



Section 73A  
*Environmental Protection Act 1986.*

## PREVENTION NOTICE

Reference No: 202302

### **Persons to whom this prevention notice is issued:**

**Alcoa of Australia Ltd ACN 004 879 298**  
181-205 Davy Street  
BOORAGOON WA 6154

### **Premises to which this notice relates (the Premises):**

The Premises, the subject of this section 73A *Environmental Protection Act 1986* (WA) Prevention Notice (**Notice**), is situated on:

Willowdale Mine - Waroona Willowdale Rd (via Wagerup Refinery Access Rd) WAROONA WA 6215 located in Mining Lease AML 70/01 and including the Arundel, Orion and Larego Regions (the **Premises**).

### **Reasons for which this Notice is issued:**

This Notice is given because I reasonably suspect that a condition of pollution is likely to arise.

*PFAS* are a group of synthetic chemicals which are persistent and bio-accumulate in the environment. *PFAS* is highly soluble and highly mobile and has the potential to cause impacts to aquatic ecosystems and human health.

Works approval application W6721/2022/1 proposes the construction of infrastructure at the Premises, including a *PFAS* treatment plant, multiple dams and pipeline that crosses the Samson drinking water supply dam, to transfer *PFAS* contaminated wastewater from the Orion mining area to the Arundel mining area. This application remains under assessment by the department.

On 23 February 2023 *Inspectors* from the department attended Willowdale Mine. Preliminary investigations have identified that:

- the *PFAS* pipeline and multiple dams have been constructed and operated at the Premises;
- the *PFAS* pipeline is likely to contain *PFAS* contaminated wastewater;
- the *PFAS* pipeline has been constructed in contravention of the Department of Water and Environmental Regulation's Public Drinking Water Supply Protection Policy; and
- the *PFAS* pipeline's design and construction does not meet the infrastructure containment measures specified in the *PFAS* NEMP to prevent the release of *PFAS* to soil, groundwater, or surface waters.
- The *PFAS* pipeline has been constructed through locations where it can easily be damaged by site equipment and vehicles and its integrity compromised.

The Samson Brook catchment is a significant human health receptor and there are various ecological receptors adjacent to the constructed and operated infrastructure. These include aquatic and riparian fauna recorded in the Samson Brook Catchment area and a conservation park which runs adjacent to the constructed PFAS pipeline.

I consider that a release of PFAS contaminated water through pipeline joints or loss of pipeline integrity to be a real and not remote possibility and that such an event will cause emissions which will cause a direct or indirect alteration of the environment to its detriment or degradation or to the degradation of an environmental value.

I am satisfied that:

**Alcoa of Australia Ltd** is the company who has constructed and operated the dams and PFAS pipeline

and are the appropriate person/s to give this Notice to.

**Requirements of this Notice:**

Terms used in this Notice have the meaning defined in Appendix 1 to this Notice.

In accordance with section 73A(2)(a) of the Act, this Notice is subject to the following requirements to prevent the condition of pollution from arising.

**Requirements**

1. From the date this Notice is given, the persons to whom this Notice is given must not operate the constructed PFAS pipeline other than to comply with the requirements of this Notice.
2. Within 2 days (excluding any public holiday) from the date this Notice is given, the person to whom this Notice is given must purge the PFAS pipeline with clean water to remove any PFAS contaminated water.
  - 2.1. The person to whom this Notice is given must purge the PFAS pipeline into the Arundel Receiving Dam 2.
  - 2.2. The person to whom this Notice is given must, after purging the PFAS pipeline in accordance with Requirement 2, take two samples of water from the PFAS pipeline and subject them to testing as set out in Table 1.

**Table 1 – Sampling and testing requirements**

Column 1	Column 2	Column 3	Column 4	Column 5
Location	Parameter	Units	Averaging period	Method
2 samples from the PFAS pipeline post purging in accordance	Perfluorooctane sulfonate (PFOS)	µg/L	Spot sample	Chemical analysis by a <i>NATA</i> -accredited laboratory using an appropriate standard method
	Perfluorooctanoic acid (PFOA)			
	Perfluorohexane sulfonate (PFHxS)			

with Requirement 2				in accordance with guidance provided in the PFAS NEMP
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2.3. In the event that the analysis result of the samples tested in accordance with Requirement 2.3 identify the presence of PFOS , PFOA or PFHxS in the PFAS pipeline exceeding the concentration listed in Table 2 below, the person to whom this Notice is given must repeat the action specified in Requirement 2, Requirement 2.1, Requirement 2.2 until such time as PFAS levels within the PFAS pipeline are less than the limits in Table 2.

