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Perma-Fix Medical Announces Validation of Medical Isotope Technology With Leading International Reactor Operators

New Process to Produce Technetium-99m Eliminates the Need for Both High and Low Enriched Uranium Targets

ATLANTA, GA -- (Marketwired) -- 03/27/14 -- ***Perma-Fix Medical Corporation, a wholly owned subsidiary of Perma-Fix Environmental Services, Inc.*** (NASDAQ: PESI) today announced successful validation of its process to produce Technetium-99m (Tc-99m) from Molybdenum-99 (Mo-99) using standard reactors at two of the premier research institutions in Poland and the United States. The first set of tests were conducted at POLATOM in Warsaw, Poland and reaffirmed previous testing that the Company's proprietary resins could withstand high levels of radiation, while meeting regulatory standards for the production of Tc-99m. The second set of tests, conducted at the Missouri University Research Reactor (MURR) in Columbia, Missouri, reinforced the POLATOM results and demonstrated higher elution efficiencies. We have filed patent applications in connection with our new process to produce Tc-99m from Mo-99.

Dr. Louis F. Centofanti, CEO of Perma-Fix Medical and Perma-Fix Environmental Services, commented, "These results further validate the strength of our technology, which we believe has the potential to reshape the global supply chain of Tc-99m in the United States and around the world. We believe the new process is a less expensive process and does not require the use of government-subsidized, weapons-grade materials. We believe our process also addresses important issues associated with current production methods. Our process can be performed in most standard research reactors, which should help solve concerns regarding supply shortages of Tc-99m around the world. Second, our process does not utilize Highly Enriched Uranium (HEU) or Low Enriched Uranium (LEU) targets, which are frequently cited as proliferation risks. Lastly, we believe our process eliminates many environmental concerns associated with the current Mo-99 production methodology, including issues around reprocessing of target materials and production of high level waste requiring permanent disposal not currently provided for."

By way of background, Tc-99m is the most widely used medical isotope in the world. It allows medical practitioners to image internal body organs and is used in 80-85% of the 25 million diagnostic nuclear medical procedures each year in the U.S. alone. Common procedures include: cardiac imaging; cancer detection bone scans; gastrointestinal issues; and imaging of the brain, kidney, spleen and infections. The radioisotope market in Europe alone is expected to reach $1.6 billion in 2017, up from $1.1 billion in 2012.

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 has proven an unreliable source of radioactive material leading to severe worldwide shortages. The scheduled closure of the NRU reactor in 2016 and the OSIRIS reactor in France in 2018 are expected to have a further impact on the manufacturing and supply of these isotopes. 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.

We believe that Perma-Fix'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.

To overcome past issues with neutron activation of Molybdenum, Perma-Fix has developed a specialized resin that is radiation resistant and holds large quantities of Molybdenum, but at the same time releases almost 90% of the Tc-99m as it forms from the decay of Mo-99. The resin, loaded with the activated Mo-99, is placed in a Technetium generator and slowly washed with a saline based solution. The eluent solution containing Tc-99m has been shown to meet targeted USP and EUP standards for Pertechnetate.

About Perma-Fix Medical
Perma-Fix Medical with headquarters in Atlanta, Georgia (USA), is a subsidiary of Perma-Fix Environmental Services, a NASDAQ listed company. It was formed to develop, obtain FDA and other regulatory approval and commercialize a new process to produce Technetium-99 (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 using standard research and commercial reactors, thereby eliminating the need for special purpose reactors.

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

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: less expensive process, our process could help solve concerns regarding

supply shortage of Tc-99, and elimination of many environmental concerns associated with current Mo-99 manufacturing methods. These forward-looking statements are intended to qualify 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 produce and market our new technology; U.S. and foreign governmental laws and regulations adopted from time to time; inability to raise necessary capital for Perma-Fix Medical; validity of our patents or patent applications in connection with this new technology; and the additional factors referred to under "Special Note Regarding Forward-Looking Statements" of our 2012 Form 10-K/A and continued in our March 31, June 30 and September 30, 2013 Form 10-Qs. 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 http://www.perma-fix.com.

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