



Clean-Up Notice

Licence 11436

VEOLIA ENVIRONMENTAL SERVICES (AUSTRALIA) PTY LTD
20 051 316 584
LEVEL 4, 65 PIRRAMA ROAD
PYRMONT NSW 2009

Attention: The Proper Officer

Notice Number 3510126
Reference Number REG-5374
Date 08-10-2024

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Why is the EPA writing to you?

The Environment Protection Authority (EPA) reasonably suspects that a pollution incident has occurred or is occurring at the Woodlawn Landfill (Bioreactor) at COLLECTOR ROAD TARAGO NSW 2580 as defined in Environment Protection Licence no. 11436 (Premises). The EPA has issued you with this Clean-up Notice. Further information is set out in the notice below.

What are you required to do?

Please read this notice carefully and carry out the clean-up action specified in this notice by the date required. If you have any queries about this matter, please contact Tracey McAndrew on (02) 9995 5000.

BACKGROUND

- A. The EPA has responsibility for the administration and enforcement of the *Protection of the Environment Operations Act 1997 (Act)*.



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- B. VEOLIA ENVIRONMENTAL SERVICES (AUSTRALIA) PTY LTD (Licensee) is the occupier of the Premises in that the Licensee has management and/or control of the Premise for the purposes of s 91(1)(a) of the Act. The Licensee has management or control of the Premises as the holder of Environment Protection Licence no. 11436 (Licence) which has been issued under the Act in respect of the Premises. The Licence authorises the carrying out the scheduled activity of “*waste disposal (application to land)*” at the Premises.
- C. In accordance with section 6 of the Act, the EPA is the appropriate regulatory authority (ARA) for all activities undertaken on a licensed premises, which includes the Premises referred to in this notice.
- D. The Premises contains a series of dams that capture polluted waters from the licensed activities including from legacy mining and mineral processing operations. An image showing the locations of the dams described below is attached and marked Attachment A.
- E. A portion of the polluted waters stored in dams at the Premises includes leachate that is extracted from the Bioreactor void which is partially treated through an aeration system prior to storage. The following dams store this partially treated leachate:
1. Leachate Treatment Dam (LTD)
 2. Evaporation Dam 3 South-South (ED3SS)
 3. Evaporation Dam 3 north (ED3N) which consists of 4 lagoons named 1 – 4.
- F. This partially treated leachate stored in the dams outlined in point E. is considered polluted as it has high concentrations of ammonia and total dissolved solids and low levels of dissolved oxygen.
- G. The Licensee operates a Leachate Treatment Plant (LTP) and extracts and treats leachate from the LTD which it treats continuously at a flow rate of 4L/s. The treated leachate is then discharged into one of two dams within Evaporation Dam 1 (ED1) known as ED1 Cofferd Dam 1 and ED1 Cofferd Dam 2. The Licensee has advised that this level of leachate extraction needs to continue to ensure landfill gas extraction is maintained. This assists in managing potential odours generated from the Bioreactor’s operation.
- H. ED1 Cofferd Dam 1 and ED1 Cofferd Dam 2 are dams that are built within ED1 and each share a wall with ED1. If Cofferd Dam 1 or Cofferd Dam 2 reach capacity and if there is no intervention, they each will overflow into ED1 which will increase the risk of ED1 overflowing and discharging offsite and polluting waters.
- I. The dams at the Premises known as ED1 and the Plant Collection Dam (PCD) contain water that has been polluted by legacy mining activities known as acid mine drainage (AMD), which has a low pH and contains high levels of heavy metals. Water quality monitoring provided to the EPA in the 2022-2023 Annual Return shows that water in ED1 is acidic with a mean pH value of 3.17.
- J. The Licensee pumps AMD from the PCD to ED1 to maintain capacity within the PCD.
- K. The Dam at the Premises known as ED3S receives transferred stormwater inflows from the Bioreactor void that has come into contact with legacy mine workings, potentially containing AMD including heavy metals. Water quality monitoring provided to the EPA in the 2022-2023 Annual Return shows that water in this dam is acidic with mean pH value of 4.23 and it also contains elevated levels of total dissolved solids.
- L. Condition O6.4 of the Licence requires that all dams used for the storage of treated leachate must be maintained with a minimum freeboard of 0.5 metres. Freeboard is the vertical distance from the water surface to the lowest elevation at which water would flow over the dam.
- M. The Licensee operates the following dams at a target minimum freeboard of 0.5 metres as confirmed in the report titled “Veolia Environmental Services Pty Ltd – Interim Water and Leachate



