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Launch of PFAS analysis in water discharges from classified facilities

Although the scientific community has been warning of the risks associated with the use of poly- or perfluoroalkyl substances (PFAS) since the early 2000s, there was until now no regulations governing discharges from industrial facilities.

As part of the PFAS 2023 2027 action plan presented earlier this year by the French Ministry of Ecological Transition and Territorial Cohesion, a ministerial order relating to the analysis of per- and polyfluoroalkyl substances in water discharges from classified facilities[1] that are subject to the so-called authorization regime was published on June 20, 2023[2].

The ministerial order defines the procedures for campaigns that will be implemented to identify and analyze per- or polyfluoroalkyl substances in water discharges from some classified facilities subject to the authorization regime.

Twenty PFAS substances, covered by the European Directive on water intended for human consumption, will be subject to mandatory analysis.

Background

PFAS are a family of chemical compounds characterized by a fluorinated carbon chain. There are over 4,000 different PFAS, all of human origin. They have been used since the 1950s in industrial applications and consumer products (textiles, packaging, cosmetics, frying pans, etc.) because of their specific properties such as heat resistance. They are found in a wide variety of environments (surface water and groundwater, air, soil, food chain, etc.). They are highly mobile and degrade very slowly. They are known as “forever chemicals”. Depending on the extent of exposure, some can have health effects.

To date, European and national regulations have focused on just a few substances. EU Regulation No. 2019/2021 of June 20, 2019 on persistent organic pollutants (POP), stemming from the Stockholm Convention, has banned PFOS (perfluorooctane sulfonate) since 2009, PFOA (perfluorooctanoic acid) since 2020 and PFHxS (perfluorohexane sulfonate) since 2022[3].

A broader ban on PFAS is also planned as part of the revision of EC Regulation 1907/2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)[4]. Since 2023, maximum levels, either of a regulatory (for the placing on the market) or recommendatory nature, for PFOA, PFOS, PFNA (perfluorononanoic acid) and PFHxS have been set for foodstuffs[5]. Lastly, drinking water must comply with a standard (0.50 µg/l for PFAS total or 0.1 µg/L for the sum of 20 PFAS) by 2026, or from 2023 for abstractions of water analyzed by the authorities[6].

These EU Directives and Regulations have been transposed into French law, in particular through:

- Executive order No. 2022-1611 of December 22, 2022 on access to and quality of water intended for human consumption, and its two implementing decrees No. 2022-1720 of December 29, 2022 on the safety of water intended for human consumption, and No. 2022-1721 of December 29, 2022 on improved access for all to water intended for human consumption;
- Ministerial order of April 26, 2022 amending the ministerial order of January 25, 2010 establishing the program for monitoring the status of water in application of Article R. 212-22 of the French Environmental Code;
- Ministerial order of February 2, 1998 on water abstraction and consumption and on emissions of any kind from classified facilities subject to the authorization regime (which only refers to PFOS and sets a concentration limit of 25 µg/l in water discharged into the natural environment).

It is within this context that the documentary *Vert de rage – Alerte aux polluants éternels* (English title: *Green Warriors: Forever Chemicals*) broadcast on France 2 TV channel on May 12, 2022, revealed to the public the high presence of PFAS in water in the Lyon region, at the heart of the so-called "chemical valley", and triggered action by the French government concerning discharges by Arkema and Daikin companies in the city of Pierre-Bénite.

On January 17, 2023, French Ministry for Ecological Transition and Territorial Cohesion presented the PFAS 2023-2027 action with the aim *inter alia* of setting standards for discharges and environments.

Area of action No. 4 of the action plan aims to significantly reduce emissions from industrial companies that emit PFAS substances. It is in these circumstances that a ministerial order was published on June 20, 2023. This order defines the procedures of a campaign to identify and analyze PFAS in water discharges from some classified facilities that are subject to the authorization regime.

Obligation to draw up a list of PFAS substances

Operators of classified facilities subject to the authorization regime under one of the classes listed in the ministerial order are required to draw up, within three months, a list of PFAS substances used, produced, treated or discharged by their facility(ies), as well as PFAS substances produced by degradation (Article 2).

Substances used, produced, treated or discharged before the entry into force of the ministerial order must also be included in the list, together with the date on which they are likely to have been discharged.

