at the address set forth in Schedule A of the relevant Note Agreement, or at such other address as a Purchaser shall from time to time designate in writing to the Company, (b) if to any Guarantor, to 1940 NW 67th Place, Gainseville, Florida 32653, 352-373-0040 (fax), Attention: Chief Financial Officer, or at such other

address as such Guarantor shall from time to time designate in writing to the Purchasers. Any notice so addressed shall be deemed to be given when so delivered or sent or, if mailed, on the third business day after being so mailed.

6. Amendments, etc. No amendment, alteration, modification or waiver of any term or provision of this Agreement, nor consent to any departure by any Guarantor therefrom, shall in any event be effective unless the same shall be in writing and signed by the holders of all of the Notes at the time outstanding, and then such waiver or consent shall be effective only in the specific instance and for the specific purpose for which given.

7. Submission to Jurisdiction. Each Guarantor, for itself and its successors and assigns, hereby irrevocably (a) agrees that any legal or equitable action, suit or proceeding against such Guarantor arising out of or relating to this Agreement or any transaction contemplated hereby or the subject matter of any of the foregoing may be instituted in any state or federal court in the State of New York, (b) waives any objection which it may now or hereafter have to the venue of any action, suit or proceeding, and (c) irrevocably submits itself to the nonexclusive jurisdiction of any state or federal court of competent jurisdiction in the State of New York for purposes of any such action, suit or proceeding. Each

Guarantor waives personal service of process and consents that service of process upon it may be made by certified or registered mail, return receipt requested, at its address specified in section 5, and service so made shall be deemed completed on the third business day after mailing. Nothing contained in this section 7 shall be deemed to affect the rights of the Purchasers or any subsequent holder of a Note to serve process in any other manner permitted by law or to commence legal proceedings or otherwise proceed against any Guarantor in any jurisdiction.

8. Survival. All warranties, representations and covenants made by the Guarantors herein or in any certificate or other instrument delivered by it or on its behalf hereunder shall be considered to have been relied upon by the Purchasers and shall survive the execution and delivery of this Agreement, regardless of any investigation made by the Purchasers or on their behalf. All statements in any such certificate or other instrument shall constitute warranties and representations by the Guarantors hereunder.

9. Further Assurances. Each Guarantor hereby agrees to execute and deliver all such instruments and take all such action as any holder of the Notes may from time to time reasonably request in order to effectuate fully the purposes of this Agreement and to establish and perfect the rights and remedies intended to be created in favor of the holders of the Notes hereunder or under any of the Guaranteed Documents.

10. Miscellaneous. Any provision of this Agreement which is prohibited or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such prohibition or unenforceability without invalidating the remaining provisions hereof, and any such prohibition or unenforceability in any jurisdiction shall not invalidate or render unenforceable such provision in any other jurisdiction. To the extent permitted by applicable law, each Guarantor hereby waives any provision of law that renders any provision hereof prohibited or unenforceable in any respect. The section and paragraph headings in this Agreement and the table of contents are for convenience of reference only and shall not modify, define, expand or limit any of the terms or provisions hereof, and all references herein to numbered sections, unless otherwise indicated, are to sections in this Agreement. THIS AGREEMENT SHALL IN ALL RESPECTS BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK, INCLUDING ALL MATTERS OF CONSTRUCTION, VALIDITY AND PERFORMANCE.

[SIGNATURES APPEAR ON THE FOLLOWING PAGES]

IN WITNESS WHEREOF, each of the Guarantors has caused this Guaranty Agreement to be duly executed as of the day and year first above written.

PERMA-FIX OF FLORIDA, INC.

By:_____
Name:
Title:

PERMA-FIX OF FORT LAUDERDALE, INC.

By:_____
Name:
Title:

PERMA-FIX OF DAYTON, INC.

By:_____
Name:
Title:

PERMA-FIX TREATMENT SERVICES, INC.

By:_____
Name:
Title:

PERMA-FIX OF MEMPHIS, INC.

By:_____
Name:

Title:

PERMA-FIX, INC.

By:_____
Name:
Title:

PERMA-FIX OF NEW MEXICO, INC.

By:_____
Name:
Title:

RECLAMATION SYSTEMS, INC.

By:_____
Name:
Title:

INDUSTRIAL WASTE MANAGEMENT, INC.

By:_____
Name:
Title:

SCHREIBER, YONLEY & ASSOCIATES

By:_____
Name:
Title:

MINTECH, INC.

By:_____
Name:
Title:

PERMA-FIX OF ORLANDO, INC.

By:_____
Name:
Title:

PERMA-FIX OF SOUTH GEORGIA, INC.

By:_____
Name:
Title:

PERMA-FIX OF MICHIGAN, INC.

By:_____
Name:
Title:

DIVERSIFIED SCIENTIFIC
SERVICES, INC.

By:_____
Name:
Title:

EAST TENNESSEE MATERIALS
AND ENERGY CORPORATION

By:_____
Name:
Title:

Schedule of Subsidiaries

Subsidiary	Jurisdiction of Formation	Ownership
Perma-Fix of Florida, Inc.		

Perma-Fix of Florida, Inc. ("PFF")	Florida	100% by Company
Perma-Fix of Fort Lauderdale, Inc. ("PFL")	Florida	100% by Company
Perma-Fix of Dayton, Inc. ("PFD")	Ohio	100% by Company
Perm-Fix Treatment Services, Inc. ("PFTS")	Oklahoma	100% by Company
Perma-Fix of Memphis, Inc. ("PFM")	Tennessee	100% by Company
Perma-Fix, Inc. ("PFI")	Oklahoma	100% by Company
Perma-Fix of New Mexico, Inc. ("PFNM")	New Mexico	100% by PFI
Reclamation Systems, Inc. ("RSI")	Oklahoma	100% by PFI
Industrial Waste Management, Inc. ("IWM")	Missouri	100% by Company
Schreiber, Yonley & Associates ("SYA")	Missouri	100% by IWM
Mintech, Inc.	Oklahoma	100% by PFI
Perma-Fix of Orlando, Inc. ("PFO")	Florida	100% by Company
Perma-Fix of South Georgia, Inc. ("PFSG")	Georgia	100% by Company
Perma-Fix of Michigan, Inc. ("PFMI")	Michigan	100% by Company
Diversified Scientific Services, Inc. ("DSSI")	Tennessee	100% by Company
East Tennessee Materials & Energy Corporation ("M&EC")	Tennessee	100% by Company

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PERMA-FIX ENVIRONMENTAL SERVICES, INC.

REGISTRATION RIGHTS AGREEMENT

Expiring July 31, 2008

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REGISTRATION RIGHTS AGREEMENT

REGISTRATION RIGHTS AGREEMENT, dated as of July 31, 2001, among PERMA-FIX ENVIRONMENTAL SERVICES, INC., a Delaware corporation (the "Company"), ASSOCIATED MEZZANINE INVESTORS-PESI, L.P., a Delaware limited partnership, and BRIDGE EAST CAPITAL, L.P., a limited partnership organized and existing under the laws of the Cayman Islands (collectively, the "Investors").

1. Definitions:

Commission: the Securities and Exchange Commission or any other Federal agency at the time administering the Securities Act or the Exchange Act, whichever is the relevant statute for the particular purpose.

Common Stock: the common stock of the Company, par value $.001 per share.

Exchange Act: the Securities Exchange Act of 1934, or any similar Federal statute, and the rules and regulations of the Commission thereunder, all as the same shall be in effect at the time. Reference to a particular section of the Securities Exchange Act of 1934 shall include a reference to the comparable section, if any, of any such similar Federal statute.

Initiating Holders: the meaning specified in section 2.1.

NASD: the National Association of Securities Dealers.

Note Agreement: the Note and Warrant Purchase Agreement among the Investors and the Company, dated as of July 31, 2001, as it may from time to time be amended or modified.

Notes: the Senior Subordinated Notes due July 31, 2006 issued by the Company pursuant to the Note Agreement.

Other Securities: any stock (other than Common Stock) and other securities of the Company or any other Person (corporate or otherwise) which the holders of the Warrants at any time shall be entitled to receive, or shall have received, upon the exercise of the Warrants, in lieu of or in addition to Common Stock, or

which at any time shall be issuable or shall have been issued in exchange for or in replacement of Common Stock or Other Securities pursuant to section 3 of the Warrants or otherwise.

Person: an individual, a partnership, an association, a joint venture, a corporation, a limited liability company, a business, a trust, an unincorporated organization or a government or any department, agency or subdivision thereof.

Public Offering: any offering of Common Stock to the public pursuant to an effective registration statement under the Securities Act.

Registrable Securities: (a) any shares of Common Stock or Other Securities issued or issuable upon exercise of the Warrants and (b) any securities issued or issuable with respect to any Common Stock or Other Securities referred to in subdivisions (a) by way of stock dividend or stock split or in connection with a combination of

shares, recapitalization, merger, consolidation or other reorganization or otherwise. As to any particular Registrable Securities, once issued such securities shall cease to be Registrable Securities when (x) a registration statement with respect to the sale of such securities shall have become effective under the Securities Act and such securities shall have been disposed of in accordance with such registration statement, (y) they shall have been distributed to the public pursuant to Rule 144 (or any successor provision) under the Securities Act, or (z) they shall have ceased to be outstanding.

Registration Expenses: all expenses incident to the Company's performance of or compliance with section 2, including, without limitation, all registration, filing and NASD fees, all fees and expenses of complying with securities or blue sky laws, all word processing, duplicating and printing expenses, messenger and delivery expenses, the fees and disbursements of counsel for the Company and of its independent public accountants, including the expenses of any special audits or "cold comfort" letters required by or incident to such performance and compliance, but excluding underwriting discounts and commissions and transfer taxes, if any.

Restricted Securities: (a) any Warrants bearing a Restrictive Legend, (b) any shares of Common Stock (or Other Securities) which have been issued upon the exercise of Warrants and which are evidenced by a certificate or certificates bearing a Restrictive Legend, and (c) unless the context otherwise requires, any shares of Common Stock (or Other Securities) which are at the time issuable upon the exercise of Warrants and which, when so

issued, will be evidenced by a certificate or certificates bearing a Restrictive Legend.

Restrictive Legend: (a) with respect to a Warrant, a legend, stamped or otherwise imprinted thereon, in substantially the following form:

> "This Warrant and any shares acquired upon the exercise of this Warrant have not been registered under the Securities Act of 1933 and may not be transferred in the absence of such registration or an exemption therefrom under such Act."

and (b) with respect to a certificate representing shares of Common Stock (or Other Securities), a legend, stamped or otherwise imprinted thereon, in substantially the following form:

> "The shares represented by this certificate have not been registered under the Securities Act of 1933 and may not be transferred in the absence of such registration or an exemption therefrom under such Act. Such shares are also

subject to certain restrictions on transferability imposed by Common Stock Purchase Warrants expiring July 31, 2008, a copy of which is on file at the offices of the Company."

Securities Act: the Securities Act of 1933, or any similar Federal statute, and the rules and regulations of the Commission thereunder, all as the same shall be in effect at the time. Reference to a particular section of the Securities Act of 1933 shall include a reference to the comparable section, if any, of any such similar Federal statute.

