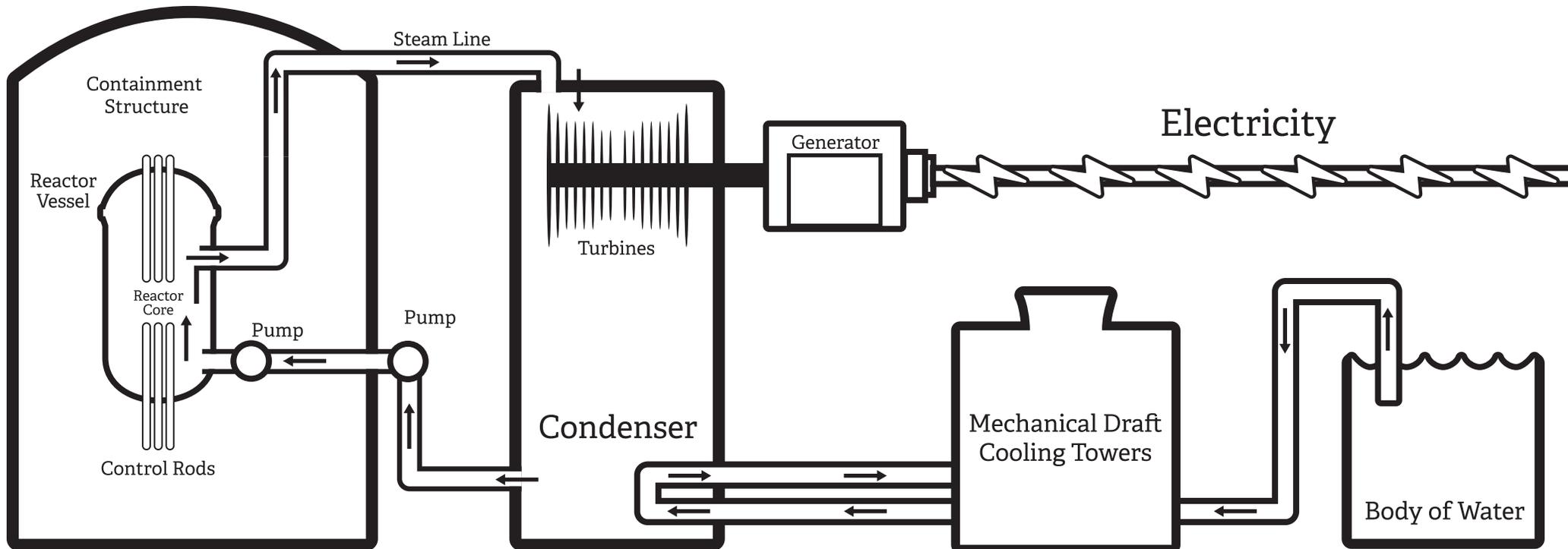


# Boiling Water Reactor

Nuclear power plants generate steam with the use of ceramic pellets made from uranium in the **reactor core** through a process called fission (splitting of atoms). Operation of the reactor is controlled by moving the **control rods** up or down from within the **reactor core**.

A boiling water reactor uses two separate water systems. Inside the **containment structure**, water is pumped through the **reactor core** where nuclear fission heats the water to a temperature of about 550 degrees Fahrenheit, creating a steam-water mixture. The steam-water mixture leaves the top of the **reactor core** and enters the two stages of moisture separation where water droplets are removed before the steam is allowed to enter the **steam line**. The hot steam passes to the **turbines** where it makes large blades spin much like a windmill when wind hits its blades. The **turbine** then spins an electric **generator**, producing **electricity**. After the steam is used from the turbines, it falls down into the **condenser** where it becomes liquid water again to continue the cycle.

The **condensers** cool by circulating water from a **mechanical draft cooling tower** using water from a **body of water**. This second, separate water system never comes in contact with the steam within the power plant or water in the reactor cycle.



# Boiling Water Reactor

Use the diagram of the reactor to color the areas you think would be hot and cool, or just have fun and use your favorite colors.

