

Consejo Superior de Investigaciones Científicas - CSIC Spanish national research council Armilla 18100 Granada Spain

> Reykjavík, mánudagur, 11. júlí 2022 UST202206-296/D.Ö.H. 09.05.01

Subject: research permit at Eyjafjordur thermal vents

The Environment Agency of Iceland has received an application from Consejo Superior de Investigaciones Científicas, dated June 28th 2022, for research permit within Arnarnesstrýtur and Strýtan hydrothermal vent chimneys.

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.

The Strýtur hydrothermal vent is protected cf. regulation no. 249/2001. 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.

Description of the project:

The project is scientific research funded by the Spanish national research council. The research goal is to do a geochemical, mineralogical and structural study of the magnesic smectite of the hydrothermal vents at Strytan, Iceland. The project involves three scientists travelling from Spain to the Strytan Divecenter from 15-17 August 2022. Dives to the vents would be carried out by Erlendur Bogason, Commercial Diver/PADI instructor at the Strytan Divecenter, with whom the Spanish partners have been collaborating.

While diving still and video images will be obtained. Samples of vent fluids and small amounts of vent precipitate will also be collected for further studies on the return of the Spanish group to the laboratory in Spain. The number of samples is to be determined with Strytan personnel, but the volume of fluid samples required should be of the order of a litre or less, and regarding solid samples, the studies to be carried out are microscope studies, so only some grammes of material are needed.

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 June 29th. The review from the committee was received on July 14th. In their review they don't object granting the permit.



Impact assessment:

The Environment Agency of Iceland considers the project not likely to have negative effect on the area if conditions of the permit are followed.

Conclusions and conditions:

The Environment Agency of Iceland hereby grants Julyan Cartwright at Consejo Superior de Investigaciones Científicas permission on its behalf to collect fluid samples and cone samples within Arnarnesstrýtan and Strýtan hydrothermal vent chimneys in August 2022 on following conditions:

- Keep this letter with you on diving site during the project. The permit conditions should be introduced to the staff of the project before work begins.
- The project shall be done in cooperation with Erlendur Bogason and follow his instructions at Arnarneshydrothermal vent and at Strýtan.
- If the project 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 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.
- Samples should be collected where any resulting disturbance of geological formations is not visible to other visitors.
- This permit is only valid for sample collection according to the application.
- The Environment Agency shall be informed as soon as possible if any accidental damages occur to the hydrothermal vent chimneys.
- All disturbance to animals and wildlife is strictly prohibited.

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.

Permit from the National Energy Authority is needed for researches in geothermal areas (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).

The Environment Agency of Iceland wishes to receive, free of charge, a copy of 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 researches is 39.400 ISK according to art. 24. b. in the agency's tariff no. 535/2015.

Supervision:

The Environment Agency will supervise the project at Reykjanes country park. The supervisor will be a ranger from the Environment Agency.

Sincerely

Davíð Örvar Hansson *advisor*

Þórdís Björt Sigþórsdóttir *team leader*