Warrants: the Common Stock Purchase Warrants issued by the Company as of July 31, 2001, evidencing rights to purchase an aggregate of 1,091,624 shares of Common Stock, and all Warrants issued in substitution therefor.

2. Registration under the Securities Act, etc.

2.1. Registration Upon Request. (a) Upon the written request of the holders of at least 25% of the outstanding Registrable Securities (the "Initiating Holders"), requesting that the Company effect the registration under the Securities Act of all or part of such Initiating Holders' Registrable Securities and

specifying the intended method of disposition thereof, the Company will promptly give written notice of such requested registration to all holders of outstanding Registrable Securities, and thereupon will use its best efforts to effect its registration under the Securities Act of

(i) the Registrable Securities which the Company has been so requested to register by such Initiating Holder or Holders for disposition in accordance with the intended method of disposition state in such request, and

(ii) all other Registerable Securities the holders of which have made written requests to the Company for registration thereof within 20 Business Days after the giving of such written notice by the Company (which request shall specify the intended method of disposition thereof)

all to the extent required to permit the disposition (in accordance with the intended methods thereof as aforesaid) of the Registrable Securities so to be registered. Subject to subdivision (f), the Company may include in such registration other securities for sale for its own account or for the account of any other Person.

(b) Number of Registrations. The Company shall not be required to effect more than two registrations pursuant to this section 2.1.

(c) Registration Statement Form. The Company may, if permitted by law, effect any registration requested under this section 2.1 by the filing of a registration statement on Form S-3 (or any successor or similar short form registration statement) or, if counsel for the Company deems that such a registration statement is not available for the registration of the Registrable Securities to which such registration relates under applicable law, on such other form as counsel for the Company may deem to be appropriate under the Securities Act.

(d) Expenses. The Company will pay all Registration Expenses in connection with any registration effected pursuant to this section 2.1.

(e) Selection of Underwriters. If, in the discretion of the holders of a majority (by number of shares) of the Registrable Securities, any offering pursuant to this section 2.1 shall constitute an underwritten offering, the underwriter or underwriters thereof shall be selected, after consultation with the Company, by such holders and shall be acceptable to the Company, which shall not unreasonably withhold its acceptance of such underwriter or underwriters.

(f) Effective Registration Statement. A registration requested pursuant to this section 2.1 will not be deemed to have been effected (i) unless it has become effective, provided that a registration which does not become effective after the Company has filed a registration statement with respect thereto solely by reason of the refusal to proceed of the Initiating Holders shall be deemed to have been effected by the Company at the request of such Initiating Holders, unless such Initiating Holders shall have elected to pay all Registration Expenses in connection with such registration, (ii) if, after it has become effective, such registration is interfered with by any stop order, injunction or other order or requirement of the Commission or other governmental agency or court (for any reason other than a misrepresentation or an omission by the Initiating Holders), or (iii) if the conditions to closing specified in the purchase agreement or underwriting agreement entered into in connection with such registration are not satisfied other than by reason of some act or omission by such Initiating Holders.

(g) Priority in Requested Registrations. If a requested registration pursuant to this section 2.1 involves an underwritten offering, and the managing underwriter shall advise the Company in writing (with a copy to each holder of Registrable Securities requesting registration) that in its opinion, the number of securities requested to be included in such registration (including securities of the Company which are not Registrable Securities)

exceeds the number which can be sold in such offering, the Company will include in any such registration to the extent of the number which the Company is so advised can be sold in such offering (i) first, Registrable Securities requested to be included in such registration by the Initiating Holders, pro rata among such holders on the basis of the number of shares of such securities requested to be included by such holders, (ii) second, other Registrable Securities requested to be included in such registration, pro rata among the holders thereof requesting such registration on the basis of the number of shares of such securities requested to be included by such holders, and (iii) third, other securities of the Company proposed to be included in such registration, in accordance with the priorities, if any, then existing among the Company and the holders of such other securities.

(h) Delay at Company's Request. With respect to any registration requested under this section 2.1, the Company may postpone for not more than 90 days, on one occasion only with respect to each such request, the filing or effectiveness of a

registration statement if the Company determines that such registration would be likely to have an adverse effect on any proposal or plan by the Company to engage in any acquisition of assets not in the ordinary course of business or any merger, consolidation, tender offer or similar transaction, or any other material event not in the ordinary course of business, provided that in case of such postponement the holders of Registrable Securities initiating the request for registration will be entitled to withdraw such request, and if so withdrawn such request will not count as one of the permitted requested registrations under this section 2.1. In any event, the Company will pay all Registration Expenses in connection with any registration initiated under this section 2.1.

2.2. Incidental Registration. (a) Right to Include Registrable Securities. Notwithstanding any limitation contained in section 2.1, if the Company at any time proposes to register any of its securities under the Securities Act (other than by a registration on Form S-4 or S-8 or any successor or similar forms), whether or not for sale for its own account, in a manner which would permit registration of Registrable Securities for sale to the public under the Securities Act, it will each such time give prompt written notice to all holders of Registrable Securities of its intention to do so and of such holders' rights under this section 2.2. Upon the written request of any such holder made within 20 days after receipt of any such notice (which request shall specify the Registrable Securities intended to be disposed of by such holder and the intended method of disposition thereof), the Company will use its best efforts to effect the registration under the Securities Act of

all Registrable Securities which the Company has been so requested to register by the holders thereof, to the extent required to permit the disposition (in accordance with the intended methods thereof as aforesaid) of the Registrable Securities so to be registered, by inclusion of such Registrable Securities in the registration statement which covers the securities which the Company proposes to register, provided that if, at any time after giving written notice of its intention to register any securities and prior to the effective date of the registration statement filed in connection with such registration, the Company shall determine for any reason not to register or to delay registration of such securities, the Company may, at its election, give written notice of such determination to each holder of Registrable Securities and, thereupon, (a) in the case of a determination not to register, shall be relieved of its obligation to register any Registrable Securities in connection with such registration (but

not from its obligation to pay the Registration Expenses in connection therewith) without prejudice, however, to the rights of any holder or holders of Registrable Securities entitled to do so to request that such registration be effected as a registration under section 2.1 and (b) in the case of a determination to delay registering, shall be permitted to delay registering any Registrable Securities for the same period as the delay in registering such other securities. No registration effected under this section 2.2 shall relieve the Company of its obligation to effect any registration statement upon request under section 2.1. The Company will pay all Registration Expenses in connection with each registration of Registrable Securities requested pursuant to this section 2.2.

(b) Priority in Incidental Registrations. If a registration pursuant to this section 2.2 involves an underwritten offering and the managing underwriter advises the Company in writing that, in its opinion, the number of securities requested to be included in such registration exceeds the number which can be sold in such offering, the Company will include in such registration to the extent of the number which the Company is so advised can be sold in such offering securities determined as follows:

(i) if such registration as initially proposed by the Company was primarily a registration of its securities, (x) first, the securities proposed by the Company to be sold for its own account, and (y) second, any Registrable Securities requested to be included in such registration, and any other securities the Company proposes to include in such registration statement, pro rata among the holders thereof requesting such registration on the basis of the number of

shares of such securities requested to be included by such holders; and

(ii) if such registration as initially proposed by the Company was in whole or in part requested by holders of securities of the Company, other than holders of Registrable Securities, pursuant to demand registration rights, (x) first, such securities held by the holders initiating such registration, pro rata among the holders thereof, on the basis of the number of shares of such securities requested to be included by such holders, and (y) second, any Registrable Securities requested to be included in such registration, pro rata among (A) the holders thereof requesting such registration on the basis of the number of shares of such securities requested to be included by such holders together with (B) any other

securities of the Company proposed to be included in such registration, in accordance with the priorities, if any, then existing among the Company and the holders of such other securities.

2.3. Registration Procedures. If and whenever the Company is required to use its best efforts to effect the registration of any Registrable Securities under the Securities Act as provided in sections 2.1 and 2.2, the Company will as expeditiously as possible:

(a) prepare and file with the Commission the requisite registration statement (including such audited financial statements as may be required by the Securities Act or the rules and regulations promulgated thereunder) to effect such registration and use its best efforts to cause such registration statement to become effective, provided that before filing such registration statement or any amendments thereto, the Company will furnish to the counsel selected by the holders of Registrable Securities whose Registrable Securities are to be included in such registration copies of all such documents proposed to be filed, which documents will be subject to the review of such counsel (such review to be limited to matters relating to the holders whose Registrable Securities are to be included in such registration and matters which might adversely affect such holders), and provided, further, that the Company may discontinue any registration of its securities which are not Registrable Securities at any time prior to the effective date of the registration statement relating thereto;

(b) prepare and file with the Commission such amendments and supplements to such registration statement

and the prospectus used in connection therewith as may be necessary to maintain the effectiveness of such registration statement and to comply with the provisions of the Securities Act with respect to the disposition of all securities covered by such registration statement until the earlier of such time as (i) all of such securities have been disposed of in accordance with the intended methods of disposition by the seller or sellers thereof set forth in such registration statement, (ii) in the case of any registration pursuant to section 2.1, the expiration of the Warrants in accordance with the terms thereof or (iii) in the case of any registration pursuant to section 2.2, 90 days after such registration statement becomes effective, provided that if less than all the

Registrable Securities are withdrawn from registration after the relevant period, the shares to be so withdrawn shall be allocated pro rata among the holders thereof on the basis of the respective numbers of Registrable Securities held by them included in such registration;

(c) furnish to each seller of Registrable Securities covered by such registration statement such number of conformed copies of such registration statement and of each such amendment and supplement thereto (in each case including all exhibits), such number of copies of the prospectus contained in such registration statement (including each preliminary prospectus and any summary prospectus) and any other prospectus filed under Rule 424 under the Securities Act, in conformity with the requirements of the Securities Act, and such other documents, as such seller may reasonably request;

(d) use its best efforts to register or qualify all Registrable Securities and other securities covered by such registration statement under such other securities or blue sky laws of such jurisdictions as each seller thereof shall reasonably request, to keep such registration or qualification in effect for so long as such registration statement remains in effect, and take any other action which may be reasonably necessary or advisable to enable such seller to consummate the disposition in such jurisdictions of the securities owned by such seller, except that the Company shall not for any such purpose be required to qualify generally to do business as a foreign corporation in any jurisdiction wherein it would not but for the requirements of this subdivision (d) be obligated to be so qualified or to consent to general service of process in any such jurisdiction;

(e) only if and to the extent the same are being furnished by the Company to underwriters or other parties pursuant to requirements otherwise applicable to the Company, furnish to each seller of Registrable Securities a signed counterpart, addressed to such seller of

(i) an opinion of counsel for the Company, dated the effective date of such registration statement (and, if such registration includes an underwritten Public Offering, dated the date of any closing under the underwriting agreement), and

(ii) a "comfort" letter, dated the effective date of such registration statement (and, if such registration includes an underwritten Public Offering, dated the date of any closing under the underwriting agreement), signed by the independent public accountants who have certified the Company's financial statements included in such registration statement,

covering substantially the same matters with respect to such registration statement (and the prospectus included therein) and, in the case of the accountants' letter, with respect to events subsequent to the date of such financial statements, as are customarily covered in opinions of issuer's counsel and in accountants' letters delivered to the underwriters in underwritten Public Offerings of securities;

(f) notify each holder of Registrable Securities covered by such registration statement, at any time when a prospectus relating thereto is required to be delivered under the Securities Act, of the happening of any event as a result of which the prospectus included in such registration statement, as then in effect, includes an untrue statement of a material fact or omits to state any material fact required to be stated therein or necessary to make the statements therein not misleading in the light of the circumstances under which they were made, and at the request of any such holder promptly prepare and furnish to such holder a reasonable number of copies of a supplement to or an amendment of such prospectus as may be necessary so that, as thereafter delivered to the purchasers of such securities, such prospectus shall not include an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading in the light of the circumstances under which they were made;

(g) otherwise use its best efforts to comply with all applicable rules and regulations of the Commission;

(h) provide a transfer agent and registrar for all Registrable Securities covered by such registration statement not later than the effective date of such registration statement; and

(i) use its best efforts to list all Registrable Securities covered by such registration statement on any

securities exchange on which any of the securities of the same class as the Registrable Securities are then listed.

