

SUBMISSION FORM

University System/Employee Intellectual Property Joint Participation

MUSP 407

This form is to be submitted with any Board of Regents item whereby a campus seeks the approval of an agreement with or arrangement regarding an employee pursuant to 20-25-109 MCA and Regents Policy 407.

When the submission concerns matters of trade secrets or confidential business information, or any other matter entitled to privacy under state or federal law (e.g., the federal statute known as Bayh/Dole) the submitting campus may request consideration of the submission, in whole or in part, in executive session.

The submitting campus should also provide the Commissioner a copy of the contract(s) that form the basis for the cooperative arrangement for which approval is sought. Submission of the contract does not indicate a conclusion that all or part of the contract is a public document and the question of whether it is in whole or in part protected from public disclosure will be evaluated on a case by case basis.

1. Summarize the nature of the intellectual property that was developed by the employee seeking approval. Indicate the sources of funding for the research that resulted in this invention.

The moving thermocouple uses a single thermocouple to measure temperature coupled with a motor system that can actuate the thermocouple within a sheath. The thermocouple wires are stiffened and the exact position can be measured from the motor feedback or use a series of temperature vs. time at a position curve.

Calculations are created to remove or reduce hysteresis. Various sheaths and stiffener materials are used for different materials being tested. The typical use for this device is in a metal cast mold measuring the temperature gradient over time across the boundary between mold and molten metal.

Funding for the development was under ARL collaborative agreement W9112020163, task 8 within Montana Tech.

2. a. Name(s) of the university employee(s) involved.
Bryce E. Hill
- b. Name(s) of business entity(ies) involved.
Copper Hill Designs, LLC
3. The university and employee(s) are seeking approval for (check as many as appropriate):
 - a. The employee to be awarded equity interest in the business entity.
 - b. The employee to serve as a member of the board of directors or other governing board of the business entity.
 - c. The employee to accept employment from the business entity.
 - d. Other. Please explain.
4. a. Summarize the nature of the relationship between the university and the business entity (e.g., the entity is licensing the intellectual property from the university, the entity is co-owning the intellectual property with the university).
Copper Hill Designs, LLC will be licensing the patent from Montana Tech.
- b. The proposed duration of the agreement or arrangement.
Terms of the licensing agreement have not been negotiated. Licensing negotiations will be conducted following BOR approval.
- c. The conditions under which the agreement may be terminated or dissolved.
The agreement can be terminated by either party given 30 days notice.
5. Explain specifically how the University System or the State of Montana will likely benefit from the agreement or arrangement.
 - a. **Per the licensing agreement to be negotiated, Montana Tech will be paid yearly licensing and maintenance fees.**
 - b. **Per the licensing agreement to be negotiated, Montana Tech will be paid a percentage of net sales of products developed with the licensed intellectual property.**

c. **The reputation and societal impact of Montana Tech and Montana University System will benefit from successful deployment of the intellectual property.**

d.

6. Summarize the financial terms of the agreement or arrangement. Include:

a. The value, nature and source of the University's contribution.
The University has provided support through the provisional and nonprovisional patenting process.

The University will provide facilities for technological development via a Facilities Use Agreement whereby Copper Hill Designs, LLC will reimburse the University for use of space, equipment, supplies, among other resources.

b. The value and nature of the employee's contribution.
Bryce E. Hill is the first inventor on the intellectual property and owner of Copper Hill Designs, LLC. He wishes to utilize the intellectual property to produce commercial products and services.

c. The anticipated revenue to be generated by the project and the time line for generating such revenue.
Copper Hill, LLC plans to distribute prototype tools to SpaceX via an established relationship with a lead engineer at the company by the end of 2026.

Modifications and improvements to the tool based on SpaceX feedback will occur 2026-2027 with official sales of the tool or services (engineer brings tool to provide measurements during casting) planned to commence by late 2027-2028.

Net sales upon distribution are expected to exceed \$100K in the first year and increase thereafter.

d. The manner in which revenue and expenses will be shared by the parties.
Terms of the licensing agreement will be negotiated upon BOR approval. Share of net sales will be negotiated.

e. The nature of each party's equity interest in the project. If none, so indicate.
Bryce E. Hill has equity interest in Copper Hill Designs, LLC. The University has no equity interest in the company.