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May 22, 2009

Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E.
Washington, D.C. 20549-7010
Attention: Jay Ingram
Legal Branch Chief

Re: *Perma-Fix Environmental Services, Inc.; Registration Statement
on Form S-3, filed April 7, 2009; File No. 333-158472;
Our File No. 07034-0085*

Ladies and Gentlemen:

On behalf of Perma-Fix Environmental Services, Inc. ("Perma-Fix"), the following are responses to the comments of the Staff of the Securities and Exchange Commission (the "SEC") with respect to Perma-Fix's Registration Statement on Form S-3, SEC File No. 333-158472 (the "Registration Statement"). The SEC comments were delivered to Dr. Louis F. Centofanti, Chairman, President, and Chief Executive Officer of Perma-Fix, by letter dated April 28, 2009 (the "Comment Letter"). Please note that with the filing of this letter, Perma-Fix filed with the SEC Perma-Fix's Amendment No. 1 to the Registration Statement (the "Amendment").

The SEC's comments and Perma-Fix's responses thereto are set forth below, numbered as such comments are numbered in the Comment Letter. Capitalized terms used herein have the meanings assigned to them in the Amendment. Page numbers referenced in responses indicate the pages of the Amendment.

General

1. We note disclosure on page 10 that Perma-Fix adopted a preferred share rights plan in May 2008. Perma-Fix is required to register the offer and sale of rights issued under an existing shareholder rights plan when it files a new registration under the Securities Act for the common stock to which the rights relate. See Question 116.16 in the Securities Act Forms section of the division of Corporation Finance's "Compliance and Disclosure Interpretations" that are available on the Commission's website at <http://www.sec.gov>. Please revise.

Dallas, TX

Houston, TX

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OK

Oklahoma City, OK
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Santa Fe, NM

Tulsa,

Conner & Winters, LLP

Founded in 1933

Response: As requested, the Registration Statement has been revised to include the Rights that will attach to the 5,000,000 shares of common stock included in the offering pursuant to the terms of the Perma-Fix's Rights Agreement, dated May 2, 2008. Accordingly, the Rights are included under the calculation of registration fee on the Form S-3 cover page, the cover of the Prospectus, and are described beginning on page 13 of the Prospectus under the heading "Rights Attaching to Our Common Stock."

2. Have counsel provide an opinion on the preferred share rights that are required to be covered by the registration statement. See Item 601(b)(5) of Regulation S-K.

Response: As requested, the opinion of Conner & Winters, LLP, attached as Exhibit 5.1 to the Amendment, includes the opinion on Perma-Fix's preferred share rights required under Item 601(b)(5) of Regulation S-K.

Registration Statement Facing Page

3. Rule 416 of Regulation C under the Securities Act is inapplicable to this offering. Please revise footnote (1) to the calculation of registration fee table.

Response: The calculation of registration fee table has been revised as requested.

Risk Factors, page 2

4. We note the statements "The risks and uncertainties described below are not the only risks and uncertainties we face. Additional risks and uncertainties not presently known to us or that we currently consider immaterial also may impair our business operations." Since Perma-Fix is required to disclose all risks factors that it believes are material at this time, please delete the statements.

Response: The statements identified in comment 4 have been deleted as requested.

Available Information, page 14

5. The address of the Commission's Public Reference Room is 100 F Street, N.E., Washington, DC 20549 and not 450 Fifth Street, N.W., Washington, DC 20549. Please revise.

Response: The address has been corrected as requested.

6. Please include your Commission file number for filings made under the Exchange Act.

Response: The last sentence of the second paragraph under "Where You Can Find More Information" on page 16, states that "Our SEC file number for filings made under the Exchange Act is 001-11596."

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We appreciate your attention to this matter. If you have any questions or comments, please do not hesitate to contact Irwin H. Steinhorn of this office or the undersigned at (405) 272-5711.

Very truly yours,

/s/ Mark H. Bennett

Mark H. Bennett
For the Firm

MHB:dr

Enclosures

cc: Dr. Louis F. Centofanti
Edward M. Kelly, Senior Counsel (Securities and Exchange Commission)