The Company may require each holder of Registrable Securities as to which any registration is being effected to furnish the Company such information regarding such holder and the distribution of such securities as the Company may from time to time reasonably request in writing.

Each holder of Registrable Securities agrees by the acquisition of such Registrable Securities that upon receipt of any notice from the Company of the happening of any event of the kind described in subdivision (f) of this section 2.3, such holder will forthwith discontinue such holder's disposition of Registrable Securities pursuant to the registration statement relating to such Registrable Securities until such holder's receipt of the copies of the supplemented or amended prospectus contemplated by subdivision (f) of this section 2.3 and, if so directed by the Company, will deliver to the Company (at the Company's expense) all copies, other than permanent file copies, then in such holder's possession of the prospectus relating to such Registrable Securities current at the time of receipt of such notice. In the event the Company shall give any such notice, the periods referred to in subdivision (b) of this section 2.3 shall be extended by a number of days equal to the number of days during the period from and including the giving of notice pursuant to subdivision (f) of this section 2.3 and including the date when each seller of any Registrable Securities covered by such registration statement shall receive the copies of the supplemented or amended prospectus contemplated by subdivision (f) of this section 2.3.

2.4. Underwritten Offerings. (a) Requested Underwritten Offerings. If requested by the underwriters for any underwritten offering by holders of Registrable Securities pursuant to the registration requested under section 2.1, the Company will enter into an underwriting agreement with such underwriters for such offering, such agreement to be satisfactory in substance and form to each such holder and the underwriters and to contain such representations and warranties by the Copmany and such other terms as are customarily contained in agreements of this type, including,

without limitation, indemnities to the effect and to the extent provided in section 2.7. The holders of Registrable Securities to be distributed by such underwriters shall be parties to such underwriting agreement. No holder of Registrable Securities shall be required to make any representations or warranties to or agreements with the Company or the underwriters

other than representations, warranties or agreements regarding such holder and such holder's intended method of distribution and any other representation required by law.

(b) Incidental Underwritten offerings. If the Company at any time proposes to register any of its securities under the Securities Act as contemplated by section 2.2 and such securities are to be distributed by or through one or more underwriters, the Company will, subject to the provisions of section 2.2(b), use its best efforts, if requested by any holder of Registrable Securities, to arrange for such underwriters to include the Registrable Securities to be offered and sold by such holder among the securities to be distributed by such underwriters, except as may be otherwise permitted herein. The holders of Registrable Securities to be distributed by such underwriters shall be parties to the underwriting agreement between the Company and such underwriters.

(c) Holdback Agreements. (i) Each holder of Registrable Securities agrees by acquisition of such Registrable Securities, if so required by the managing underwriter, not to effect any public sale or distribution of such securities during the seven days prior to and the 90 days after the closing of any underwritten registration pursuant to section 2.1 or any underwritten registration pursuant to section 2.1 has become effective, or, if the managing underwriter advises the Company in writing that, in its opinion, no such public sale or distribution should be effected for a specified period longer than 90 days after such underwritten registration in order to complete the sale and distribution of securities included in such registration and the Company gives notice to such holder of Registrable Securities of such advice, during a reasonable longer period after such underwritten registration, except as part of such underwritten registration, whether or not such holder participates in such registration.

(ii) The Company agrees not to effect any public sale or distribution of its equity securities or securities convertible into or exchangeable or exercisable for any of such securities during the seven days prior to and the 90 days after the closing of any underwritten registration pursuant to section 2.1 or any underwritten registration pursuant to section 2.1 has become effective, except as part of such underwritten registration and except pursuant to registrations on Form S-4 or Form S-8 or any successor or similar forms thereto, or if the managing underwriter

advises the Company in writing that in its opinion no such public sale or distribution should be effected for a specified period

longer than 90 days after such underwritten registration in order to complete the sale and distribution of securities included in such registration, during a reasonable longer period after such underwritten registration, except as part of such underwritten registration.

2.5. Preparation; Reasonable Investigation. In connection with the preparation and filing of each registration statement under the Securities Act, the Company will give the holders of Registrable Securities registered under such registration statement, their underwriters, if any, and their respective counsel and accountants, the opportunity to participate in the preparation of such registration statement, each prospectus included therein or filed with the Commission, and each amendment thereof or supplement thereto, and will give each of them such access to its books and records and such opportunities to discuss the business of the Company with its officers and the independent public accountants who have certified its financial statements as shall be necessary, in the opinion of such holders' and such underwriters' respective counsel, to conduct a reasonable investigation within the meaning of the Securities Act.

2.6. Certain Rights of Holders. The Company will not file any registration statement under the Securities Act which refers to any holder of any Notes or Registrable Securities by name or otherwise as the holder of any securities of the Company, unless it shall first have given to such holder the right to require (a) the insertion therein of language, in form and substance satisfactory to such holder, to the effect that the holding by such holder of such securities does not make such holder a "controlling person" of the Company within the meaning of the Securities Act and is not to be construed as a recommendation by such holder of the investment quality of the Company's debt or equity securities covered thereby and that such holding does not imply that such holder will assist in meeting any future financial requirements of the Company, or (b) in the event that such reference to such holder by name or otherwise is not required by the Securities Act or any rules and regulations promulgated thereunder, the deletion of the reference to such holder.

2.7. Indemnification. (a) Indemnification by the Company. In the event of any registration of any securities of the Company under the Securities Act, the Company will, and hereby does, indemnify and hold harmless, in the case of any registration statement filed pursuant to section 2.1 or 2.2, the seller of Registrable Securities covered by any such registration statement, its directors and officers, each other Person who participates as

an underwriter in the offering or sale of such securities and each other Person, if any, who controls any such seller or any such underwriter within the meaning of the Securities Act, against any losses, claims, damages or liabilities, joint or several, to which such seller or any such director or officer or underwriter or controlling Person may become subject under the Securities Act or otherwise, insofar as such losses, claims, damages or liabilities (or actions or proceedings, whether commenced or threatened, in respect thereof) arise out of or are based upon any untrue statement or alleged untrue statement of any material fact contained in any registration statement under which such securities were registered under the Securities Act, any preliminary prospectus, final prospectus or summary prospectus contained therein, or any amendment or supplement thereto, or any omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, and the Company will reimburse such seller and each such director, officer, underwriter and controlling person for any legal or any other expenses reasonably incurred by them in connection with investigating or defending any such loss, claim, liability, action or proceeding, provided that the Company shall not be liable in any such case to the extent that any such loss, claim, damage, liability (or action or proceeding in respect thereof) or expense arises out of or is based upon an untrue statement or alleged untrue statement or omission or alleged omission made in such registration statement, any such preliminary prospectus, final prospectus, summary prospectus, amendment or supplement in reliance upon and in conformity with written information furnished to the Company through an instrument duly executed by such seller specifically stating that it is for use in the preparation thereof, and, provided, further, that the Company shall not be liable to any Person who participates as an underwriter, in the offering or sale of Registrable Securities or any other Person, if any, who controls such underwriter within the meaning of the Securities Act, in any such case to the extent that any such loss, claim, damage, liability (or action or proceeding in respect thereof) or expense arises out of such Person's failure to send or give a copy of the final prospectus to the Person asserting an untrue statement or alleged untrue statement or omission or alleged omission at or prior to the written confirmation of the sale of Registrable Securities to such Person if such statement or omission was corrected in such final prospectus. Such indemnity shall remain in full force and effect regardless of any investigation made by or on behalf of such

seller or any such director, officer, underwriter or controlling person and shall survive the transfer of such securities by such

seller.

(b) Indemnification by the Sellers. The seller of any Registrable Securities in any registration statement filed pursuant to section 2 will indemnify and hold harmless (in the same manner and to the same extent as set forth in subdivision (a) of this section 2.7) the Company, each director of the Company, each officer of the Company and each other Person, if any, who controls the Company within the meaning of the Securities Act, and each Person who participates as an underwriter in the offering or sale of securities by the Company, with respect to any statement or alleged statement in or omission or alleged omission from such registration statement, any preliminary prospectus, final prospectus or summary prospectus contained therein, or any amendment or supplement thereto, if such statement or alleged statement or omission or alleged omission was made in reliance upon and in conformity with written information furnished to the Company through an instrument duly executed by such seller specifically stating that it is for use in the preparation of such registration statement, preliminary prospectus, final prospectus, summary prospectus, amendment or supplement, provided that such seller's obligations hereunder shall be limited to an amount equal to the proceeds to such holder of the Registrable Securities sold pursuant to such registration statement. Such indemnity shall remain in full force and effect regardless of any investigation made by or on behalf of the Company or any such director, officer or controlling Person and shall survive the transfer of such securities by such seller.

(c) Notices of Claims, etc. Promptly after receipt by an indemnified party of notice of the commencement of any action or proceeding involving a claim referred to in the preceding subdivisions of this section 2.7, such indemnified party will, if a claim in respect thereof is to be made against an indemnifying party, give written notice to the latter of the commencement of such action, provided that the failure of any indemnified party to give notice as provided herein shall not relieve the indemnifying party of its obligations under the preceding subdivisions of this section 2.7, except to the extent that the indemnifying party is actually prejudiced by such failure to give notice. In case any such action is brought against an indemnified party, unless in such indemnified party's reasonable judgment upon advice of counsel a conflict of interest between such indemnified and indemnifying parties may exist in respect of such claim, the

indemnifying party shall be entitled to participate in and to assume the defense thereof, jointly with any other indemnifying party similarly notified to the extent that it may wish, with counsel reasonably satisfactory to such indemnified party, and after notice from the indemnifying party to such indemnified party of its election so to assume the defense thereof, the indemnifying party

shall not be liable to such indemnified party for any legal or other expenses subsequently incurred by the latter in connection with the defense thereof other than reasonable costs of investigation. No indemnifying party shall consent to entry of any judgment or enter into any settlement without the consent of the indemnified party which does not include as an unconditional term thereof the giving by the claimant or plaintiff to such indemnified party of a release from all liability in respect to such claim or litigation.