**Table 2 – PFAS limits**

Column 1	Column 2	Column 3	Column 4	Column 5
Location	Parameter	Units	Averaging period	Limit
2 samples from the PFAS pipeline post purging in accordance with Requirement 2	PFOS	µg/L	Spot sample	0.00023
	PFOA			19
	PFHxS			0.07

2.4. The person to whom this Notice is given must, within 24 hours of sample analysis results for the samples taken and tested in accordance with Requirement 2.2 being available, provide copies of all sample analysis results to the CEO by email to [compliance@dwer.wa.gov.au](mailto:compliance@dwer.wa.gov.au)

2.5. Within 28 days of the PFAS pipeline being purged, the person to whom this Notice is given must dispose of all the purged PFAS contaminated water in the Arundel Receival Dam 2 to a waste disposal facility that is authorised to accept the liquid waste.

2.6. The Person to whom this Notice is given must, within 14 days from the date of all purged water being disposed of from the Arundel Receival Dam 2 as required by Requirement 2.5, provide the following information to the CEO:

- a. the quantity (litres) of all water purged from the PFAS pipeline disposed of under Requirement 2.5 of this Notice; and
- b. the name of the authorised Premises where the water purged from the PFAS pipeline was disposed.

3. The timeframes stipulated in this notice may be amended by an Inspector or Authorised Officer in writing on application with reasonable justification.

**Duration**

This Notice subsists until it is cancelled by written notice of the CEO.



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Paul Newell  
**Inspector and *Authorised Officer*** under the *Environmental Protection Act 1986*

3 March 2023

**Important Information:**

A PERSON WHO IS BOUND BY THIS PREVENTION NOTICE AND WHO DOES NOT COMPLY WITH THIS NOTICE COMMITS AN OFFENCE UNDER THE *ENVIRONMENTAL PROTECTION ACT 1986*.

Note that under section 118 of the Act that each person who is a director or who is concerned in the management of the body corporate may be taken to have also committed the same offence.

Section 103 of the Act provides that:

- a person who is aggrieved by a requirement contained in this Notice may within 21 days of being given this notice lodge with the Minister for Environment an appeal in writing setting out the grounds of that appeal; and
- any other person who disagrees with a requirement contained in this Notice may within 21 days of the making of that requirement lodge with the Minister for Environment an appeal in writing setting out the grounds of that appeal.

PENDING THE DETERMINATION OF AN APPEAL REFERRED TO ABOVE, THE RELEVANT REQUIREMENTS CONTAINED IN THIS NOTICE CONTINUE TO HAVE EFFECT.

## Appendix 1: Definitions

**In this Notice, unless the contrary intention appears –**

**‘Act’** means the *Environmental Protection Act 1986* (WA).

**‘AS/NZS 5667.6’** means the Australian Standard AS/NZS 5667.6 Water Quality – Sampling – Guidance on sampling of rivers and streams

**‘Authorised person’** means a person or member of a class of persons appointed under section 87(1), and includes the CEO

**‘CEO’** means Chief Executive Officer, Department of Water and Environmental Regulation; and

**‘CEO’** for the purposes of correspondence means;

Chief Executive Officer  
Department of Water and Environmental Regulation  
Locked Bag 10  
JOONDALUP DC WA 6919  
Telephone: (08) 6364 7000  
Fax: (08) 6364 7001  
Email: [compliance@dwer.wa.gov.au](mailto:compliance@dwer.wa.gov.au)

**‘Days’** means all days including weekends.

**‘Department’** means Department of Water and Environmental Regulation.

**‘Inspector’** means a person appointed to be an inspector under section 88 of the Act and includes the CEO.

**‘NATA’** means National Association of Testing Authorities

**‘PFAS’** means perfluoralkyl and polyfluoralkyl substances

**‘PFAS NEMP’** means the PFAS National Environmental Management Plan Version 2.0, dated January 2020, published by the National Chemicals Working Group of the Heads of EPAs Australia and New Zealand.

**‘PFAS pipeline’** means the pipeline constructed between the Orion and Arundel mine areas at the Premises and labelled as the ‘Orion to Arundel PFAS Pipeline’.

**‘Premises’** refers to the Premises to which this Notice applies, as specified at the front of this Notice.

**‘Purge’** means pumping clean water through the PFAS pipeline to remove its contents and replace with clean water