

Technological Regulation of Wastewater Discharges Based on the Best Available Techniques Parameters

M.E. Astrakhanov^{1,2}, FSBEI HE M.V. Lomonosov Moscow State University, FSAI Research Institute Environmental Industrial Policy Center (FSAI EIPC), m.astrakhanov@eipc.center

Yu.N. Burvikova³, FSAI EIPC, PhD (Chem.), u.burvikova@eipc.center

V.A. Novikov⁴, FSAEI FVT Academy for Standardization, Metrology and Certification (Training), Assoc. Prof. PhD (Tech.), nva@asms.ru

¹ PhD Student of Soil Science Faculty, Moscow, Russia

² Researcher of Department, Moscow, Russia

³ Leading Researcher of Department, Moscow, Russia

⁴ Head of Department, Vice-Rector for Academic Affairs, Moscow, Russia

Citation: Astrakhanov M.E., Burvikova Yu.N., Novikov V.A. Technological Regulation of Wastewater Discharges Based on the Best Available Techniques Parameters, *Kompetentnost' / Competency (Russia)*, 2023, no. 4, pp. 34–39. DOI: 10.24412/1993-8780-2023-4-34-39

key words

wastewater treatment plants,
technological parameters,
expert assessment, integrated
environmental permit, technical
working group, emission levels

Currently large industrial installations are undergoing the change in regulation towards technological regulation based on the Best Available Techniques; this means that every installation should receive an integrated environmental permit. Approaches to the establishment of BAT-related technological parameters (BAT-AELs) are based on expert assessment and further coordination with the members of expert groups for a particular industry and a technical working group. The researchers offer various options for methodological approaches to establishing BAT-AELs, taking into account the specifics of the environmental efficiency of the installations in the various economic sectors.

We present the results of determining the BAT-AELs for the municipal wastewater treatment by using the approach proposed by European researchers and traditionally used for drawing up and reviewing of Russian reference documents on BAT.

References

1. Skobelev D.O. Nailuchshie dostupnye tekhnologii: opyt povysheniya resursnoy i ekologicheskoy effektivnosti proizvodstva [Best Available Techniques: experience in increasing resource and environmental efficiency of production], Moscow, ASMS, 2020, 250 P.
2. Skobelev D.O. Sistema otsenki nailuchshikh dostupnykh tekhnologii kak instrument realizatsii ekologicheskoy promyshlennoy politiki Rossii [The system for assessing the Best Available Techniques as a tool for implementing the environmental industrial policy in Russia], *Vestnik Tverskogo gosudarstvennogo universiteta. Seriya: Ekonomika i upravlenie*, 2019, no. 2, pp. 141–148.
3. Volosatova A.A., Morokishko V.V., Tsay M.N., Begak M.V. Analiz pravovogo regulirovaniya polucheniya kompleksnogo ekologicheskogo razresheniya [Analysis of the legal regulation for obtaining an integrated environmental permit], *Kompetentnost'*, 2020, no. 1, pp. 18–25.
4. ITS 10–2019 Ochistka stochnykh vod s ispol'zovaniem tsentralizovannykh sistem vodootvedeniya poseleniy, gorodskikh okrugov [BAT reference document ITS 10–2019 Wastewater treatment using centralized wastewater systems in settlements, urban districts].
5. Nailuchshie dostupnye tekhnologii. Predotvrashchenie i kontrol' promyshlennogo zagryazneniya. Etap 2: Podkhody k opredeleniyu nailuchshikh dostupnykh tekhnologiy (NDT) v stranakh mira [Best Available Techniques for preventing and controlling industrial pollution. Activity 2: Approaches to establishing Best Available Techniques (BAT) around the world], Moscow, 2018, 156 P.; <https://www.oecd.org/chemicalsafety/risk-management/approaches-to-establishing-best-available-techniques-around-the-world-russian.pdf>.
6. Nikitin G.S., Os'makov V.S., Skobelev D.O. Soglasovanie ekologicheskoy i promyshlennoy politiki: global'nye indikatory [Harmonization of environmental and industrial policy: global indicators], *Kompetentnost'*, 2017, no. 7(148), pp. 20–28.
7. Polders C., Van den Abeele L., Derden A., Huybrechts D. Methodology for determining emission levels associated with the Best Available Techniques for industrial wastewater, *Journal of Cleaner Production*, 2012, vol. 29–30, pp. 113–121.
8. RF Government Decree of 26/10/2019 N 1379 On approval of the Rules for classifying water bodies as water bodies for the purpose of establishing BAT-related technological parameters in the field of wastewater treatment using centralized wastewater disposal systems in settlements or urban districts.
9. Grevtsov O.V., Astrakhanov M.E., Epov A.N. Primenenie evropeyskikh podkhodov k opredeleniyu tekhnologicheskikh pokazateley nailuchshikh dostupnykh tekhnologiy v sfere ochistki stochnykh vod [Application of European approaches to determining the BAT-related technological parameters in the field of wastewater treatment], *Vodnoe khozyaystvo Rossii: problemy, tekhnologii, upravlenie*, 2021, no. 4, pp. 105–117.
10. RF Government Decree of 31/12/2020 N 2398 On approval of the criteria for classifying objects with a negative impact on the environment as category I, II, III and IV objects.
11. RF Government Order of 8/07/2015 N 1316-r On approval of the list of pollutants subject to state regulation measures in the field of environmental protection.
12. RF Government Decree of 15/09/2020 N 1430 On approval of the BAT-related technological parameters in the field of wastewater treatment using centralized wastewater systems in settlements or urban districts.
13. Volosatova A.A., Uchenov A.A., Skobelev D.O. Formirovanie kontseptsii vnedreniya printsipov zelenoy ekonomiki v Evraziyskom ekonomicheskom soyuze: rol' garmonizatsii podkhodov k povysheniyu resursnoy effektivnosti [Forming the concept of implementing green economy principles in the Eurasian Economic Union: the role of harmonizing resource efficiency approaches], *Vestnik evraziyskoy nauki*, 2022, vol. 14, no. 4; <https://esj.today/PDF/23ECVN422.pdf>.