(d) Indemnification Payments. The indemnification required by this section 2.7 shall be made by periodic payments of the amount thereof during the course of the investigation or defense, as and when bills are received or expense, loss, damage or liability is incurred.

2.8. Covenants Relating to Rule 144. The Company will file reports in compliance with the Exchange Act and will, at its expense, forthwith upon the request of any holder of Restricted Securities, deliver such reports to such holder.

3. Notices. Any notice and other communication to be given or made under this Agreement shall be in writing and shall be delivered by facsimile transmission, hand or courier service, or mailed by registered or certified mail, return receipt requested, to the appropriate address set forth below or at such other address as shall have been furnished by the party who is to receive any such notice or communication in writing to the other party. Any notice so addressed and delivered by facsimile transmission, hand or courier shall be deemed to be given when received, and any notice so addressed and mailed by registered or certified mail shall be deemed to be given three business days after being so mailed.

For the Investors:

Associated Mezzanine Investors-PESI, L.P.
c/o Associated Mezzanine Investors, LLC
436 Frogtown Road
New Canaan, Connecticut 06840-4411

Attention: John Katz and Susan C. Penny

Facsimile: 203-966-2618

Copy to: Becker, Glynn, Melamed & Muffly LLP
299 Park Avenue
New York, New York 10171
Attention: Bruce A. Rich, Esq.
Facsimile: 212-888-0255

Bridge East Capital, L.P.

c/o W.S. Walker & Co.
Caledonian House
Mary Street, Georgetown
Grand Cayman, Cayman Islands, BWI

Copy to: Bridge East Management, LLC
575 Fifth Avenue, 22nd floor
New York, New York 10017
Attention: John P. Oswald
Facsimile: 212-277-1001

Copy to: LeBoeuf, Lamb, Greene & MacRae, L.L.P.
125 West 55th Street
New York, New York 10019
Attention: John R. Fallon, Jr., Esq.
Facsimile: 212-424-8500

For the Company:

Perma-Fix Environmental Services, Inc.
1940 Northwest 67th Place
Gainesville, Florida 32653
Attention: President
Facsimile: 352-373-0040

Copy to: Conner & Winters, A Professional Corporation
211 North Robinson, Suite 1700
Oklahoma City, Oklahoma 73102
Attention: Irwin N. Steinhorn, Esq.
Facsimile: 405-232-2695

4. Miscellaneous.

4.1. Remedies. Any Person having rights under any provision of this Agreement shall be entitled to enforce such rights specifically to recover damages caused by reason of any breach of any provision of this Agreement and to exercise all other rights granted by law. The parties hereto agree and acknowledge that money damages may not be an adequate remedy for any breach of the provisions of this Agreement and that any party may in its sole discretion apply to any court of law or equity of competent jurisdiction (without posting any bond or other security) for specific performance and for other injunctive relief in order to enforce or prevent violation of the provisions of this Agreement.

4.2. Amendments and Waivers. Except as otherwise provided

herein, the provisions of this Agreement may be amended or waived only upon the prior written consent of the Company and holders of a majority of the Registrable Securities; provided that no amendment or waiver which adversely or prejudicially affects any one holder of Registrable Securities (the "Affected Holder") vis-à-vis the other holders of Registrable Securities shall be effective without the approval in writing of the Affected Holder.

4.3. Successors and Assigns. All covenants and agreements in this Agreement by or on behalf of any of the parties hereto shall bind and inure to the benefit of the respective successors and assigns of the parties hereto whether so expressed or not. In addition, whether or not any express assignment has been made, the provisions of this Agreement which are for the benefit of purchasers or holders of Registrable Securities are also for the benefit of, and enforceable by, any subsequent holder of Registrable Securities.

4.4. Severability. Whenever possible, each provision of this Agreement shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be prohibited by or invalid under applicable law, such provision will be ineffective only to the extent of such prohibition or invalidity, without invalidating the remainder of this Agreement.

4.5. Counterparts. This Agreement may be executed simultaneously in two or more counterparts, any one of which need not contain the signatures of more than one party, but all such counterparts taken together shall constitute one and the same Agreement.

4.6. Descriptive Headings. The descriptive headings of this Agreement are for convenience only and shall not limit or otherwise affect the meaning of this Agreement.

4.7. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of New York.

[SIGNATURES APPEAR ON THE FOLLOWING PAGE]

IN WITNESS WHEREOF, the parties hereto have executed this Registration Rights Agreement as of the date first above written.

PERMA-FIX ENVIRONMENTAL SERVICES, INC.

By:_____
Name:
Title:

ASSOCIATED MEZZANINE INVESTORS-PESI, L.P.

By: Associated Mezzanine Investors, LLC,
its General Partner

By:_____
Name:
Title:

BRIDGE EAST CAPITAL, L.P.

By: Bridge East Partners, LDC
its General Partner

By: Bridge East Holdings, LLC
its General Partner

By:_____
Name: John P. Oswald
Title: Director

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SUBORDINATION AGREEMENT

PERMA-FIX ENVIRONMENTAL SERVICES, INC.
ASSOCIATED MEZZANINE INVESTORS-PESI (I), L.P.
ANN L. SULLIVAN LIVING TRUST
THOMAS P. SULLIVAN LIVING TRUST

Dated as of July 30, 2001

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SUBORDINATION AGREEMENT

SUBORDINATION AGREEMENT, dated as of July 30, 2001, by and among PERMA-FIX ENVIRONMENTAL SERVICES, INC., a Delaware corporation ("Company"), the Ann L. Sullivan Living Trust, dated September 6, 1978, the THOMAS P. SULLIVAN LIVING TRUST, dated September 6, 1978 (collectively, the "Creditors"), and ASSOCIATED MEZZANINE INVESTORS-PESI (I), L.P., a limited partnership organized and existing under the laws of the State of Delaware (the "Investor")

WHEREAS, the Company has entered into a Note and Warrant Purchase Agreement, dated as of July 30, 2001 (as amended or supplemented from time to time, the "Note Agreement"), with the Investor and Bridge East Capital, L.P., a limited partnership organized and existing under the laws of the Cayman Islands ("Bridge East"), providing, among other things, for issuance by the Company of up to $6,000,000 aggregate principal amount of its 13.50% Senior Subordinated Notes due 2006 (the "Notes") to the Investor and Bridge East;

WHEREAS, to induce the Investor to purchase the Notes and in consideration of the Investor's agreement to purchase the Notes, the Creditors are entering into this Agreement;

WHEREAS, capitalized terms not otherwise defined herein shall have the meanings specified therefor in the Note Agreement.

NOW, THEREFORE, in consideration of the premises and the covenants herein contained, the parties hereto agree as follows:

1. Indebtedness Subordinated. Each of the Creditors subordinates all Indebtedness now or at any time hereafter owing from the Company to such Creditor (including without limitation, interest thereon that may accrue subsequent to Company becoming subject to any state or federal debtor-relief statute) (collectively, "Junior Debt") to all Indebtedness of the Company under the Notes ("Senior Debt"). Each of the Creditors irrevocably

consents and directs that all Senior Debt shall be paid in full prior to Company making any payment on any Junior Debt, except as provided in Section 3. Each of the Creditors will, and the Investor is authorized in the name of each Creditor from time to time to, execute and file such financing statements and other documents as the Investor may require in order to give notice to other persons and entities of the terms and provisions of this Agreement. As long as this Agreement is in effect, neither Creditor will take any action or initiate any proceedings, judicial or otherwise, to enforce its rights or remedies with respect to any Junior Debt, including without limitation, any action to enforce remedies with respect to any collateral securing any Junior Debt or to obtain any judgment or prejudgment remedy against the Company or any such collateral, except as provided in Section 3.

2. Indebtedness Defined. The word "Indebtedness" is used herein in its most comprehensive sense and includes any and all advances, debts, obligations and liabilities of the Company heretofore, now or hereafter made, incurred or created, whether voluntary or involuntary and however arising, whether due or not due, absolute or contingent, liquidated or unliquidated, determined or undetermined, and whether the Company may be liable individually or jointly with others, including without limitation, obligations and liabilities that: (i) arise from notes, letters of credit issued for the account of the Company, repurchase agreements and trust receipts; (ii) are incurred for all or any part of the purchase price of property or other assets or for the cost of property or other assets constructed or of improvements thereto; and (iii) are secured by any pledge, mortgage, lien, security interest or similar security arrangement; provided that Indebtedness shall not include regular salary obligations consistent with historical levels.

3. Restriction of Payment of Junior Debt; Disposition of Payments Received by Creditor. The Company will not make, and neither Creditor will accept or receive, any payment or benefit in cash, securities (other than securities, the payment of which is subordinate, at least to the extent provided in this Agreement with respect to Junior Debt, to the payment of all Senior Debt at the time outstanding and all securities issued in exchange

therefor to the holders of Senior Debt at the time outstanding) or other property, by setoff or otherwise, directly or indirectly, on account of principal, interest or any other amounts owing on any Junior Debt, except for the Michigan Real Estate (as defined below) and as otherwise provided in this Section 3. So long as no Event of Default shall have occurred and be continuing under the Note Agreement, or in the Investor's reasonable determination, if the payment to either Creditor of amounts permitted below would not result in an Event of Default (notice of any of the foregoing is referred to as a "Default Notice"), the Company may pay and, until the Investor gives the undersigned written notice of the occurrence of an Event of Default, each of the Creditors may accept from the Company, the regularly scheduled payments of principal, together with accrued interest thereon, on the Junior Debt when, and in the amounts, set forth in the promissory note or other instrument evidencing the Junior Debt. Such payments shall exclude, without limitation, (a) prepayments, (b) non-mandatory payments, (c) any payments pursuant to acceleration or pursuant to claims of breach or (d) any payments by virtue of setoff against any obligation of either Creditor, any of them, or their affiliates to indemnify or make payments to the Company or its affiliates, including, without limitation, obligations due the Company under (i) the Stock Purchase Agreement, dated May 27, 1999, among the Creditors, the Company, Thomas P. Sullivan, Ann L. Sullivan and Chem-Met Services, Inc., and (ii) the Stock Purchase Agreement, dated May 27, 1999, among the Creditor, the Company, Thomas P. Sullivan, Ann L. Sullivan, Chemical Conservation of Georgia, Inc., and Chemical Conservation Corporation (collectively, the "Stock Purchase Agreements"). From and after the giving of Default Notice to a Creditor, unless and until the Event of Default or other event giving rise to a Default Notice in question is cured or waived by the Investor (without implying any obligation on the part of the Investor to permit a cure of or to waive any such Event of Default or other event), no further payments of principal or interest shall be made to either Creditor unless and until all Senior Debt has been paid in full and all financing statements have been terminated; and unless the Investor, in its reasonable discretion, gives its prior written consent, payments on the Junior Debt which accrued but were unpaid during any period commencing upon the giving of a Default Notice

