



**Perma-Fix Medical Confirms Successful Tests at 4 Curie Level;  
Achieves Another Major Milestone Towards Scale-Up  
of Non-Uranium Process to Produce Technetium-99m**

*New Process Eliminates Proliferation Risk and  
the Need for Either High or Low Enriched Uranium Targets*

**Atlanta and Warsaw – June 15, 2015 – Perma-Fix Medical S.A (WAR:PFM), a subsidiary of Perma-Fix Environmental Services, Inc., a NASDAQ listed company,** today announced the completion of another successful scale-up of its process to produce Technetium-99m (Tc-99m) from Molybdenum-99 (Mo-99). The tests confirmed that the Company's proprietary resins could withstand higher levels of radiation, up to 4 curies, while producing clinically useful doses of Tc-99m. These results follow previously announced tests that verified success at the 2 curie level. Perma-Fix Medical plans to conduct additional demonstrations at higher curie levels in the near future, as part of its multi-step validation of its technology.

Perma-Fix Medical's process, now verified at the 4 curie level, has numerous benefits over traditional processes for producing Technetium-99m, the most widely used medical isotope in the world, including:

- the new process is cost effective and does not require the use of government-subsidized, weapons-grade materials, including Highly Enriched Uranium (HEU) or Low Enriched Uranium (LEU) targets, which are frequently cited as proliferation risks;
- the process eliminates many environmental concerns associated with Mo-99 production, including both HEU and LEU processes, both of which produce large quantities of high level waste containing enriched uranium;
- it can be performed in most standard research reactors, which should help solve concerns regarding supply shortages of Tc-99m around the world.

Stephen Belcher, CEO of Perma-Fix Medical, commented, "Achieving these results at the 4 curie level marks a major achievement within the industry. We not only exceed industry requirements in many emerging markets that are in need of a decentralized and stable supply chain, but we are also moving rapidly to demonstrate our superiority over traditional processes in the North American and European markets. Based on these results, we remain convinced that our process has the potential to reshape the global supply chain of Tc-99m in the United States and around the world."

Dr. Louis F. Centofanti, Chairman of Perma-Fix Medical, commented, "Following our recent success at the 2 curie level, we have already attracted significant interest from within the industry—further validating the significance of our process. Given our latest success at the 4 curie level, and near term plans to scale up even further, we are moving forward aggressively with our plans to formalize additional partnerships, prepare for regulatory submission, and, ultimately, commence commercialization of the process."

Tc-99m 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.

Perma-Fix's technology has the potential to overcome 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 is a subsidiary of Perma-Fix Environmental Services Inc., 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. Please visit us on the World Wide Web at <http://www.medical-isotope.com>.

### **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, new build construction, 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.

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: Perma-Fix Medical's process has numerous benefits over traditional processes for producing Technetium-99m, the most widely used medical isotope in the world; we are moving rapidly to demonstrate our superiority over traditional processes in the North American and European markets; our process has the potential to reshape the global supply chain of Tc-99m in the United States and around the world; we are moving forward aggressively with our plans to formalize additional partnerships, prepare for regulatory submission, and, ultimately, commence*

*commercialization of the process.. 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; U.S. and state governmental laws and regulations adopted from time to time; and the additional factors referred to under "Special Note Regarding Forward-Looking Statements" of our 2014 Form 10-K and Form 10-Q for the quarter ended March 31, 2015. 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.*

**Contacts:**

Justyna Gudaszevska or David K. Waldman  
Crescendo Communications Europe Sp.z.o.o

Tel: + 48 71 79 11 551

Email: [pfm@crescendo-ir.com](mailto:pfm@crescendo-ir.com)