

NSW ENVIRONMENT PROTECTION AUTHORITY
PROTECTION OF THE ENVIRONMENT OPERATIONS ACT 1997
LANDFILL AND SEWAGE TREATMENT PLANT PFAS MONITORING
CHEMICAL CONTROL ORDER

I, Emma Whale, Executive Director Regulatory Practices and Services of the NSW Environment Protection Authority (EPA), by this Order, regulate certain activities in relation to specified per- and polyfluoroalkyl substances (PFAS).

Authority to make the order

1. This Order is made by the EPA under sections 296I and 296J of the Act and it applies to the whole of New South Wales.

Title

2. This Order may be cited as the “Landfill and Sewage Treatment Plant PFAS Monitoring Chemical Control Order 2025”.

Definitions

3. In this Order:

Act means the *Protection of the Environment Operations Act 1997*.

Approved Methods for the Sampling and Analysis of Water Pollutants in NSW means *Approved Methods for the Sampling and Analysis of Water Pollutants in New South Wales*, NSW EPA, 2022.

CAS-RN means the Chemical Abstracts Service Registry Number for a chemical.

downgradient groundwater monitoring location means a groundwater monitoring location specified on a licence for a landfill that is downgradient of a landfill cell or cells.

downstream surface water monitoring location means a surface water monitoring location specified on a licence for a landfill that is downstream of a landfill cell or cells.

EPA means the Environment Protection Authority established under the *Protection of the Environment Administration Act 1991* (NSW).

environment has the same meaning as in the Act.

exception report means a report detailing when sampling cannot be carried out as specified in any part of this Order. For example, where there is no surface water or groundwater at a monitoring point at the time scheduled for sampling.

groundwater means any underground or artesian water.

land has the same meaning as in the Act.

landfill means a premises licenced for the scheduled activity of waste disposal by application to land under clause 39 of Schedule 1 of the Act.

leachate means the liquid that passes through, or is released by, waste.

licence has the same meaning as in the Act.

licensee means a person who holds a licence for a landfill or a sewage treatment plant.

PFAS NEMP means the *PFAS National Environmental Management Plan Version 3.0*, Heads of EPA Australia and New Zealand 2025.

quarter means a period of 3 calendar months ending on 31 March, 30 June, 30 September or 31 December.

sewage treatment plant means a premises licenced for the scheduled activity of sewage treatment under clause 36 of Schedule 1 of the Act, except premises where the licence is held by Sydney Water Corporation.

Note: Licences held by Sydney Water Corporation for sewage treatment contain conditions requiring a pollution study to be conducted for PFAS monitoring.

surface waters means any river, stream, lake, lagoon, swamp, wetlands, unconfined surface water, natural or artificial watercourse, dam or tidal waters (including the sea).

Sydney Water Corporation means the corporation constituted under section 4 of the *Sydney Water Act 1994*.

treated effluent means effluent, as defined in Schedule 1 of the Act, that has been processed at the sewage treatment plant for disposal or discharge at or from those premises.

US EPA Method 1633A means *Method 1633, Revision A: Analysis of Per- and Polyfluoroalkyl Substances (PFAS) in Aqueous, Solid, Biosolids, and Tissue Samples by LC-MS/MS (EPA 820-R-24-007)*, United States Environmental Protection Agency.

waters has the same meaning as in the Act.

waste has the same meaning as in the Act.

year means a period of time starting on the anniversary date specified in a licence and ending on the 12-month anniversary of that date.

Chemicals to which this Order relates

4. This Order relates to the chemicals specified in Table 1:

Table 1: Chemicals subject to this order				
Name	Abbreviation	CAS-RN	Maximum Limit of Reporting (µg/L) for all samples, except landfill leachate	Maximum Limit of Reporting (µg/L) for landfill leachate
Perfluorooctanoic acid	PFOA	335-67-1	0.001	0.01
Perfluorooctanesulfonic acid	PFOS	1763-23-1	0.001	0.01
Perfluorohexanesulfonic acid	PFHxS	355-46-4	0.001	0.01
Perfluorobutanesulfonic acid	PFBS	375-73-5	0.005	0.01

5. If a chemical specified in Table 1 of this Order is mixed with other chemicals or substances, the Order applies to the other chemicals or substances in the same way as it applies to the specified chemical.

