METALLIUM LIMITED
ASX: MTM | OTCQX: MTMCF | OTCQX ADR: MTLMY
Australia: Perth, Western Australia
USA: Houston, Texas

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Major Commissioning Milestone: Successful Completion of 12-Hour Continuous FJH Reactor Campaign Ahead of Parallel Reactor Deployment

Single-reactor campaign validates operational stability, automation systems and repeatability ahead of planned multi-reactor operations

HIGHLIGHTS:

- **Major interim commissioning milestone achieved towards planned multi-reactor demonstration campaign**
- **Successful completion of a 12-hour continuous commercial-scale FJH reactor campaign at Metallium's Gator Point Technology Campus in Texas**
- **Initial testing indicates potential reactor throughput uplift versus original internal design assumptions**
- **Demonstrated stable, repeatable and controlled reactor operation over extended duration**
- **Validated key reactor subsystems, automation architecture and operating procedures ahead of planned parallel reactor deployment**
- **Materially reduced technical and operational scale-up risk for the next phase of technology development**
- **Enabled transition toward higher-frequency testing and accelerated optimisation campaigns**
- **Generated valuable operational data supporting process optimisation and broader plant integration**
- **Appointment of highly experienced metallurgist, Rod Lawry, to Technical Advisory Team**

Metallium Limited ("Metallium" or the "Company") (ASX: MTM; OTCQX: MTMCF; OTCQX ADR: MTLMY) is pleased to announce the successful completion of a 12-hour continuous Flash Joule Heating ("FJH") reactor campaign at its Gator Point Technology Campus in Chambers County, Texas.

The campaign demonstrated stable, repeatable and controlled operation of Metallium's "Generation-1" commercial-scale FJH reactor platform over extended duration, validating key process assumptions, reactor integrity, automation systems and operating procedures ahead of planned multi-reactor deployment. Importantly, the results materially reduce technical and operational scale-up risk as Metallium advances toward its next major milestone of multiple FJH reactors operating simultaneously in parallel.

Metallium's scale-up strategy is based on a modular parallel-reactor architecture, where throughput expansion is achieved through the operation of multiple FJH reactor units under an integrated control framework. The successful completion of extended-duration single-reactor operations represents an important prerequisite step toward this next phase of development, with parallel reactor deployment forming the basis of Metallium's modular throughput scale-up strategy.

The campaign also generated valuable operating data and early optimisation insights across reactor throughput, feed handling, instrumentation, control systems and broader plant integration activities, supporting ongoing technology refinement and future reactor development.

Managing Director & CEO Michael Walshe commented: *"This milestone represents an important transition point for Metallium as we move from individual reactor commissioning toward sustained multi-reactor operations. Successfully operating a commercial-scale FJH reactor continuously over an extended duration provides critical validation of reactor integrity, process stability, automation systems and operating procedures. Importantly, these results materially reduce risk ahead of our next major objective of operating multiple FJH reactors simultaneously in parallel, which forms the basis of our modular scale-up strategy.*

"The campaign has also generated important operating and engineering learnings expected to support ongoing throughput optimisation, reactor refinement and broader process integration activities as commissioning progresses across the Gator Point flowsheet."

***Figure 1**: Commissioning Team*

***Figure 2**: FJH Reaction System*

Throughput and Scale-Up Validation

Initial commissioning results have exceeded internal expectations and provide important early insights into reactor throughput and future plant configuration opportunities. Key observations from the campaign include:

- Reactor performance exceeding internal intermediate commissioning targets
- Early indications of potential throughput uplift versus original internal design assumptions
- Validation of several early-stage reactor design concepts and operating methodologies
- Improved understanding of feed handling, solids movement and system integration under sustained operating conditions

Depending on the outcomes of ongoing pre-processing optimisation and future multi-reactor testing campaigns, these learnings may support future throughput expansion opportunities across the broader platform.

The increased operational confidence and potential throughput flexibility may also support future expansion into additional high-value feedstocks and specialty metal recovery opportunities, including gallium and germanium-rich materials.

Operational Stability and Commissioning Progress

The successful completion of the continuous reactor campaign materially strengthens confidence in Metallium's operating philosophy and broader scale-up pathway. **Key commissioning achievements to date include:**

- Demonstrated **stable reactor operation over extended continuous runtime**
- **Validated instrumentation, automation and control systems** required for future multi-reactor deployment
- **Confirmed repeatable operating procedures** and safe reactor cycling under commercial-scale operating conditions
- Expanded operational capability, with a growing team of trained personnel capable of independently executing test campaigns
- Enabled transition toward higher-frequency testing and accelerated optimisation activities

Extended continuous operation represents an important industrialisation milestone for emerging process technologies, validating reactor durability, process stability, automation systems and repeatability under sustained operating conditions.

