

Stony Brook University  
145 Endeavour Hall  
United States

Reykjavík, 31. maí 2024  
UST202405-085/P.V.B.  
09.05.01

**Subject: Permit to conduct research at Hverastrýtur, Mývatn and Reykjanesfólkvangur**

The Environment Agency of Iceland has received an application from Roy E. Price at Stony Brook University, dated, April 16<sup>th</sup> 2024, for permit to conduct research within Hverastrýtur, Mývatn and Reykjanesfólkvangur.

Arnarnesstrýtur hydrothermal vent is protected cf. regulation no. 510/2007. Research and collection of specimens are subject to a permit from the Environment Agency of Iceland. It is prohibited to disrupt the hydrothermal vent chimneys and attach any kind of sign on the vents.

Mývatn and Laxá area is protected according to act no. 97/2004. Permission from the Environment Agency of Iceland is needed for construction work and all activity that can affect wildlife, geological formations, vegetation and landscape in the area. Permission from the Environmental Agency of Iceland is needed to conducting observations, monitoring or research in the nature reserve, such as sampling for research, collection of natural artifacts, bird photography from camouflage, filming, bird tagging, as well as other similar observations. In the period from April 15<sup>th</sup> to August 20<sup>th</sup>, the use of vehicles on Mývatn and Laxá and other lakes in the protected area is only permitted for traditional uses and hunting, nature research and management of the area.

Reykjanes country park is protected cf. regulation 520/1975. Disturbance to geological formations is prohibited.

The Strýtur hydrothermal vent is protected cf. regulation no. 249/2001 Researches and collection of specimen are subject to a permit from the Environment Agency of Iceland. It is prohibited to disrupt the hydrothermal vent chimneys and attach any kind of sign on the vents.

**Description of the project:**

Permit is requested for taking samples and to measurements at Kleifarvatn, lake Mývatn and Strýtan. At Kleifarvatn the sampling would take place at underwater vents where 1-2

litres of hydrothermal fluids, 30 samples of sediment, 10 grams each, total 300 grams and 1 liter of gas would be collected. At Lake Mývatn the sampling would take place at the main hydrothermal area just off the beach. Liter of water would be collected and 15 samples of sediment, 10 grams each, total 150 grams. Sediments would be collected via grab samples of surface sediments, which would be placed into zip loc bags underwater, with minimal to no impact on the site. At Strýtan fluids and small pieces of chimney would be sampled from the hydrothermal cones, under the supervision of Erlendur Bogason. The main target site would be the 55m high cone on 38 meters depth. The site is specifically set up for scientific sampling purposes. Small pieces, ~5-10 cubic cm of sample, would be collected with methods approved by Erlendur Bogason into small sampling vials, and minimal impacts are expected as previously experienced. Max number of samples would be 20. In addition 2-4 liters of hydrothermal fluids would be collected. There would be 6 participants in the sampling group and sampling would take place in the period of June 17<sup>th</sup> - 28<sup>th</sup> 2024.

**Review:**

The Environment Agency of Iceland requested review from the committee of protection of Hverastrýtur á botni Eyjafjarðar and Hverastrýtur á botni Eyjafjarðar, norður af Arnarnesnöfum on May 16<sup>th</sup> 2024. No review was received from the committee.

In accordance to art. 17. in regulation 665/2012 the Environment Agency of Iceland requested a review from the Icelandic Institute of Natural History and the Lake Mývatn Research station on May 16<sup>th</sup> 2024. The review from Icelandic Institute of Natural History was received on May 22<sup>nd</sup> 2024. In their review they don't consider the sampling at Kleifarvatn and Mývatn likely to disturb geological formations. The review from the Lake Mývatn Research station was received on May 17<sup>th</sup>. In principle the Myvatn Research Station does not object to the proposed sampling from Lake Myvatn. The sampling entails some problems, however, that need to be considered. The sampling date is during the waterfowl nesting season which means that large stretches of lake shore are officially closed to traffic, and some other parts parts (including those in the warm water zone) are kept under vigilance by the locals. The applicants should be **STRONGLY ADVISED** to contact local rangers before any sampling takes place, even if the sampling is delayed beyond the nesting season.