will not be permitted to be paid notwithstanding that a cure or waiver occurs (subject as aforesaid). Notwithstanding any rights or

remedies available to any Creditor under any of the Junior Debt, the Stock Purchase Agreements, applicable law or otherwise, unless and until the indefeasible satisfaction in full of all the Senior Debt, neither Creditor shall, directly or indirectly, seek to collect from the Company, or exercise rights or remedies upon an event of default under any payment in respect of Junior Debt, including, without limitation, filing an action to foreclose upon the Michigan Real Estate, filing a lis pendens against the Real Property, or any other judicial or non-judicial remedy, except that: (a) upon an event of default under any document evidencing the Junior Debt, the Creditor that is the holder of such document may declare the Company to be in default thereunder and accelerate the respective portion thereof, (b) each Creditor may defend the validity of its claims against the Company, and (c) each Creditor may file a proof of claim with respect to its claims against the Company, in a manner consistent with the terms of this Agreement. If any such payment is made in violation of this Agreement, either Creditor receiving such a payment shall promptly deliver the same to the Investor in the form received, with any endorsement or assignment necessary for the transfer of such payment or amounts set off from such Creditor to the Investor, to be either (in the Investor's sole discretion) held as cash collateral securing the Senior Debt or applied in reduction of the Senior Debt in such order as the Investor shall determine, and until so delivered, such Creditor shall hold such payment in trust for and on behalf of, and as the property of, the Investor. As used in this Agreement, the Michigan Real Estate shall mean that certain real property described on Schedule 1 hereto (the "Real Property"), and the building and improvements, and real estate fixtures, permits and licenses to operate the building thereon (except for all tangible and intangible assets used in connection with the business of the Company and its affiliates, or any of them, including, without limitation, all permits and licenses to operate the business, and all trade fixtures of the Company or its affiliates), and all vacated alleys and streets abutting said land, together with all rents and leases from third party tenants, if any, thereof (but not the accounts, chattel paper or other

intangible property in which a security interest may be perfected under the Uniform Commercial Code in effect in the State of Michigan from time to time), and tenements, hereditaments, easements and appurtenances therein or thereto.

4. Disposition of Evidence of Indebtedness. If there is any existing promissory note or other evidence of any Junior Debt, or if any promissory note or other evidence of Indebtedness is executed at any time hereafter with respect thereto, then the Company and the Creditor holding such promissory note or other evidence will mark the same with a legend stating that it is subject

to this Agreement, and if asked to do so, will deliver a copy of the same to the Investor. Neither Creditor shall, without the Investor's prior written consent, assign, transfer, hypothecate or otherwise dispose of any claim it now has or may at any time hereafter have against the Company at any time that any Senior Debt remains outstanding.

5. Continuing Agreement; Existing and Future Indebtedness; No Amendments Without Consent. This Agreement shall be a continuing agreement and shall apply to any and all Indebtedness of the Company to the Creditors now existing or hereafter arising, including any Indebtedness arising under successive transactions, related or unrelated, and notwithstanding that from time to time all Indebtedness theretofore existing may have been paid in full. The Creditors agree not to amend any instrument or agreement pursuant to which the Indebtedness of the Company to the Creditors is outstanding without the prior written consent of the Investor.

6. Representations and Warranties; Information. Each of the Company and the Creditors represents and warrants to the Investor that: (a) no interest in the Junior Debt has been assigned or otherwise transferred to any person or entity; and (b) each Creditor has the requisite power and authority to enter into and perform its obligations under this Agreement. Each Creditor further represents and warrants to the Investor that it has established adequate, independent means of obtaining from the Company on a continuing basis financial and other information pertaining to the Company's financial condition. Each Creditor agrees to keep adequately informed from such means of any facts,

events or circumstances that might in any way affect its risks hereunder, and each Creditor agrees that the Investor shall have no obligation to disclose to it information or material about the Company that is acquired by the Investor in any manner.

7. Transfer of Assets or Reorganization of Company. If any petition is filed or any proceeding is instituted by or against the Company under any provisions of Title 11 of the United States Code, or any other or similar law relating to bankruptcy, insolvency, reorganization or other relief for debtors, or generally affecting creditors' rights, or seeking the appointment of a receiver, trustee, custodian or liquidator of or for the Company or any of its assets, any payment or distribution of any of the Company's assets, whether in cash, securities or any other property, that would be payable or deliverable with respect to any Junior Debt, shall be paid or delivered to the Investor until all Senior Debt is paid in full. Each Creditor grants to the Investor the right to enforce, collect and receive any such payment or distribution and to give releases or acquittances therefor, and each Creditor authorizes the

Inestor as its attorney-in-fact to vote and prove the Junior Debt held by it in any of the above-described proceedings or in any meeting of creditors of the Company relating thereto.

8. Other Agreements; No Third Party Beneficiaries. The Investor shall have no direct or indirect obligations to the Creditors of any kind with respect to the manner or time in which the Investor exercises (or refrains from exercising) any of its rights or remedies with respect to the Senior Debt, the Company or any of the Company's assets. Each Creditor understands that there may be various agreements between the Investor and the Company evidencing and governing the Senior Debt, and each Creditor acknowledges and agrees that such agreements are not intended to confer any benefits on such Creditor.

9. Breach of Agreement by Company or Creditor. No delay, failure or discontinuance of the Investor in exercising any right, privilege, power or remedy hereunder shall be deemed a waiver of such right, privilege, power or remedy; nor shall any single or

partial exercise of any such right, privilege, power or remedy preclude, waive or otherwise affect the further exercise thereof or the exercise of any other right, privilege, power or remedy. Any waiver, permit, consent or approval of any kind by the Investor with respect to this Agreement must be in writing and shall be effective only to the extent set forth in such writing.

10. Costs, Expenses and Attorneys' Fees. If any party hereto institutes any arbitration or judicial or administrative action or proceeding to enforce any provisions of this Agreement, or alleging any breach of any provision hereof or seeking damages or any remedy, the losing party or parties shall pay to the prevailing party or parties all costs and expenses, including reasonable attorneys' fees (to include outside counsel fees and all allocated costs of such prevailing party's in-house counsel), expended or incurred by the prevailing party or parties in connection therewith, whether incurred at the trial or appellate level, in an arbitration proceeding or otherwise, and including any of the foregoing incurred in connection with any bankruptcy proceeding (including without limitation, any adversary proceeding, contested matter or motion brought by the Investor or any other person) relating to the Company, the Creditors or any other person or entity.

11. Notices. All notices hereunder shall be in writing and shall be sufficiently given if personally delivered or mailed by first class registered or certified mail, return receipt requested, postage prepaid, and addressed, if to: (a) either Creditor, at 1021 Harvard, Grosse Pointe Park, Michigan 48230; (b) the Company, to it at the address for notices to the Company originally specified in

the Note Agreement; (c) any holder of Senior Debt, to it at its address originally specified in the Note Agreement; or to such other address or addresses as the party to whom such notice is directed may have designated by like notice in writing to the other parties hereto. A notice shall be deemed to have been given when personally delivered or, if mailed, on the earlier of (i) three (3) days after the date on which it deposited in the mails, or (ii) the date on which it is received.

12. Successors; Assigns; Amendment. This Agreement shall be binding upon and inure to the benefit of the heirs, executors, administrators, legal representatives, successors and assigns of the parties. This Agreement may be amended or modified only in writing signed by all of the parties hereto; provided that the holders of sixty-six and two-thirds percent (66 2/3%) in principal amount of the Senior Debt is required to constitute the consent of the Investor.

13. Obligations Joint and Several; Construction. If this Agreement is executed by more than one Creditor, it shall bind them jointly and severally. All words used herein in the singular shall be deemed to have been used in the plural where the context so requires.

14. Severability of Provisions. If any provision of this Agreement shall be held to be prohibited by or invalid under applicable law, such provision shall be ineffective only to the extent of such prohibition or invalidity, without invalidating the remainder of such waiver or other provision or any remaining provisions of this Agreement.

15. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of New York.

16. VENUE; WAIVER OF JURY TRIAL. THE PARTIES AGREE THAT ALL ACTIONS OR PROCEEDINGS ARISING IN CONNECTION WITH THIS AGREEMENT SHALL BE TRIED AND LITIGATED ONLY IN THE STATE AND FEDERAL COURTS LOCATED IN THE COUNTY OF NEW YORK, NEW YORK OR, AT THE SOLE OPTION OF THE INVESTOR, IN ANY OTHER COURT IN WHICH THE INVESTOR SHALL INITIATE LEGAL OR EQUITABLE PROCEEDINGS AND WHICH HAS SUBJECT MATTER JURISDICTION OVER THE MATTER IN CONTROVERSY. EACH OF THE COMPANY, EACH CREDITOR AND THE INVESTOR WAIVES, TO THE EXTENT PERMITTED UNDER APPLICABLE LAW, ANY RIGHT THAT SUCH PARTY MAY HAVE TO ASSERT THE DOCTRINE OF FORUM NON CONVENIENS OR TO OBJECT TO VENUE TO THE EXTENT THAT ANY PROCEEDING IS BROUGHT IN ACCORDANCE WITH THIS SECTION 16. THE COMPANY, EACH CREDITOR AND THE INVESTOR HEREBY WAIVES ITS RESPECTIVE RIGHTS TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION BASED UPON OR ARISING OUT OF ANY OF THE TRANSACTIONS CONTEMPLATED HEREIN, INCLUDING CONTRACT

CLAIMS, TORT CLAIMS, BREACH OF DUTY CLAIMS AND ALL OTHER COMMON LAW OR STATUTORY CLAIMS. THE COMPANY, EACH CREDITOR AND THE INVESTOR REPRESENT THAT EACH HAS REVIEWED THIS WAIVER AND EACH KNOWINGLY AND VOLUNTARILY WAIVES ITS JURY TRIAL RIGHTS FOLLOWING CONSULTATION WITH LEGAL COUNSEL. IN THE EVENT OF LITIGATION, A COPY OF THIS AGREEMENT MAY BE FILED AS A WRITTEN CONSENT TO A TRIAL BY THE COURT.

17. Headings. The headings in this Agreement are for convenience of reference only and shall not alter or otherwise affect the meaning of this Agreement.

18. Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be deemed an original instrument, but all of which taken together shall constitute one and the same document.

[SIGNATURES APPEAR ON THE FOLLOWING PAGE]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

THE COMPANY:

PERMA-FIX ENVIRONMENTAL SERVICES, INC.

By:_____
Name:
Title:

THE INVESTOR:

ASSOCIATED MEZZANINE INVESTORS-PESI (I), L.P.

By: Associated Mezzanine Investors, LLC

its General Partner

By:_____
Name:
Title:

THE CREDITORS:

ANN L. SULLIVAN LIVING TRUST
DATED SEPTEMBER 6, 1978

By:_____
Name: Ann L. Sullivan
Title: Trustee

THOMAS P. SULLIVAN LIVING
TRUST
DATED SEPTEMBER 6, 1978

By:_____
Name: Thomas P. Sullivan
Title: Trustee

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SENIOR SUBORDINATION AGREEMENT

PERMA-FIX ENVIRONMENTAL SERVICES, INC.