The following classes of activities, as set forth in the nomenclature of classified facilities, are targeted by the ministerial order: 2330, 2345, 2350, 2351, 2567, 2660, 2661, 2750, 2752, 2760, 2790, 2791, 2795, 3120, 3230, 3260, 3410, 3420, 3440, 3450, 3510, 3531, 3532, 3540, 3560, 3610, 3620, 3630, 3670, 3710 or 4713 (Article 1).

Classified facilities that are subject to the authorization regimes whose activities are not included in the above classes but who use, produce, process or discharge PFAS substances are also subject to this new obligation (Article 1).

Identification and analysis campaign

The relevant operators must carry out a campaign to identify and analyze PFAS substances at each point of water discharge from their facility, with the exception of points of discharge of uncontaminated rainwater (Article 3).

This campaign must include:

- Assessment of the total quantity of PFAS substances present, in fluoride equivalent, using the adsorbable organic fluorine (AOF) method;
- Compulsory analysis of each of the twenty substances listed in the European Directive on water intended for human consumption;
- Search for and analysis of any other PFAS substances, mentioned in the list drawn up by the operator and technically quantifiable in accordance with the provisions of the ministerial order, not included in the aforementioned list of twenty substances and likely to be or to have been present in water discharges. A list of eight substances to which specific attention must be given is provided.

Sampling and analysis procedures are specified in Article 4 of the ministerial order.

The analysis campaign must be carried out every month for three consecutive months, using samples taken as per the instructions specified in the ministerial order.

Implementation deadlines vary according to the classes of activities

For the first analysis campaign, deadlines are set according to business sector in order to take into account the availability of laboratories.

The following schedule has been established:

- For classes 2660, 2661, 2760, 2790, 3410, 3420, 3440, 3450, 4713: 3 months from June 28, 2023;
- For classes 2330, 2345, 2350, 2351, 2567, 2750, 2752, 2795, 3120, 3230, 3260, 3610, 3620, 3630, 3670, 3710: 6 months from June 28, 2023;
- For classes 2791, 3510, 3531, 3532, 3540, 3560: 9 months from June 28, 2023.

If a facility is subject to the authorization regime for several classes of activities, the longest deadline shall apply.

For facilities that are subject to the authorization regime for classes of activity not mentioned above, the first campaign is to be completed no later than nine months from June 28, 2023.

Transmission of results to the Classified Facilities Inspectorate

The relevant operators must transmit electronically the commented results of these analysis to the Classified Facilities Inspectorate no later than the last day of the month following each campaign.

If an operator is unable to meet the deadline, it must inform the Classified Installations Inspectorate and provide justification of its inability to do so. In this case, the results must be transmitted no later than one month after the initial deadline.

Facilities where analysis of PFAS substances in their water discharges was carried out before the ministerial order came into force may benefit from an adaptation of the conditions under which the analysis campaigns are to be carried out.

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[1] Under French law, an *installation classée pour la protection de l'environnement* (ICPE) (literally a classified facility for the protection of the environment) is an industrial or agricultural facility that is likely to present a risk or cause pollution or nuisance, especially for the safety or health of local residents. The activities covered by the legislation on classified facilities are set forth in a list that indicates whether they are subject to the authorization, registration or administrative declaration regime, depending on the level of risks or inconveniences they present.

[2] Ministerial order of June 20, 2023 on the analysis of analysis of per- and polyfluoroalkyl substances in water discharges from classified facilities subject to the authorization regime (NOR: TREP2315342A).

Available at https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000047739535 (in French only)

[3] EU Regulation No. 2019/2021 of June 20, 2019 on persistent organic pollutants. Available at https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:32019R1021&qid=1694512998928

[4]EC Regulation No. 1907/2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH). Available at: http://data.europa.eu/eli/reg/2006/1907/oj. To follow up on the PFAS restriction proposal published by the European Chemicals Agency, available for public consultation until September 25, 2023, please visit https://echa.europa.eu/hot-topics/perfluoroalkyl-chemicals-pfas

[5] EU Regulation No. 2022/2388 of December 7, 2022 amending EC Regulation No. 1881/2006 as regards maximum levels of perfluoroalkyl substances in certain foodstuffs. Available at http://data.europa.eu/eli/reg/2022/2388/oj

[6] EU Directive No. 2020/2184 of the European Parliament and of the Council of December 17, 2020 on the quality of water intended for human consumption. Available at http://data.europa.eu/eli/dir/2020/2184/oj