

## Perma-Fix Environmental Services Awarded Key Patent for Its Microporous Composite Material in Eurasia

ATLANTA, GA -- (Marketwired) -- 09/08/16 -- **Perma-Fix Environmental Services, Inc.** (NASDAQ: PESI) today announced that it has been granted a key patent covering its Microporous Composite Material and its applications in countries that are signatories to the Eurasian Patent Convention. These countries include Russia, Kazakhstan, Belarus, Azerbaijan, Armenia, Turkmenistan, Tajikistan, Kyrgyz Republic, and the Republic of Moldova.

This patent follows the original U.S. patent granted in January 2015 by the US Patent Office to Perma-Fix Environmental Services, Inc., allowing all claims in its patent application. Perma-Fix Medical, S.A. has a Patent License Agreement with Perma-Fix Environmental Services, for the production of technetium-99 (Tc-99m).

The claims of the patent address the proprietary resin that Perma-Fix manufactures, including but not limited to:

- Selective separation of Tc-99m pertechnetate from molybdenum-99 (Mo-99);
- Enhanced sorption of molybedenum with a holding capacity in excess of 60% of the dry weight of the sorbent;
- Sorbent and generator resistant to degradation by gamma and beta radiation and acid environments;
- Sorption of selective isotopes from radioactive waste streams; and
- Removal of heavy metals, such as mercury and arsenic, from waste water streams.

Dr. Louis F. Centofanti, Chief Executive Officer, stated, "The Eurasian markets represent an attractive near-term opportunity for our proprietary process to produce Tc-99m, along with other future applications of our breakthrough resin. Tc-99m is the most widely used medical isotope in the world and is used in 80-85% of all diagnostic nuclear medical procedures each year. In particular, these Eurasian countries struggle with even greater supply chain issues due in part to proliferation concerns related to the current process."

Nearly all of the world's supply of Tc-99m comes from the thermal fission of highly enriched uranium (HEU) targets in a small number of highly specialized reactors. The current process is costly and from time to time, has experienced disruptions which have resulted in short-term shortages. The current process also raises serious proliferation concerns related to the threat associated with international production, transportation and/or use of HEU in the production of medical isotopes.

Perma-Fix Medical's technology overcomes these issues by using neutron capture to activate natural molybdenum, a common metal, to produce Mo-99, which decays into Tc-99m. Unlike conventional processes, the Perma-Fix Medical process can be produced locally using standard research and commercial reactors, thereby eliminating the need for special purpose reactors. The new process encompasses the full production cycle, from reactor to final medical supply, and should be easily deployable around the world within the current industry infrastructure.

## About Perma-Fix Environmental Services

Perma-Fix Environmental Services, Inc. is a nuclear services company and leading provider of nuclear and mixed waste management services. The Company's nuclear waste services include management and treatment of radioactive and mixed waste for hospitals, research labs and institutions, federal agencies, including the Department of Energy (DOE), the Department of Defense (DOD), and the commercial nuclear industry. The Company's nuclear services group provides project management, waste management, environmental restoration, decontamination and decommissioning, and radiological protection, safety and industrial hygiene capability to our clients. The Company operates four nuclear waste treatment facilities and provides nuclear services at DOE, DOD, and commercial facilities, nationwide.

Through its subsidiary, Perma-Fix Medical S.A., the Company has also developed a new process to produce Tc-99m, the most widely used medical isotope in the world. The new process is expected to solve worldwide shortages of Tc-99m as it is less expensive, does not require the use of government-subsidized, weapons-grade materials and can be easily deployed around the world.

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This press release contains "forward-looking statements" which are based largely on the Company's expectations and are subject to various business risks and uncertainties, certain of which are beyond the Company's control. Forward-looking statements generally are identifiable by use of the words such as "believe", "expects", "intends", "anticipate", "plans to", "estimates", "projects", and similar expressions. Forward-looking statements include, but are not limited to: the new process is expected to solve worldwide shortages of Tc-99m as it is less expensive, does not require the use of government-subsidized, weapons-grade materials; and can be easily deployed around the world. These forward-looking statements are intended to gualify for the safe harbors from liability established by the Private Securities Litigation Reform Act of 1995. While the Company believes the expectations reflected in this news release are reasonable, it can give no assurance such expectations will prove to be correct. There are a variety of factors which could cause future outcomes to differ materially from those described in this release, including, without limitation, future economic conditions; industry conditions; competitive pressures; our ability to apply and market our new technologies; our ability to fund the commercialization of our technology; the government or such other party to a contract granted to us fails to abide by or comply with the contract or to deliver waste as anticipated under the contract; that Congress fails to provides continuing funding for the DOD's and DOE's remediation projects; ability to obtain new foreign and domestic remediation contracts; and the "Risk Factors" discussed in, and the additional factors referred to under "Special Note Regarding Forward-Looking Statements" of our 2015 Form 10-K and Form 10-Qs for guarters ended March 31, 2016 and June 30, 2016. The

Company makes no commitment to disclose any revisions to forward-looking statements, or any facts, events or circumstances after the date hereof that bear upon forward-looking statements.

Please visit us on the World Wide Web at<u>http://www.perma-fix.com</u>.

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