The Icelandic Institute of Natural History mention in their review on Lake Mývatn that the geothermal formations at Strýtan are very vulnerable and it is important that the sampling is conducted under supervision of Erlendur Bogason.

**Impact assessment:**

The Environment Agency of Iceland considers the project not likely to have negative effect on nature or conservation value of the sites if conditions of the permit are followed.

**Conclusions and conditions:**

The Environment Agency of Iceland hereby grants Roy E. Price at Stony Brook University permission on its behalf to collect fluid samples and cone samples within Arnarnesstrýtan

and Strýtan hydrothermal vent chimneys, at Kleifarvatn in Reykjanes country park and at Mývatn as described above in the period of June 17<sup>th</sup> - 28<sup>th</sup> 2024 on the following conditions:

- Keep this letter with you on site during the project. The permit conditions should be introduced to the staff of the project before work begins.
- If the project dates or description changes the Environment Agency shall be notified as soon as possible.
- The crew must follow rules of conduct that apply to the areas.
- If any complications occur during the project, please contact the ranger or the Environment Agency of Iceland, tel. +354 591 2000.
- This permit is only valid for research purposes. It does not include permit to utilize the samples for commercial purposes. The samples cannot be signed over to third party for commercial use.
- Every measure should be taken to avoid damage to the sites and unnecessary disturbance while collecting samples.
- All vehicles used during field exploration must be labelled with the identity of the researcher's institute. All participants in the project must wear high-visibility clothing during field work, labelled with the identity of the researcher or the research institute.

#### Arnarnesstrýtur and Strýtan

- The project shall be done in cooperation with Erlendur Bogason and follow his instructions at Arnarneshydrothermal vent and at Strýtan.
- Samples should be collected where any resulting disturbance of geological formations is not visible to other visitors where the depth is at least 36 meters.

#### Mývatn and Reykjanes country park

- The applicant shall inform rangers in the area about their arrival and departure. This is to be done 24 hours before entering the area and again before leaving it.
- All participants in the project at lake Mývatn and Reykjanes country park must wear high-visibility clothing during field work, labelled with the identity of the researcher or the research institute.

#### Mývatn

- It is not allowed to use boats with engine more powerful than 25 HP.
- If you wish to bring your own boat and diving gear that has been used in other lakes you will need to disinfect it and also all sampling equipment that goes into the lake to prevent that bring with you foreign organism into Mývatn. Confirmation about the disinfection needs to be filled in to the Environment Agency before you arrive.
- Sampling shall be conducted in close consultation or cooperation with rangers.

If the developer causes damage to nature, according to art. 87 in the Nature Conservation Act no. 60/2013, the Environment Agency of Iceland can, according to the Nature Conservation Act, f.e. order the licensee to fix damage to nature and vegetation and/or stop the project.

The Environment Agency of Iceland can according to art. 89 in the Nature Conservation Act no. 60/2013 change conditions of the permit, add new conditions or withdraw the permit in order to prevent damage to nature if environmental conditions change.

According to art 89. in the Nature Conservation Act no. 60/2013 the Environment Agency can withdraw the permit if conditions of the permit are not complied to.

A permission from the landowners and/or the municipality might be needed for the project.

Permit from the National Energy Authority is needed for researches in geothermal areas ([www.os.is](http://www.os.is)).

If you wish to export samples from Iceland a special permit is needed from the Icelandic Institute of Natural History ([www.ni.is](http://www.ni.is)).

The Environment Agency of Iceland wishes to have access, free of charge to all reports and scientific articles that result from the research project.

**Permission fee:**

Environment Agency of Iceland charges a fee for processing applications for permits in protected areas based on Article 92 of Act no. 61/2013 on Nature Conservation. The fee for operational, events, research and other activities is **62.400 ISK** according to art. 29. a. in the agency's tariff no. 1410/2023.

**Supervision:**

The Environment Agency will supervise the project. The supervisor will be a ranger from the Environment Agency.

Sincerely

René Biasone  
**advisor**

Þórdís Vilhelmína Bragadóttir  
**advisor**