

Hot-Spring Hazards

Gases like carbon dioxide, hydrogen sulfide, methane, and nitrogen are present in hot-spring water. When water erupts from the ground, the gases and water separate, causing water to bubble. The frothing of the Obuki spring is due to the separation of water and carbon dioxide, as well as other gases.

When the geothermal water in which the volcanic gases are dissolved boils underground, steam forms. It then emerges, along with the carbon dioxide and hydrogen sulfide gas, from holes in the ground called fumaroles. Hydrogen sulfide is a highly toxic gas, and poisoning incidents occasionally occur in areas around fumaroles.

Even at low concentrations, hydrogen sulfide has a distinctive “rotten egg” smell. An exceptionally strong odor is a sign that hydrogen sulfide levels are becoming dangerously high. As the levels escalate further, however, the smell actually becomes more difficult to detect, so people should immediately leave the area at the first signs of an unusually strong odor.