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Management Strategy – Woodlawn Eco-Precinct" prepared by Engeny Australia Pty Ltd and dated 28 August 2024:

1. ED1
2. ED3S
3. ED3SS
4. ED3N 1-4
5. ED1 Cofferd Dam 1
6. ED1 Cofferd Dam 2

- N. Maintaining adequate freeboard is critical to ensuring dam integrity and preventing uncontrolled discharges of polluted water from the dams into the surrounding environment.
- O. Freeboard provides storage space for rainfall to prevent overflows into the environment particularly after storm events and also allows for wave action in the dams. Wind action can generate waves that can potentially either overtop dams and/or damage dams' walls that could lead to an escape of polluted water to the environment.
- P. On 19 July 2024 the EPA issued the Licensee with Prevention Notice No. 3509784 (Prevention Notice) that directed the Licensee to amongst other things, submit a report to provide reasonable and feasible measures and activities to achieve compliance with freeboard limits in all storage dams. It also required the Licensee to assess the risks (actual or likely) of any leachate/water from an accidental or uncontrolled release from dams at the Premises.
- Q. On 19 July 2024 the Licensee self-reported to the EPA that the treated leachate dam known as, Cofferd Dam 2, had exceeded freeboard.
- R. On 31 July 2024 the Licensee submitted a report and associated documentation to meet the requirements of the Prevention Notice which included options to manage leachate at the Premises.
- S. In response to the Prevention Notice, the Licensee submitted a report titled "Preliminary environmental risk assessment for an uncontrolled discharge event from Woodlawn Eco Precinct", prepared by Element Environment Pty Ltd and dated 29 July 2024. That report detailed:
1. An uncontrolled discharge from the dams at the Premises would flow via unnamed ephemeral waterways into either Crisps Creek or Allianoyonyiga Creek. Crisps Creek is located within the upper reaches of the Sydney drinking water catchment. Allianoyonyiga Creek flows into Lake George.
 2. The indicative worst-case water quality for the contents of ED1 included numerous exceedances of the Australia and New Zealand Guidelines for Fresh and Marine Water Quality (2018) including for pH, copper, lead, zinc and ammonia.
- T. On 26 July 2024, the Licensee informed the EPA that three dams, namely ED3S, ED3N 1-4 and ED1 Cofferd Dam 2 had exceeded the 0.5 metre freeboard.
- U. On 12 August 2024, the Licensee self-reported to the EPA that leachate dam, ED3SS had exceeded the 0.5 metre freeboard.
- V. On 23 August 2024, the Licensee self-reported to the EPA that the treated leachate dam known as, ED1 Cofferd Dam 1, had exceeded the 0.5 metre freeboard and further advised the EPA that a 40mm rain event would cause ED1 to reach the 0.5 metre freeboard.
- W. The following dams are exceeding the 0.5 metre freeboard, their locations are summarised in Attachment A of this Notice (**Relevant Dams**).



