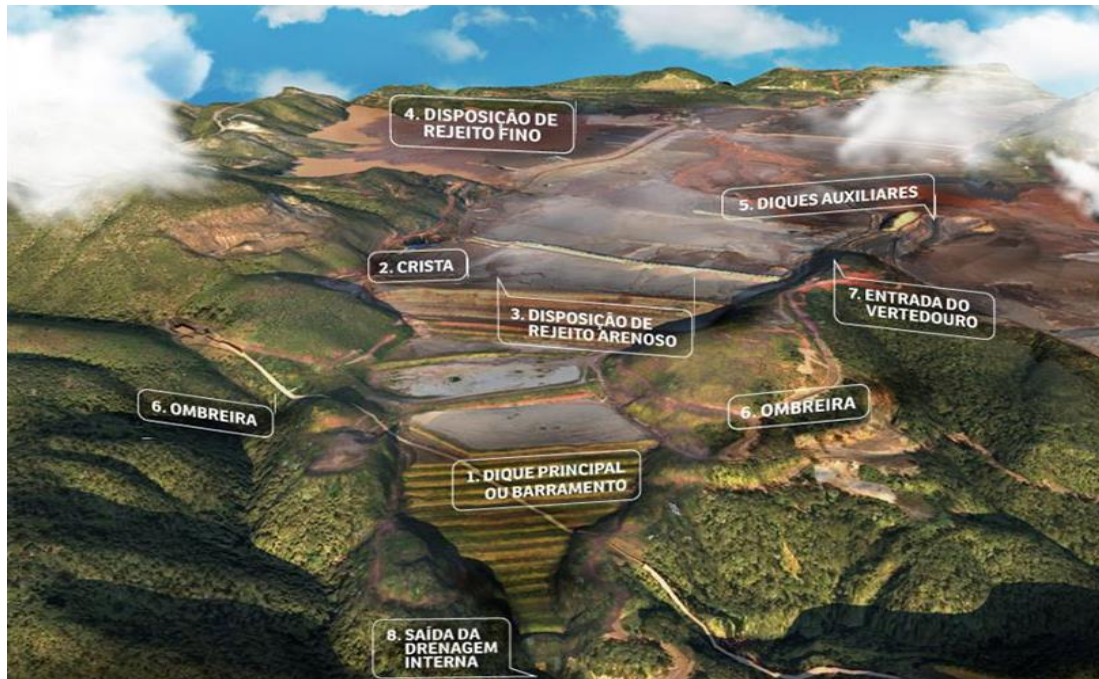


What is a dam

A tailings dam is a physical structure that holds in, or impounds, the waste ground rock that is left over from the process of beneficiating ore. The tailings are piped out in a slurry form (solids mixed with water) to the pond, where the solids settle to the bottom and the water on top is treated and partly reused in the mining process and partly returned to the environment.



Structural aspects of the dam

1 – Main dike or dam – a structure build at the bottom of a valley to contain the tailings. It is the lowest point of the dam.

2 - Crest: the highest point of the dam, where tailings disposal starts.

3 – Tailings pond – site where the tailings are disposed of.

4 – Auxiliary dikes – side structures which delimit the tailings disposal areas.

5 – Shoulder – natural terrain into which the dam fits.

6 – Spillway – structure which allows the overflow of the water from the top of the dam.

7 – Internal drainage – structure which channels the water at the bottom of the dam.

Samarco's dams

The Germano unit had three different dams, built at different phases – Germano (1977), Fundão (2008) and Santarém (1994). The area occupied by the dams is crossed by two main water ways – the Fundão and the Santarém creeks, as well as their tributaries.

These three structures worked in an integrated manner, storing the tailings from Samarco's operations and recirculating the process water.