PNC BANK, NATIONAL ASSOCIATION

ASSOCIATED MEZZANINE INVESTORS-PESI (I), L.P.

BRIDGE EAST CAPITAL, L.P.

Dated as of July 31, 2001

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SUBORDINATION AGREEMENT

THIS AGREEMENT (this "Agreement") is entered into as of July 31, 2001, by and among PNC BANK, NATIONAL ASSOCIATION (the "Bank"), as agent (in such capacity, "Agent") for the financial institutions (collectively, "Lenders") that are now or that hereafter become a party to the Credit Agreement (as defined below); PERMA-FIX ENVIRONMENTAL SERVICES, INC. (the "Company"), ASSOCIATED MEZZANINE INVESTORS-PESI (I), L.P. ("AMI-P") and BRIDGE EAST CAPITAL, L.P. ("BEC" and, collectively with AMI-P, the "Creditors").

WHEREAS, the Bank has established certain credit facilities with the Company (collectively, the "Senior Credit Facility"), as evidenced by that certain Revolving Credit, Term Loan and Security Agreement, dated as of December 22, 2000 (the "Credit Agreement"), by and among the Agent, the Lenders and Company, and various other documents, instruments and agreements all between the

Bank and the Company (collectively, together with the Credit Agreement, the "Loan Documents"). Capitalized terms used herein and not otherwise defined herein shall have the meanings ascribed to them in the Credit Agreement.

WHEREAS, the Creditors have extended or are extending to the Company certain loans as evidenced by a Note and Warrant Purchase Agreement, dated as of July 31, 2001, among the Creditors and the Company, and by the Notes (as defined therein) issuable thereunder (collectively, the "Creditor Documents").

WHEREAS, it is a condition to the Creditors entering into the Creditor Documents that this Agreement shall have been entered into by the parties hereto.

WHEREAS, the Bank and each Creditor hereby desire to set forth the respective rights and obligations each has as against the other with respect to the Company.

NOW, THEREFORE, the parties hereto, intending to be legally bound, hereby agree as follows:

1. Definitions. As used herein the following terms have the following respective meanings:

Obligations: means all loans, advances, debts, liabilities, obligations, covenants and duties owing by the Company to the Bank or to any other direct or indirect subsidiary of PNC Bank Corp., up to an aggregate amount, inclusive of principal, interest, fees, costs and expenses, of $25,000,000, of any kind or nature, present or future (including any interest accruing thereon after maturity or after the filing of any petition in bankruptcy, or the commencement of any insolvency, reorganization or like proceeding relating to the Company, whether or not a claim for post-filing or post-petition interest is allowed in such proceeding), whether or not evidenced by any note, guaranty or other instrument, arising under the Loan Documents, or pursuant to any hedging risk or money management risk, whether or not for the payment of money, whether direct or indirect (including those acquired by assignment or participation), absolute or contingent, joint or several, due or to become due, now existing or hereafter arising, and any amendments, extensions, renewals or, subject to the dollar limitation contained herein, increases and all costs and expenses of the Bank incurred in the documentation, negotiation, modification, enforcement, collection or otherwise in connection with any of the foregoing, including reasonable attorneys' fees and expenses.

Collateral: means any collateral now or in the future securing the Obligations, including but not limited to claims against any guarantors of the Obligations and any collateral securing such guarantees.

Material Event of Default: means any of the events described in the Credit Agreement, as in effect on the date hereof and deemed by the Bank to be material.

Subordinated Debt: means any loans, advances, debts, liabilities, obligations, covenants and duties owing by the Company to any Creditor of any kind or nature, present or future, whether or not evidenced by any note, guaranty or other instrument, arising under the Creditor Documents, whether or not for the payment of money, whether direct or indirect, absolute or contingent, joint or several, due or to become due, now existing or hereafter arising (including any such obligations purchased or

otherwise acquired by a Creditor), whether consisting of principal, interest (including, without limitation, interest thereon that may accrue subsequent to the Company becoming subject to any state or federal insolvency or debtor-relief statute), expense payments, management and consulting fees, liquidation costs, attorneys' fees and costs or otherwise.

2. Subordination. (a) Subject to Section 3 hereof, each Creditor hereby irrevocably subordinates the right to receive payment of all the Subordinated Debt to the prior payment of the Obligations.

(b) Each Creditor shall: (i) make notations on its books beside all accounts or on such other statements evidencing or recording any Subordinated Debt to the effect that such Subordinated Debt is subject to the provisions of this Agreement, (ii) furnish the Bank, upon Bank's request from time to time, a statement of the account between it and the Company representing the Subordinated Debt and copies of each of the Creditor Documents, and (iii) give the Bank, upon its request, full and free access to its books pertaining only to such accounts with the right to make copies thereof. Each and every Creditor Document shall bear a legend as set forth in Section 13(c) hereof.

3. Payments to Creditors. Notwithstanding any other provision of this Agreement, the Company shall be entitled to pay, and each Creditor shall be entitled to receive, so long as no Material Event of Default has occurred under the Loan Documents or would result from such payment, all scheduled payments of principal and interest (at the applicable rate set forth in the Creditor Documents as in effect on the date hereof) on the Subordinated Debt, and only when due; provided, that no such payment of principal under the Subordinated Debt shall be made using proceeds of the Senior Credit Facility, unless the Bank has given its prior written consent thereto, which consent shall not be unreasonably withheld, or

unless, at the time of such payment, there shall be no commitment in place or Revolving Credit Facility Advances outstanding under (and as such term is defined in) the Credit Agreement, as in effect on the date hereof; and provided further, that proceeds of any capital infusion received directly or indirectly by the Company, whether in the form of equity or debt, may be used at any time, without the Bank's consent, to fund any payment, including prepayments, of principal on the

Subordinated Debt. After the occurrence of a Material Event of Default under the Loan Documents and receipt by the Creditors of written notice thereof from the Bank to the Creditors, the Company shall not make, and the Creditors shall not receive, any direct or indirect payments of principal, interest, fees or expenses under the Subordinated Debt, until the earlier of the following events shall have occurred: a period of 180 consecutive days (a "Payment Blockage Period") shall have elapsed from the date of the Creditors' receipt of such notice (a "Payment Blockage Notice") or such Material Event of Default shall have been cured or waived in writing by the Bank, provided, however, that notwithstanding the foregoing, the Bank may provide the Creditors with a Payment Blockage Notice in which a Payment Blockage Period of less than 180 days is specified, so long as the aggregate duration of all Payment Blockage Periods that occur in any 360-day period does not exceed 180 days.

4. Security. The Company shall not grant, and neither Creditor shall take, any lien on or security interest in any of the Company's property, now owned or hereafter acquired or created, which lien or security interest has priority over the Bank's lien or security interest in such property, without the prior written consent of the Bank.

5. Standby Limitation. Notwithstanding any breach or default by the Company under the Creditor Documents, until the earliest to occur of the following events, neither Creditor will (a) take any action or initiate any proceeding against the Company, judicial or otherwise, to enforce its rights or remedies with respect to any Subordinated Debt, including, without limitation, any action to enforce remedies with respect to, or realize on, any of the Company's collateral to the extent that such collateral secures the Subordinated Debt or to obtain any judgment or prejudgment remedy against the Company or any of the Company's collateral to the extent that such collateral secures the Subordinated Debt, or (b) contest, protest or object to any action taken by Bank under the Loan Documents or otherwise: (i) the payment and satisfaction in full of all Obligations, (ii) the acceleration by the Bank of the maturity of the Obligations, (iii) the occurrence of a Material Event of Default under the Credit Agreement as in effect on the date

hereof, or (iv) the expiration of a single Payment Blockage Period of 180 days' duration or, if

applicable, the expiration of the last of a series of Payment Blockage Periods of 180 days' duration in the aggregate, but subject to the 360-day limitation contained in Section 3 hereof, provided, however, that unless the Bank otherwise agrees in writing, any amounts recovered by a Creditor in any such proceeding, whether from the Company, its property, or otherwise, shall be turned over by such Creditor to the Bank, for application by the Bank against the Obligations, until paid in full.

6. Bankruptcy/Probate of Company. In the event a petition or action for relief shall be filed by or against the Company under any federal bankruptcy statute in effect from time to time, or under any other law relating to bankruptcy, insolvency, reorganization, receivership, general assignment for the benefit of creditors, moratorium, creditor composition, arrangement or other relief for debtors, the Bank's claim (secured or unsecured) against the assets or estate of the Company for repayment of the Obligations shall be indefeasibly paid in full before any payment is made to the Creditors on the Subordinated Debt, whether such payment is in cash, securities or any other form of property or rights, other than securities given in exchange for the Subordinated Debt, so long as such securities are subordinated at least to the same extent as provided for herein. If a Creditor fails to do so, the Bank may, in its discretion, file a proof of claim for or collect the claim of such Creditor first for the benefit of the Bank to the extent of the unpaid Obligations and then for the benefit of such Creditor (but without creating any duty or liability to such Creditor other than to remit to it distributions, if any, actually received in such proceedings after the Obligations have been paid and satisfied in full) directly from the receiver, trustee, custodian, liquidator or representative of the Company's estate in such proceeding. The Company and the Creditors shall furnish to the Bank copies of all documents reasonably requested by it to effectuate the foregoing.

7. Receipt of Payments by Creditor. Should a Creditor directly or indirectly receive any payment or distribution not permitted by the provisions of this Agreement or any Collateral or proceeds thereof, prior to the full and indefeasible payment and satisfaction of the Obligations and the termination of the Credit

Agreement, it will deliver the same to the Bank in the form received (except for the endorsement or assignment of such Creditor where necessary), for application to the Obligations in such order and manner as the Bank may elect. Until so delivered, such Creditor shall hold the same, in trust, for the Bank as property of the Bank, and shall not commingle such property of the Bank with any other property held by it. In the event such Creditor fails to make any such endorsement or assignment, the Bank, or any of its officers or employees on behalf of the Bank, is hereby irrevocably authorized in its own name or in the name of such Creditor to make such endorsement or assignment and is hereby irrevocably appointed as such Creditor's attorney-in-fact for those purposes.

8. Bank's Rights. (a) Each Creditor hereby consents that at any time and from time to time, without further consent of or notice to such Creditor and without in any manner affecting, impairing, lessening or releasing any of the provisions of this Agreement, the Bank may, in its sole discretion: (i) renew, compromise, extend, expand (but not to an extent greater than the dollar limit contained in the definition of Obligations), postpone, waive, accelerate, terminate, change the payment terms of, or otherwise modify the Obligations or amend, renew, replace or terminate the Loan Documents or any and all other agreements now or hereafter related to the Obligations; (ii) extend credit to the Company in whatever amount on a secured or unsecured basis or take other support for the Obligations and exchange, enforce, waive, sell, transfer, collect, adjust or release any such security or other support or any part thereof; (iii) apply any and all payments or proceeds of such security or other support and in any order or manner as the Bank, in its discretion, may determine; and (iv) release or substitute any party liable on the Obligations, any guarantor of the Obligations, or any other party providing support for the Obligations.