Activities regulated by this Order

6. This Order regulates the following activities relating to the chemicals specified in Table 1:
- 6.1. disposing of or discharging leachate or treated effluent containing one or more of the chemicals specified in Table 1 to land at or from a landfill or sewage treatment plant; and
 - 6.2. disposing of or discharging leachate or treated effluent containing one or more of the chemicals specified in Table 1 to waters at or from a landfill or sewage treatment plant.

How activities are regulated by this Order

7. The activities specified in clause 6 of this Order are regulated in the following ways:

Sampling at landfills and sewage treatment plants

- 7.1. A licensee of a landfill or sewerage treatment plant must conduct sampling at the licenced premises in the manner and sequence set out in this Order.

Sample Collection - General

- 7.2. Samples of leachate, groundwater, surface water or treated effluent required to be collected under this Order must be collected and handled in accordance with the *Approved Methods for the Sampling and Analysis of Water Pollutants in New South Wales*, NSW EPA, 2022.

Sample Collection – Landfills

- 7.3. A licensee of a landfill must undertake the following sampling at the licensed premises:
- a. a sample of leachate must be collected from all leachate quality monitoring locations specified in the licence. This sampling must be undertaken at least once per year; and

- b. where the licence specifies downgradient groundwater monitoring locations, a sample of groundwater must be collected from a downgradient groundwater monitoring location for each landfill cell as specified in the licence. This sampling must be undertaken each quarter with a minimum of 60 days between each quarterly sampling event; or
- c. where a downgradient monitoring location is not specified in the licence, a sample of surface waters must be collected from a downstream surface water monitoring location for each landfill cell as specified in the licence. This sampling must be undertaken each quarter with a minimum of 60 days between each quarterly sampling event. In the event that the licensed landfill does not have either a downgradient or surface water monitoring location, then the licensee should contact the EPA to arrange to monitor another suitable location.

Sample collection - Sewage Treatment Plant

- 7.4. A licensee for a sewage treatment plant must undertake the following sampling at the licensed premises:
- a. treated effluent samples must be collected each quarter from the treated effluent quality monitoring point specified in the licence that is at, or closest to, the point where the treated effluent is discharged to the environment; and
 - b. there must be a minimum of 60 days between each quarterly sampling event.

Sample analyses

- 7.5. A licensee must have all samples collected under clause 7 analysed to quantify the concentrations of the chemicals listed in Table 1 at the limits of reporting (LOR) shown in Table 1.
- 7.6. The analysis must be performed in accordance with the methods described in Approved Methods for the Sampling and Analysis of Water Pollutants in New South Wales, NSW EPA, 2022, using a method that is appropriate for the analysis of PFAS in Aqueous Samples by LC-MS/MS, based on USEPA 1633A.

Reporting results

- 7.7. A licensee must submit a report to the EPA on the anniversary date detailed in its licence. That report must include the information and records referred to in Table 2 for samples analysed under this Order.
- 7.8. “The report must be submitted to the EPA using the EPA’s online portal as specified by the EPA or otherwise via email to info@epa.nsw.gov.au.

Table 2 – reporting requirements	
1.	Environment Protection Licence number
2.	Lab identification

3.	EPA Monitoring Point ID number
4.	Date collected (DD/MM/YYYY)
5.	Time collected
6.	Chemical
7.	Limit of Reporting
8.	Value
9.	Unit of measurement
10.	A description of exception reporting summarising why there has been no sample collected or analysed.

