

PRODUCTION WASTE

The Company reuses most of its industrial waste as approximately 96% of the waste generated are class 5, i.e. non-hazardous waste. This

is mostly waste from the mining and smelting operations, including rock and overburden, tailings, and metallurgical slags. Ore extraction waste is used as backfill for underground workings and open pits, road fill, or for tailings dam reinforcement. In 2019, Nornickel reused about 63% of all waste (70% in 2018), with the balance turned over to specialised contractors for reuse or decontamination. Higher waste generation in 2019 was due to increased processing volumes.

TAILING DUMPS

Nornickel currently operates six tailing dumps: four in the Polar Division and Medvezhy Ruchey, taking tailings from Talnakh and Norilsk concentrators and Nadezhda Metallurgical Plant; one at Kola MMC, storing tailings from Zapolyarny Concentrator; and Bystrinsky GOK tailing dump.

Nornickel acts responsibly to ensure tailing dump safety and monitors the condition of tailing dump hydraulic structures and the environment within the dump sites and affected areas on a regular basis. In line with governmental requirements, Nornickel has developed safety criteria each operating tailings facility is required to meet and got them approved by supervisory authorities. Primary oversight is provided by the Federal Environmental, Industrial and Nuclear Supervision Service of Russia (Rostekhnadzor).

Hydraulic structures are subject to comprehensive audits every five years, with mandatory prior preparation of the hydraulic structure safety declarations. The declarations are produced by an independent expert agency accredited by Rostekhnadzor only after detailed inspections of the hydraulic structures.

All tailings facilities operated by Nornickel are situated far from production sites and human settlements. Potential damage estimates made for a safety declaration show minimum risks

Waste generation by hazard class (kt)

Hazard class	2017	2018	2019
V	30,722	29,517	35,300
IV	1,190	1,191	1,115
III	12	15	5
II	2.4	1.1	0.03
I	0.1	0.1	0.04
TOTAL	31,926	30,725	36,420

of adverse impact on communities, eco-systems, and critical infrastructures in case of a disaster or a tailings dam failure. It should be noted that over the last five years no environmental incidents have been recorded across the Company's hydraulic structures and no orders from supervisory agencies were received to correct critical or pre-critical conditions.

Hydraulic structures are monitored by operating personnel and Nornickel's environmental team on an ongoing basis. Nornickel employees involved in the operation of tailing dumps complete regular specialised trainings and knowledge assessments by Rostekhnadzor.

After the Brumadinho and Samarco dam disasters in Brazil, Nornickel published a special report on the safety of all its hydraulic structures following an inquiry from a group of investors led by the Church of England Pensions Board and the Council on Ethics of the Swedish National Pension Funds (AP Funds) and guided by the UN Principles for Responsible Investment (PRI). The report is available in the link below.



Special report on safety
of tailings storage
facilities

Tailing dumps

Branch/subsidiary	Number of tailing dumps	Asset using the tailing dump
Polar Division	2	Talnakh Concentrator, Nadezhda Metallurgical Plant
Medvezhy Ruchey	2	Norilsk Concentrator
Kola MMC	1	Zapolyarny Concentrator
GRK Bystrinskoye	1	Bystrinsky GOK Concentrator

WATER BODIES

The Company's major production assets are located in regions with sufficient water resources. Nonetheless, the Company is extremely careful about its use of fresh water and strictly complies with restrictions applicable to industrial water withdrawal. Nornickel's key production facilities use closed water circuits to reduce water withdrawal. Furthermore, the Company never withdraws water from protected natural areas. In 2019, 87% of all water used by the Company was recycled or reused. Water is mostly withdrawn from surface and underground water bodies as well as from wastewater of other companies and natural water inflow. Natural water inflow and meltwater accounted for 12% of the total water withdrawal in 2019. All facilities using water have programmes

in place to monitor water bodies and water protection areas..

Wastewater discharge also does not exceed the approved limits or have any major impact on biodiversity of water bodies and related habitats..

The Company is committed to sustainable use of water resources and prevention of water body pollution.

Water consumption and discharge framework