(b) This Agreement will not be affected, impaired or released by any delay or failure of the Bank to exercise any of its rights and remedies against the Company or any guarantor or under any of the Obligations or against any Collateral, by any failure of the Bank to take steps to perfect or maintain its lien on, or to preserve any rights to, any Collateral by any irregularity, unenforceability or invalidity of any of the

Obligations or any part thereof or any security or guarantee therefor, or by any other event or circumstance which otherwise might constitute a defense available to, or a discharge of, the Company or a subordinated creditor. Each Creditor hereby waives demand, presentment for performance, protest, notice of dishonor and of protest with respect to the Subordinated Debt and the Collateral,

notice of acceptance of this Agreement, notice of the making of any of the Obligations and notice of default under any of the Obligations.

(c) Nothing in this Agreement will obligate the Bank to grant credit to, or continue financing arrangements with, the Company.

9. Continuing Agreement. This is a continuing agreement and will remain in full force and effect until all of the Obligations and all of the Creditors' obligations and undertakings to the Bank have been fully performed and indefeasibly satisfied and until all the Loan Documents have been terminated. This Agreement will continue to be effective or will be automatically reinstated, as the case may be, if at any time payment of all or any part of the Obligations is rescinded or must otherwise be returned by the Bank upon insolvency, bankruptcy, or reorganization of the Company or otherwise, all as though such payment had not been made.

10. No Challenge to Liens. Each Creditor agrees that they will not make any assertion, claim or argument in any action, suit or proceeding of any nature whatsoever in any way challenging the priority, validity or effectiveness of the liens and security interests granted to the Bank.

11. Disposition or Release of Collateral. (a) If at any time or from time to time the Collateral, or any portion thereof, is in any manner sold or otherwise transferred in accordance with the terms of the Credit Agreement, as in effect on the date hereof, each Creditor consents to such disposition shall be automatically and irrevocably given if the Bank, in its sole discretion and for any reason, consents to such disposition, and such disposition occurs reasonably promptly after the Bank shall have given such consent, and in any event no Creditor shall be entitled to receive any proceeds (cash or non-cash) of such disposition unless and until the Obligations have been indefeasibly paid in full.

(b) If, at any time and for any reason, the Bank releases its lien on the Collateral, or any portion thereof, in connection with a sale or other disposition thereof made in accordance with the terms of the Credit Agreement, as in effect on the date hereof, each Creditor shall likewise release its lien on the property so released from the Bank's lien, if such Creditor has obtained such a lien.

12. Order of Proceedings. Nothing in this Agreement is intended to compel the Bank or the Creditors at any time to declare the Company in default or compel the Bank to proceed against or refrain from proceeding against any Collateral in any order or manner. All rights and remedies of the Bank with respect to the

Collateral, the Company, and any other obligors concerning the Obligations are cumulative and not alternative.

13. Replacement Financing; Assignment of Subordinated Debt. (a) The provisions hereof shall inure to the benefit of any financial institution obtained by the Company or the Bank to provide replacement working capital or other financing for the Company in place of the Bank, regardless of whether any such replacement lender provides its own financing or succeeds to the Bank's financing by assignment. If requested by such replacement lender, the Creditors shall execute with such replacement lender a subordination agreement substantially similar to this Agreement.

(b) Each Creditor also agrees that as a prior condition of any assignment of any of its interests under any of the Creditor Documents, it shall require the assignee to acknowledge this Agreement and agree, in writing, to be bound by the terms and conditions hereof.

(c) Each and every Creditor Document that constitutes a promissory note shall bear the following legend, or a similar legend acceptable to Bank, in boldface type:

> This Note is subject to the terms of a Subordination Agreement in favor of PNC Bank, National Association. Notwithstanding any contrary statement contained in the within instrument, no payment on account of any obligation arising from or in connection with the within instrument

> or any related agreement (whether of principal, interest or otherwise) shall be made, paid, received or accepted except in accordance with the terms of said Subordination Agreement.

14. Financing of Fiduciary. In the event that a bankruptcy, reorganization, other insolvency or court proceeding for the Company commences, the Bank shall have the option (in its sole and absolute discretion) to continue to provide financing (on terms acceptable to the Bank) of the trustee, other fiduciary, or of the Company as a debtor-in-possession, if the Bank deems such financing to be in its best interests. The subordination and lien priority provisions of this Agreement shall continue to apply to all advances made during the pendency of such court proceedings so that the Bank shall have a prior lien on all Collateral, created before or during such court proceeding, to secure all Obligations, whether created before or during such court proceeding. Each Creditor hereby waives any right it may have to object to financing by the Bank during the pendency of such court proceeding and such Creditor's consent to such financing shall not be required regardless of whether the court

supervising such proceeding approves, grants or allows adequate protection to such Creditor.

15. Investigation of Parties. Each Creditor has entered into the Creditor Documents with the Company, and the Bank has entered into the Loan Documents with the Company, and each Creditor and the Bank have entered into this Agreement, each upon its own independent investigation, and each makes no warranty or representation as to each other with respect to the financial condition of the Company, or its ability to repay its loans to the Creditors or the Bank in the future. Nothing in this Agreement shall be deemed to constitute this Agreement as a security or create a joint venture or partnership among the Creditors and the Bank for any purpose.

16. Improper Action by Creditor. If a Creditor, the Company or both, contrary to this Agreement, make, attempt to or threaten to allow such Creditor to exercise its remedies against the Company under the Creditor Documents, or make any payment or take any action, in any case, contrary to this Agreement, the Bank may restrain or enjoin such Creditor and the Company from so doing, it being expressly understood and agreed by such Creditor

and the Company that (i) the Bank's damages from their actions may at that time be difficult to ascertain and may be irreparable, and (ii) such Creditor and the Company waive any defense or claim that the Bank or the Company cannot demonstrate damages or can be made whole by the awarding of damages.

17. Indemnification of Bank. Each Creditor agrees to indemnify and to hold the Bank, its officers, directors, agents and employees harmless for any and all losses, damages, liabilities, expenses and obligations, including attorneys' fees and expenses, as they arise, relating to actions of such Creditor taken contrary to this Agreement, to the extent such actions arise from such Creditor's gross negligence or willful misconduct.

18. Notices. All notices, demands, requests, consents, approvals and other communications required or permitted hereunder must be in writing and will be effective upon receipt. Such notices and other communications may be hand-delivered, sent by facsimile transmission with confirmation of delivery with a copy sent by first-class mail, or sent by nationally recognized overnight courier service, to a party's address set forth below or to such other address as any party may give to the other in writing for such purpose:

To the Bank:

PNC Bank, National Association
Two Tower Center Boulevard
East Brunswick, New Jersey 08816
Attention: Mr. Wing Louie

Facsimile No.: (732) 220-4393

To the Creditors:

Associated Mezzanine Investors-PESI (I), L.P.
c/o Associated Mezzanine Investors, LLC
436 Frogtown Road
New Canaan, Connecticut 06840-4411
Attention: John Katz and Susan C. Penny

Facsimile: 203-966-2618

Copy to: Becker, Glynn, Melamed & Muffly LLP
299 Park Avenue
16th Floor
New York, N.Y. 10171
Attention: Bruce A. Rich, Esq.

Facsimile: 212-888-0255

Bridge East Capital, L.P.
c/o W.S. Walker & Co.
Caledonian House
Mary Street, Georgetown
Grand Cayman, Cayman Islands, BWI

Copy to: Bridge East Management, LLC
575 Fifth Avenue, 22nd floor
New York, New York 10017
Attention: John P. Oswald

Facsimile: 212-277-1001

Copy to: LeBoeuf, Lamb, Greene & MacRae, L.L.P.
125 West 55th Street
New York, New York 10019
Attention: John R. Fallon, Jr., Esq.

Facsimile: 212-424-8500

To the Company:

Perma-Fix Environmental Services, Inc.
1940 N.W. 67th Place
Gainesville, Florida 32653
Attention: Dr. Louis Centofanti, President

Facsimile No.: (404) 847-9977

19. Preservation of Rights. No delay or omission on the Bank's part to exercise any right or power arising hereunder will impair any such right or power or be considered a waiver of any such right or power, nor will the Bank's action or inaction impair any such right or power. The Bank's rights and remedies hereunder are cumulative and not exclusive of any other rights or remedies that the Bank may have under other agreements, at law or in equity. Nothing in this Agreement is intended to modify, alter, reduce or impair any rights which the Bank or the Creditors may have against the Company under the Loan Documents or the Creditor

Documents, respectively, or under any other agreement between them, or either of them, and the Company.

20. Illegality. In case any one or more of the provisions contained in this Agreement should be invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions contained herein shall not in any way be affected or impaired thereby.

21. Changes in Writing. No modification, amendment or waiver of any provision of this Agreement nor consent to any departure therefrom by any party hereto will be effective unless made in a writing and signed by the party to be charged, and then such waiver or consent shall be effective only in the specific instance and for the purpose for which given.

22. Entire Agreement. This Agreement (including the documents and instruments referred to herein) constitutes the entire agreement and supersedes all other prior agreements and understandings, both written and oral, among the parties with respect to the subject matter hereof.

23. Counterparts. This Agreement may be signed in any number of counterpart copies and by the parties hereto on separate counterparts, but all such copies shall constitute one and the same instrument. Delivery of an executed counterpart of a signature page to this Agreement by facsimile transmission shall be effective as delivery of a manually executed counterpart. Any party so executing this Agreement by facsimile transmission shall promptly deliver a manually executed counterpart, provided that any failure to do so shall not affect the validity of the counterpart executed by

facsimile transmission.

24. Successors and Assigns. This Agreement will be binding upon and inure to the benefit of the Company, the Creditors and the Bank and their respective heirs, executors, administrators, successors and assigns; provided, however, that neither the Company nor the Creditors may assign this Agreement in whole or in part without the Bank's prior written consent and the Bank at any time may assign this Agreement in whole or in part. No claims or rights are intended to be created hereunder for the

benefit of the Company or any alleged third party beneficiary hereof.

25. Interpretation. In this Agreement, unless the parties otherwise agree in writing, the singular includes the plural and the plural the singular; words importing any gender include the other genders; the word "or" shall be deemed to include "and/or", the words "including", "includes" and "include" shall be deemed to be followed by the words "without limitation"; references to articles, sections (or subdivisions of sections) or exhibits are to those of this Agreement unless otherwise indicated; and references to agreements and other contractual instruments shall be deemed to include all subsequent amendments and other modifications to such instruments, but only to the extent such amendments and other modifications are not prohibited by the terms of this Agreement. Section headings in this Agreement are included for convenience of reference only and shall not constitute a part of this Agreement for any other purpose. If this Agreement is executed by more than one party as Company or by more than one party as Creditor, the obligations of such persons or entities hereunder will be individual and not joint and several.

