# *Thank you for your commitment to green initiatives at the University of Illinois. One of the ongoing requirements listed in the terms of the funding agreement for your project is the submission of semesterly reports with key information about your project. In addition to this form, please provide additional financial documentation and/or progress photos if available.*

# *Please be as accurate as possible in describing the project (including possible setbacks or challenges in meeting the initial goals of the project). Not fully meeting your project's goals will not disqualify you from making future funding requests as long as your reports are as complete and accurate as possible. If you have any questions, please contact Micah Kenfield, Program Advisor for the Student Sustainability Committee, at* *kenfield@illinois.edu**.*

**Project Name:** High Resolution Temperature Profiling and Thermal Analysis for Geothermal Energy Alternatives

**Date of Report Submission:** 12/22/2016

**Project Purpose:**

Establishing a geothermal exchange experiment for evaluating the feasibility of geothermal energy on campus, and sharing the knowledge with campus and community for future geothermal energy development.

**Detailed Accounting of Expenditures to Date:**

The budget has been managed within the scope of the project. An urgent change of scope for additional $7,000 was proposed and approved during the borehole drilling on the 4th week of due to 50% more bedrock depth for drilling as unforeseen challenges of earth nature (attached SSCscopechange.pdf). The drilling and installation was completed as scheduled with such prompt support from the committee. The details updated to 12/20/2016 are shown in the attached file (303692 12-20-16.pdf).

**Project Progress to Date:**

The scheduled tasks such as borehole construction, geothermal loop and sensor installation, geological cord sampling, geophysical logging, geothermal property analysis, fiber-optic distributed temperature sensing and in-situ thermal response test have all progressed as scheduled.

**Student Involvement and Outreach to Date:**

One undergraduate student from NERS has been hired and participated since the beginning of the project. Two graduate students from EaSE have been participated since the borehole construction started. All three current student are proposing a new student leading project on developing a new in-situ thermal response test device. Two prospective graduate students (EaSE and CEE) have requested to join the project in spring semester 2017. The project team is providing assistance to the Champaign Unit 4 school district for their new $164M development.

**Marketing and Promotion Efforts to Date:**

The project team has been leverage the initial data to propose a new DOE grant for an innovative application of deep geothermal exchange on campus by collaborating with several campus units, UW-Madison and industrial partners. The OVCR and US Army have jointly awarded a new research development grant to the team to leverage this project finding for improving geothermal exchange applications in military.

**Additional Comments:**

This project has been making progress seamlessly on schedule because of the strong support from the SSC, Energy Farm, F&S and many campus units. The detailed progress during the construction and installation are available at: http://www.isgs.illinois.edu/node/30789