The Federal Service for Ecological, Technological and Nuclear Supervision

Exercising federal state supervision of hydraulic structures at tailing ponds of industrial enterprises

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ФЕДЕРАЛЬНАЯ СЛУЖБА
ПО ЭКОЛОГИЧЕСКОМУ, ТЕХНОЛОГИЧЕСКОМУ
И АТОМНОМУ НАДЗОРУ

...того ради мы, к пользе Государства и всем Нашиным вверенным
родственникам Берг-Коллегиум,
Всемилостиво учредить изволили,
и по Нам оному власту и мощь
dам едным суднею быть над
всеми к тому принадлежащим
делами и особыми...
The Federal Service for Ecological, Technological and Nuclear Supervision
(Rostekhnadzor)

the federal executive body, which carries out functions for the development and implementation of state policy and legal regulation in the established field of activity, including in the field of safety of hydraulic structures (with the exception of shipping and port hydraulic structures)

The main objective of Rostekhnadzor is to increase the level of protection of the vital interests of the individual, society and the state from accidents at hazardous production facilities and their consequences
Regulatory areas of Rostekhnadzor

- Safety Regulation for Nuclear Power Plants and Research Nuclear Facilities
- Safety regulation of nuclear fuel cycle facilities, nuclear power plants of ships and radiation hazardous facilities
- Mountain supervision
- General industrial supervision
- State Construction Supervision
- State Energy Supervision
- Coal Oversight
- Supervision of oil and gas facilities
- Special security
The functions of Rostechnadzor in the system of state regulation

Development of regulatory documents and technical regulations

Supervisory activity

Licensing activities
The total number of supervised Rostekhnadzor HS (HS complexes)

889 complexes at industrial facilities:
- 363 – mining
- 389 – chemical
- 137 – metallurgical

433 complex at energy facilities:
- 158 – HS
- 75 – SDPS
- 185 – CHP
- 3 – PSP
- 12 – NPS

23280 supervised by Rostekhnadzor HS

21958 HS at water facilities:
- 964 – Ministry of Agriculture of Russia
- 966 – Rosvod Resources
- 3156 – ownerless
- 16872 – other
Уровень безопасности ГТС

Normal security level: 
HS comply with the project, current standards and rules, the values of safety criteria are not exceed maximum permissible, operation carried out without violation, requirements state oversight bodies are being implemented

Lowered Security: 
failure to fulfill priority actions or incomplete enforcement state supervision, other violations of the operating rules

Poor security: 
decrease in mechanical or filtration strength, partial excess of the maximum permissible values of safety criteria, other deviations from the design

Dangerous level of security: 
developing processes to reduce the strength and stability of hydraulic structures and their foundations, exceeding the maximum permissible values of safety criteria, other deviations from the design state, which can lead to the development of an accident
Legal regulation of the safety of liquid industrial waste storage

- Safety rules for hydraulic structures of liquid industrial waste storage devices (ПБ 03-438-02), approved by the resolution of the Gosgortekhnadzor of Russia dated January 28, 2002 No. 6
- In accordance with the requirements of PB 03-438-02, prior to the beginning of each year, operators of hydraulic structures compile and approve plans and schedules for filling liquid industrial waste storage devices in accordance with the territorial departments of Rostekhnadzor, taking into account their actual state.
- Not later than 15 days before the beginning of next year, operating organizations develop and approve, in agreement with the territorial administrations of Rostekhnadzor, emergency response plans for all facilities and equipment that are part of the drives, the accidents of which are associated with a real threat to the lives of people and the safety of objects inhabited items or environmental disasters.
Risk-based approach

- **Hazard Class I Objects**
  - Permanent State Supervision Regime

- **Hazard Class II Objects**
  - Scheduled inspections - no more than 1 time per year

- **Hazard Class III Objects**
  - Scheduled inspections - no more than 1 time in 3 years

- **Hazard Class IV Objects**
  - No scheduled inspections
Remote monitoring of technological processes

Automated accident risk calculation:

- **Low risk**: No deviations
- **Medium risk**: Non-critical deviations
- **High risk**: Critical deviations

Operating organization

Situation and analytical center of Rostekhnadzor

Data processing center
Remote control system

The main idea of the remote control system is based on the use of a risk-based approach and consists in the rapid assessment and forecasting of any incident and the adoption of preventive measures to prevent an accident.

This is achieved by:
- continuous monitoring of the state of the object in real time
- using an automated process control system (ACS TP)
- operational risk assessment of accidents
- security prediction
- enabling the operating organization to take measures to prevent accidents.
The causes of the accidents were:
External factors: natural influences (sharp increase in air temperature, active melting of snow, heavy rainfall).
Technical factors: unsatisfactory technical condition of the GTS, lack of KIA, insufficient water throughput of structures.
Internal factors: lack of a qualified operation service, rules for the operation of hydraulic structures, compulsory insurance contract, emergency response plan.

No injured or injured in the population
Break of the dam on the river Ceiba
In the Krasnoyarsk Territory

10/19/2019 there was a breakthrough of the embankment in the subsurface area owned by Sisim LLC, where gold mining operations were carried out. The gold deposit in the mentioned subsoil block is alluvial, does not belong to the hazardous category and does not fall under the jurisdiction of Federal Law of July 21, 1997 No. 116-ФЗ On Industrial Safety of Hazardous Production Facilities.

Thus, Rostekhnadzor does not oversee and control these facilities.

In accordance with the project, on the site where the accident occurred, the construction of the hydraulic structures was not expected, but mounds and sedimentation tanks were provided for temporary non-categorical structures that were not declared, an accident on which could not lead to an emergency
Break of the dam on the river Ceiba
In the Krasnoyarsk Territory
Thank you for attention!