These outcomes materially reduce execution risk ahead of planned parallel-reactor operations and future throughput expansion activities.

Figure 3: Integrated control unit to support technology automation

Commissioning and Process Optimisation Learnings

The campaign generated valuable operational and engineering insights across multiple areas of the FJH platform, including:

- Reactor component performance and design refinement opportunities
- Feedstock behaviour and process variability under sustained operating conditions
- Solids handling, material transfer and broader plant integration
- Instrumentation positioning and process control optimisation
- Gas flow behaviour and reactor operating dynamics
- Opportunities to further improve reactor durability, efficiency and maintainability

These learnings are being directly incorporated into ongoing reactor optimisation, engineering refinement and future scale-up planning activities.

Feedstock Flexibility and Platform Versatility

The campaign also confirmed Metallium's ability to process platinum and palladium-rich materials, supporting ongoing development across high-value waste and mineral feedstocks.

Ongoing feedstock characterisation activities continue to improve Metallium's understanding of feed variability, process response and pre-processing optimisation requirements.

Metallium's modular FJH platform is designed to process a broad range of metal-bearing materials through configurable pre-processing systems, tuneable reactor conditions and adaptable downstream recovery pathways.

This flexible operating philosophy is expected to support:

- Commercial optionality across multiple end markets
- Reduced reliance on any single feedstock source
- Improved plant utilisation
- Scalable deployment across multiple regions and industries

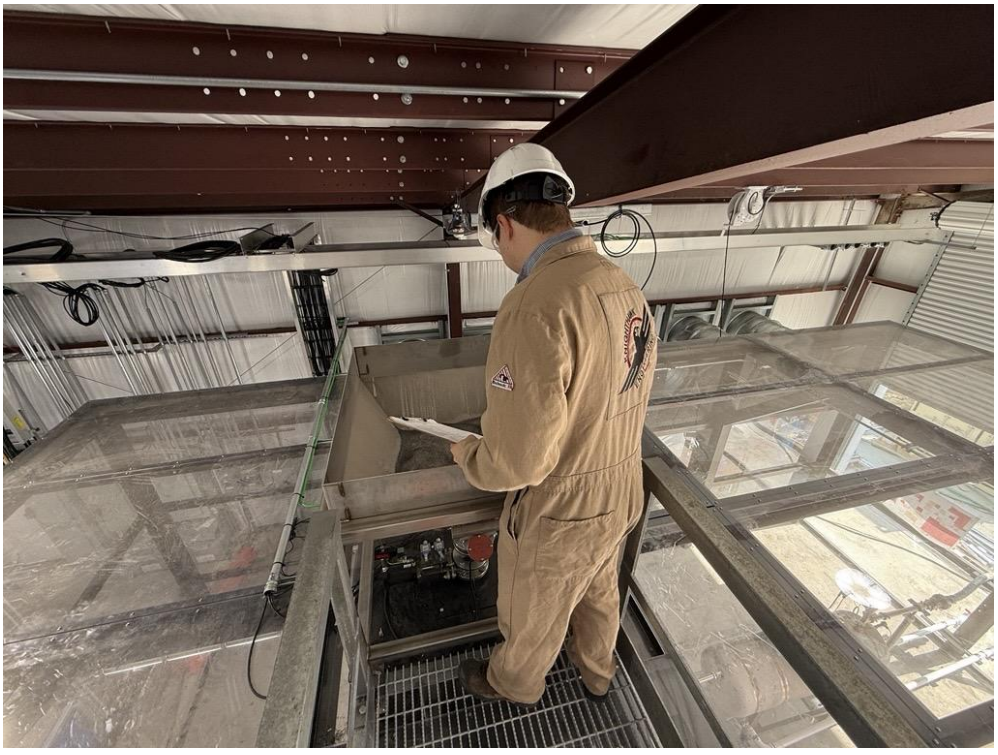

Figure 4: *Feed chute for precious metal rich feedstocks*

Figure 5: Gas Handling System

Metallium's Next Scale-Up Milestones

Metallium's immediate focus remains on progressing from extended-duration single-reactor operations toward sustained multi-reactor deployment and broader throughput expansion activities. Planned next steps include:

- Demonstration of multiple FJH reactors operating simultaneously in parallel
- Extended-duration single and multi-reactor campaigns, including future 24-hour operating tests
- Ongoing optimisation of upstream pre-processing and downstream recovery systems
- Continued reactor engineering refinement and process optimisation activities
- Progressive throughput expansion toward Metallium's Stage-1 demonstration capacity targets
- Expansion of feedstock qualification and techno-commercial datasets across strategic feed materials
- Progression of additional feedstock supply agreements supporting ongoing technology development and future commercial operations

Metallium continues to target demonstration of its Stage-1 commercial-scale e-waste processing capacity during the fourth quarter of calendar year 2026.