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1. ED1 Cofferd Dam 1
2. ED1 Cofferd Dam 2
3. ED3S
4. ED3SS
5. ED3N 1-4

Environment Protection Law

X. Section 91 of the Act enables the EPA to issue a Clean-up Notice in respect of a pollution incident. The Dictionary to the Act defines:

- **Pollution incident** as an incident or set of circumstances during or as a consequence of which there is or is likely to be a leak, spill or other escape or deposit of a substance, as a result of which pollution has occurred, is occurring or is likely to occur. It includes an incident or set of circumstances in which a substance has been placed or disposed of on premises, but it does not include an incident or set of circumstances involving only the emission of any noise.
- **Pollution** as including **water pollution**.
- **Water pollution** or **pollution of waters** as
 - a. Placing in or on, or otherwise introducing into or onto, waters (whether through an act or omission) any matter, whether solid, liquid or gaseous, so that the physical, chemical or biological condition of the waters is changed, or
 - b. Placing in or on, or otherwise introducing into or onto, the waters (whether through an act or omission) any refuse, litter debris or other matter, whether solid or liquid or gaseous, so that the change in the condition of the waters of the refuse, litter, debris or other matter either alone or together with any other refuse, litter, debris or matter present in the waters makes, or is likely to make, the waters unclean, noxious, poisonous or impure, detrimental to the health, safety, welfare or property of persons, undrinkable for farm animals, poisonous or harmful to aquatic life, animals, birds or fish in or around the waters or unsuitable for use in irrigation, or obstructs or interferes with, or is likely to obstruct or interfere with persons in the exercise or enjoyment of any right in relation to the waters, or
 - c. Placing in or on, or otherwise introducing into or onto the waters (whether through an act or omission) any matter, whether solid, liquid or gaseous, that is of a prescribed nature, description or class or that does not comply with any standard prescribed in respect of that matter, and, without affecting the generality of the foregoing, includes-
 - d. Placing any matter (whether solid, liquid or gaseous) in a position where-
 - A. It falls, descends, is washed, is blown or percolates, or
 - B. It is likely to fall, descend, be washed, be blown or percolate,into any waters, onto the dry bed of any waters, or into any drain, channel or gutter used or designed to receive or pass rainwater, floodwater or any water that is not polluted, or
 - e. Placing any such matter on the dry bed of any waters, or in any drain, channel or gutter used or designed to receive or pass rainwater, floodwater or any water that is not polluted,



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if the matter would, had it been placed in any waters, have polluted or have been likely to pollute those waters.

- **Waters** meaning the whole or any part of -
 - a. any river, stream, lake, lagoon, swamp, wetlands, unconfined surface water, natural or artificial watercourse, dam or tidal waters (including the sea) or,
 - b. any water stored in artificial works, any water in water mains, water pipes or water channels or any underground or artesian water.
- **Clean-up Action** -
 - a. In relation to a pollution incident – includes -
 - i. Action to prevent, minimise, remove, disperse, destroy or mitigate pollution resulting or likely to result from the pollution incident, and
 - ii. Ascertaining the nature and extent of the pollution incident and the actual or likely resulting pollution, and
 - iii. Preparing and carrying out a remedial plan of action to deal with the pollution incident, and
 - iv. Actions required to restore the environment to a state that is as close as possible to the state of the environment was in immediately before the pollution incident, and
 - v. Carrying out -
 - (A) Specified tests or environmental monitoring, and
 - (B) Action to facilitate testing by the appropriate regulatory authority, and
 - vi. Giving the appropriate regulatory authority a specified test, monitoring or a report, and
 - b. Also includes action to remove or store the following -
 - i. Waste disposed of on land unlawfully,
 - ii. Chemicals,
 - iii. Products or articles containing chemicals

Y. For the purposes of paragraph (c) the definition of **water pollution**, Schedule 5 to the *Protection of the Environment Operations (General) Regulation 2022* the following are prescribed as matter -

1. matter that has a pH value of less than 6.5 or more than 8.5,
2. toxicants for which guidelines are prescribed by the Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2018, published by the Australian and New Zealand Governments and State and Territory Governments, as in force from time to time,
3. copper, lead, or zinc.