26. Governing Law and Jurisdiction. This Agreement has been delivered to and accepted by the Bank and will be deemed to be made in the State of New York. This Agreement will be interpreted and the rights and liabilities of the parties hereto determined in accordance with the laws of the State of New York, excluding its conflict of laws rules. Each party hereto hereby irrevocably consents to the exclusive jurisdiction of any state or federal court located in the Borough of Manhattan, City and State of New York, provided that nothing contained in this Agreement will prevent the Bank from bringing any action, enforcing any award or judgment or exercising any rights against the Company or the Creditors individually, against any security or against any property of the Company within any other county, state or other foreign or domestic jurisdiction. The parties hereto agree that the venue provided above is the most convenient forum for each of the parties. Each of the Creditors and the Company waives any objection to venue and any

objection based on a more convenient forum in any action instituted under this Agreement.

27. WAIVER OF JURY TRIAL. EACH OF THE CREDITORS, THE COMPANY AND THE BANK IRREVOCABLY WAIVES ANY AND ALL RIGHT IT MAY HAVE TO A TRIAL BY JURY IN ANY ACTION, PROCEEDING OR CLAIM OF ANY NATURE RELATING TO THIS AGREEMENT, ANY DOCUMENTS EXECUTED IN CONNECTION WITH THIS AGREEMENT OR ANY TRANSACTION CONTEMPLATED IN ANY OF SUCH DOCUMENTS. THE COMPANY, THE CREDITORS AND THE BANK ACKNOWLEDGE THAT THE FOREGOING WAIVER IS KNOWING AND VOLUNTARY.

[SIGNATURES APPEAR ON THE FOLLOWING PAGE]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date first above written.

THE COMPANY:

PERMA-FIX ENVIRONMENTAL SERVICES, INC.

By:_____

Name:
Title:

CREDITORS:

ASSOCIATED MEZZANINE INVESTORS-PESI, L.P.

By: Associated Mezzanine Investors, LLC,

its General Partner

By:_____
Name:
Title:

BRIDGE EAST CAPITAL, L.P.

By: Bridge East Partners, LDC
its General Partner

By: Bridge East Holdings, LLC
its General Partner

By:_____
Name: John Oswald
Title: Director

LENDERS:

PNC BANK, NATIONAL ASSOCIATION,
As Agent

By:_____
Name: Wing Louie
Title: Vice President

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PERMA-FIX ENVIRONMENTAL SERVICES, INC.

OPTION AGREEMENT

Dated as of July 31, 2001

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OPTION AGREEMENT, dated as of July 31, 2001, between PERMA-FIX ENVIRONMENTAL SERVICES, INC., a Delaware corporation (the "Company"), and [ASSOCIATED MEZZANINE INVESTORS-PESI (I), L.P., a Delaware limited partnership][BRIDGE EAST CAPITAL, L.P., a Cayman Islands limited partnership] (the "Investor").

WHEREAS, on July 31, 2001 the Company and the Investor entered into a Note and Warrant Purchase Agreement (the "Note Agreement") which provided, *inter alia*, for the issuance by the Company to the Investor of warrants (the "Warrants") for the purchase of 1,281,731 shares of the common stock of the Company, par value $.001 per share (the "Common Stock"); and

WHEREAS, under certain circumstances, the Investor wishes to have the right to require the Company to purchase, and the Company wishes to have the right to require the Investor to sell to the Company, the Warrants or the Warrant Shares, as the case may be, all in accordance with the terms set forth herein;

NOW, THEREFORE, in consideration of the mutual covenants contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties to this Agreement hereby agree as follows:

SECTION 1. Grant of Put Option. (a) The Company hereby grants to the Investor an irrevocable option (the "Put Option") to require the Company to purchase any or all of the Warrants or the Warrant Shares then held by the Investor, for a purchase price equal to the Option Price and in accordance with the other terms set forth herein.

(b) The Put Option may be exercised by the Investor at any time in whole or from time to time in part during the Option Period by written notice as set forth in section 3.

(c) The Option Price for the Warrants or Warrant Shares subject to the Put Option shall be calculated as of the day of the relevant Notice of Exercise delivered pursuant to section 3.

SECTION 2. Grant of Call Option. (a) The Investor hereby grants to the Company an irrevocable option (the "Call Option") to purchase from the Investor all (but not less than all) of the Warrants or Warrant Shares then held by the Investor, for a purchase price equal to the Option Price and in accordance with the other terms set forth herein.

(b) The Call Option may be exercised by the Company at any time in whole during the Option Period by written notice as set forth in section 3.

(c) The Option Price for the Warrants or Warrant Shares subject to the Call Option shall be calculated as of the day of the relevant Notice of Exercise delivered pursuant to section 3.

SECTION 3. Notice of Exercise of Option. Each of the Put and Call Options provided for herein may be exercised by the holder thereof by delivering a written "Notice of Exercise" to Company or the Investor, as the case may be. The Notice of Exercise shall set forth in reasonable detail the calculation of the Option Price and shall state the date for closing of the purchase, which shall be not more than twenty nor fewer than five days from the date of the Notice of Exercise (the "Closing Date").

SECTION 4. Closing. On the Closing Date, the Company shall make payment to the Investor of the Option Price, as the case may be, by wire transfer of immediately available funds to such account as the Investor shall have designated by notice to the Company at least two days prior to the Closing Date; and the Investor shall deliver to the Company for surrender the Warrants or Warrant Shares subject to the Put or Call Option, as the case may be, free and clear of all liens, claims, charges, voting agreements, proxies, preemptive rights or other encumbrances.

SECTION 5. Additional Consideration Payable Upon Acquisition Event. If an Acquisition Event occurs (i) in the case of the Call Option, within 12 months after the date of the relevant Notice of Exercise or (ii) in the case of the Put Option, within 6 months after the date of the relevant Notice of Exercise, the Company shall concurrently with the consummation of the Acquisition Event pay to the Investor additional consideration equal to the excess, if any, of the *pro rata* share of the Acquisition Price to which the Investor would have been entitled had the Put or Call Option not been exercised, *over* the Option

Price paid to the Investor in connection with the Put or Call Option, as the case may be.

SECTION 6. Restrictions on Payment. With respect to any exercise of the Call Option or the Put Option, if and to the extent (but only to the extent) as of the Closing Date the Company is prohibited, by the corporate law of Delaware relating to the impairment of capital or by any covenant against the purchase or redemption of capital stock contained in any note evidencing senior Debt of the Company or in any loan or credit agreement or similar instrument pursuant to which any senior Debt of the Company shall then be outstanding, from paying the Option Price, the Company shall be relieved from the obligation to pay any portion of the Option Price to which a prohibition applies until such prohibition shall no longer be in effect, whereupon the Option Price shall become payable immediately in cash together with interest accrued to the date of payment at the rate of _____% per annum. The obligation to pay the Option Price shall be evidenced by a promissory note, in form and substance reasonably acceptable to the Investor, delivered to the Investor on the Closing Date.

SECTION 7. Definitions. Capitalized terms used herein without definition have the meanings specified therefore in the Note Agreement or the Warrants. The following additional terms when used herein have the following meanings:

"Acquisition Event" means (i) the sale by the Company to any Person of all or substantially all of its assets, (ii) the

merger or consolidation of the Company into or with any Person or (iii) the acquisition by any Person of more than 30% of the then outstanding Common Stock (or other security carrying with it voting control of the Company).

"Acquisition Price" means the aggregate consideration paid, if any, by a third party to the Company or its shareholders in connection with any Acquisition Event.

"Current Value" means an amount equal to the sum of (a) six times the consolidated EBITDA of the Company for the period of twelve consecutive calendar months ended most recently prior to the date of exercise minus (b) Net Debt as of the end of such period plus (c) Warrant Proceeds as of the end of such period.

"Diluted Shares" as of the Exercise Date means the number of shares of Common Stock that would be outstanding on the last day of the month immediately preceding the Exercise Date if all outstanding warrants, options and shares of preferred stock exercisable or convertible for Common Stock were exercised as of such date in accordance with their respective terms.

"Exercise Date" means the date of the Notice of Exercise delivered pursuant to section 3 hereof.

"Net Debt" as of the Exercise Date means the Debt of the Company, as shown on the balance sheet of the Company as at the end of the month immediately preceding the Exercise Date, together with any accrued and unpaid interest thereon, minus cash and cash equivalents of the Company, as shown on the balance sheet of the Company as at such date.

"Option Period" means (a) with respect to the Put Option, the period commencing on July 31, 2004 and ending on July 31, 2008, and (b) with respect to the Call Option, the period commencing on July 31, 2005 and ending on July 31, 2008.

"Option Price" means the amount obtained by multiplying the Per Share Price by the number of Warrants or Warrant Shares specified in the Notice of Exercise as being subject to the Put or Call Option.

"Per Share Price" means an amount equal to the quotient obtained by dividing the Current Value by the Diluted Shares; minus, in the case of any exercise of the Put Option or Call Option with respect to any unexercised Warrants, the exercise price per share applicable to such Warrants.

"Warrant Proceeds" as of the Exercise Date means the cash

proceeds the Company would receive if all outstanding warrants, options and shares of preferred stock exercisable or convertible for Common Stock had been exercised as of the last day of the month immediately preceding the Exercise Date in accordance with their respective terms.

"Warrant Shares" means (a) any shares of Common Stock or other securities issued or issuable upon exercise of the Warrants

and (b) any securities issued or issuable with respect to any Common Stock or such other securities by way of stock dividend or stock split or in connection with a combination of shares, recapitalization, merger, consolidation or other reorganization or otherwise.

SECTION 8. Specific Performance. The parties hereto acknowledge and agree that irreparable damage would occur if any of the provisions of this Agreement were not performed in accordance with its specific terms or were otherwise breached and that such damage would not be fully compensable in money damages. Each party hereto shall consequently be entitled to an injunction or injunctions to prevent breaches of the provisions of this Agreement and to enforce specifically the terms and provisions hereof, in addition to any other remedy to which it may be entitled at law or equity.

SECTION 9. Miscellaneous. This Agreement shall be binding upon and inure to the benefit of and be enforceable by the respective successors and assigns of the parties hereto, whether so expressed or not, including without limitation any subsequent holder from time to time of any of the Warrants or Warrant Shares. THIS AGREEMENT SHALL BE CONSTRUED AND ENFORCED IN ACCORDANCE WITH AND GOVERNED BY THE LAW OF THE STATE OF NEW YORK. The headings in this Agreement are for purposes of reference only and shall not limit or otherwise affect the meaning hereof. This Agreement may be executed in any number of counterparts, each of which shall be an original, but all of which together shall constitute one instrument.

[SIGNATURES APPEAR ON THE FOLLOWING PAGE]

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

PERMA-FIX ENVIRONMENTAL SERVICES, INC.

By:_____

Name: Richard T. Kelecy
Title: Vice President

[ASSOCIATED MEZZANINE INVESTORS-PESI, L.P.

By: Associated Mezzanine Investors, LLC
its General Partner

By:_____

Name: Susan C. Penny
Title: Managing Partner]

[BRIDGE EAST CAPITAL, L.P.

By: Bridge East Partners LDC,
its General Partner

By: Bridge East Holdings, LLC,
its General Partner

By:_____

Name: John P. Oswald
Title: Director]