Metallium Appoints Experienced Metallurgist to Technical Advisory Team

Metallium is pleased to announce the appointment of experienced metallurgist, Rod Lawry, to its Technical Advisory Team. Rod brings over 45 years of global metallurgical, project development, commissioning, and operational leadership experience across the mining and mineral processing sector, with extensive expertise spanning nickel, copper, gold, uranium, tin, tungsten, and complex hydrometallurgical systems.

His career includes senior technical and operational roles with leading organisations including Western Mining Corporation, Glencore, BHP, Newmont, Barrick Gold, Rio Tinto, and SNC-Lavalin. Rod's technical capability and practical operational experience will provide significant value to Metallium as it advances its technology development, scale-up, and commercial deployment activities.

This announcement has been authorised for release by the Board of Directors of Metallium Limited.

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ABOUT METALLIUM LIMITED

Metallium Ltd (ABN 27 645 885 463), is pioneering a low-carbon, high-efficiency approach to recovering critical and precious metals from mineral concentrates and high-grade waste streams. The company's patented **Flash Joule Heating (FJH)** technology enables the extraction of high-value materials, including **gallium, germanium, antimony, rare earth elements, and gold** — from feedstocks such as refinery scrap, e-waste, and monazite.

Aligned with U.S. strategic supply chain objectives, Metallium has recently secured its first commercial site in Texas via its wholly owned subsidiary, **Flash Metals USA Inc.**, marking a major step toward near-term production and revenue generation.

To learn more, visit:

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FORWARD-LOOKING STATEMENTS

This announcement contains forward-looking statements concerning Metallium Limited (Metallium or the Company), including statements regarding the planned deployment of additional FJH reactors, the targeted Stage-1 PCB processing capacity of approximately 8,000 tpa, potential throughput uplift relative to original internal design assumptions, expected scale-up of the FJH platform, anticipated commercial deployment activities, and the Company's future plans, strategy and objectives.

Forward-looking statements can generally be identified by the use of words such as “may”, “will”, “expect”, “intend”, “plan”, “estimate”, “anticipate”, “believe”, “target”, “forecast”, “project”, “potential”, “continue”, “should”, “seek”, and similar expressions.

These statements are based on information available to Metallium as at the date of this announcement and on assumptions and expectations that the Company considers to be reasonable as at that date, including assumptions regarding: continued successful operation and reliability of the FJH reactor platform; the availability and characteristics of suitable feedstock; the timing and outcome of ongoing commissioning and optimisation activities; the availability of capital, equipment, personnel, services, regulatory approvals and site access required for the planned multi-reactor deployment; the absence of material adverse changes in commodity prices, exchange rates, input costs and general economic and market conditions; and continued progress of customer, partner and offtake discussions.

Forward-looking statements are not guarantees or predictions of future performance and involve known and unknown risks, uncertainties and other factors, many of which are beyond the Company's control. Actual results, performance or achievements may differ materially from those expressed or implied by the forward-looking statements. Such risks and uncertainties include, but are not limited to: technology scale-up and commissioning risk; feedstock supply, grade and recovery variability; processing throughput and yield variability; capital and operating cost variability; financing risk; regulatory, permitting and environmental risk; intellectual property risk; reliance on key personnel, contractors and partners; competition; and broader macroeconomic, market and geopolitical conditions.

Production targets, processing capacity targets, throughput indications and timelines referred to in this announcement (including the Stage-1 ~8,000 tpa PCB processing target and references to throughput uplift relative to original internal design assumptions) are targets only. They are not production forecasts and are subject to the assumptions, risks and uncertainties described above. There is no guarantee that these targets will be achieved, in the timeframes indicated or at all.

Investors should not place undue reliance on forward-looking statements. Except as required by the ASX Listing Rules, the Corporations Act 2001 (Cth) and applicable law, Metallium does not undertake any obligation to update or revise any forward-looking statement, whether as a result of new information, future events or otherwise.