Record keeping

8. A licensee must keep records of all the information set out in Table 3.

8.1. The records must be kept for a minimum period of four years from the date of the licence anniversary.

8.2. The licensee must make the records available for inspection and copying by an authorised officer if requested.

Table 3 – record keeping requirements	
1.	Name of the facility, licensee and licence number.
2.	Name of the sampling location as identified in the licence
3.	Details (first and last name, phone number, email address, postal address, entity name/company name) of sampling team
4.	Signed copies of chain of custody documentation including – for each sample – the sampler, nature of the sample, collection date, analyses to be performed, sample preservation method, departure time from the site and dispatch courier(s) (where applicable)
5.	Details of the sampling devices, container type and equipment
6.	Laboratory accreditation for analytical methods used, also noting any methods used which are not covered by accreditation
7.	All relevant laboratory sheets.
8.	A description of exception reporting summarising why there has been no sample collected or analysed.

Prior sampling results

9. A licensee may submit a report under clause 7.6 containing the information and records in Table 2 for sampling results obtained prior to the commencement of this Order, as though they had otherwise been sampled and analysed in accordance with clause 7 of this Order, if:

- a. the samples of leachate, groundwater, surface water or treated effluent were collected at a landfill or a sewage treatment plant:

- i. in accordance with the *Approved Methods for the Sampling and Analysis of Water Pollutants in New South Wales*, NSW EPA, 2022; and
 - ii. at the same locations referred to in this clause 7; and
- b. the sampling results contain concentration results for the chemicals listed in Table 1; and
- c. the samples were analysed in accordance with the methods described in clause 7.5.

When sampling under this Order may cease

10 A licensee is not required to comply with the requirements of clause 7.1 to clause 7.6 of this Order if:

10.1 in the case of a landfill, the licensee has completed one sampling event for leachate and four quarterly sampling events for groundwater or surface water; or

10.2 in the case of a sewage treatment plant, the licensee has completed four quarterly sampling events for treated effluent;

and

10.3 the licensee has submitted reports to the EPA for those sampling events in accordance with clause 7.6; and

10.4 the conditions of the licence for the landfill or the sewage treatment plant explicitly deal with the monitoring of the chemicals referred to in Table 1. For the avoidance of doubt, such conditions in the licence may contain requirements that are different to the requirements of this Order.

Commencement

11. This Order commences on 1 October 2026, being more than 21 days from the date of publication of this Order.

Grounds for making this Order

12. In accordance with section 296I(1) of the Act, the EPA has made this Order regulating the disposing of the chemicals specified in Table 1 and activities relating to the disposal of those chemicals, namely:

- 12.1. discharging leachate or treated effluent containing the chemicals specified in Table 1 to land at or from the licensed premises; and

- 12.2. discharging leachate or treated effluent containing the chemicals listed in Table 1 to waters at or from the licensed premises.
13. For the purposes of section 296I(2) of the Act, the EPA is satisfied that the Order is necessary to prevent or minimise an adverse effect on the environment that may result from carrying on the activities referred to in clause 6 in relation to the chemicals specified in Table 1, namely:
 - 13.1. The PFAS NEMP has identified landfill leachate and effluent from sewage treatment plants as possible sources of the chemicals specified in Table 1 in the environment,
 - 13.2. The PFAS NEMP contains guideline values that act as a trigger to undertake further investigations if those values are exceeded,
 - 13.3. Leachate or treated effluent containing any chemical specified in Table 1 that is discharged from licensed premises is characterised as ‘waste’ under the Act,
 - 13.4. For the purposes of section 296I(3), an activity that results in or is likely to result in otherwise dealing with the chemicals specified in Table 1 as ‘waste’ is taken to have an adverse effect on the environment, and
 - 13.5. This Order minimises the adverse effect on the environment of dealing with the chemicals specified in Table 1 as waste by requiring monitoring to be undertaken in line with the PFAS NEMP. This monitoring will inform the EPA’s regulatory approach to the release of the chemicals into the environment.

Complying with this Order

14. It is an offence under section 296L of the Act to carry on an activity in relation to a chemical in contravention of this Order.
15. An offence against section 296L of the Act is also an executive liability offence.
16. A licence does not authorise the carrying out of an activity in contravention of this Order. To avoid doubt, in the event of an inconsistency between this Order and a licence condition, this Order prevails to the extent of the inconsistency.

Emma Whale (by delegation)

Executive Director Regulatory Practices and Services
Environment Protection Authority
Date: 25 May 2026