Z. Section 93A of the Act, states that

1. This section applies if -
 - a. under this part, a person is required to take clean-up action and



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b. the carrying out of the clean-up action would, but for this section, require consent or approval under the *Environmental Planning and Assessment Act 1979*.

2. Despite the *Environmental Planning and Assessment Act* or an instrument made under the Act, consent or approval under that Act or instrument is not required to carry out the clean-up action.

AA. The EPA reasonably suspects that a pollution incident has occurred or is occurring at the Premises, namely:

1. The Relevant Dams are exceeding freeboard levels, leaving minimal storage capacity at the Premises.
2. The water stored in leachate dams ED3N1-4 and ED3SS is contaminated by ammonia, total dissolved solids and low dissolved oxygen.
3. The water stored in ED3S has low pH and contains AMD from the Bioreactor Void Catchment which contains heavy metal contamination.
4. The water stored in ED1 is contaminated with AMD as referred to in paragraphs I. and S. 2. of this Notice.
5. Despite freeboard levels being exceeded, the Bioreactor will continue to produce leachate that needs to be stored in leachate storage dams prior to treatment and once treated it will be transferred to other leachate storage dams and all those dams will continue to also continue to collect rainwater.
6. The continued generation and storage of leachate, AMD and rainwater in the Relevant Dams above the freeboard levels is likely to cause either the leak, spill or uncontrolled release of that polluted water:
 - a. To directly escape the Premises; or
 - b. To flow into neighbouring dams, including ED1, which is likely to cause those dams to in turn overflow and escape from the Premises.
7. Any polluted water that leaks, spills or otherwise escapes from the Premises will leak, spill, or otherwise escape or be placed into the unnamed ephemeral waterways that leads into Crisps Creek which forms part of the Sydney drinking water catchment and/or Allianoyonyiga Creek which flows into Lake George.
8. As a consequence of the circumstances detailed above, water pollution is likely to occur due to the polluted waters referred to in paragraphs AA.2. - 4. of this Notice being released from the Relevant Dams and being introduced or placed into the waters of Crisps Creek and/or Allianoyonyiga Creek so that:
 - a. The physical, chemical or biological condition of the waters is changed, or,
 - b. Otherwise introducing into the waters matter that is of a prescribed nature including:
 - i. matter that has a pH value of less than 6.5
 - ii. ammonia, being a toxicant for which guidelines are prescribed by the Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2018, published by the Australian and New Zealand Governments and State and Territory Governments, as in force from time to time
 - iii. copper, lead and zinc.

AB. The EPA is directing you to take clean-up action because you are the occupier of the Premises.



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DIRECTION TO TAKE CLEAN-UP ACTION

The EPA directs VEOLIA ENVIRONMENTAL SERVICES (AUSTRALIA) PTY LTD to take the following clean-up action

1. By no later than **30 October 2024** the licensee must commence transporting treated leachate from the Premises to a facility or facilities that can lawfully receive it. For the purposes of this direction, a minimum of 150,000 litres of treated leachate must be transported from the Premises per day. This direction remains in force until 20 November 2024.
2. From **20 November 2024**, until the levels in the Relevant Dams are at or below the 0.5 metre freeboard level, the Licensee must undertake the following:
 - a. Each day, transport from the Premises leachate that has been treated by the Leachate Treatment Plant. The volume of treated leachate that must be transported is a volume that is equivalent to the daily quantity of leachate treated by the Leachate Treatment Plant on the previous day.
 - b. The treated leachate must be transported to a facility or facilities that can lawfully receive it.
 - c. The Licensee must record the daily quantity, in litres, of leachate treated by the Leachate Treatment Plant.
3. Until Directions 1., 2. and 7. are complied with, submit weekly reports to the EPA by **5pm every Friday**, that include the following:
 - a. The daily quantity, in litres, of leachate treated by the Leachate Treatment Plant.
 - b. The date and time each load of treated leachate was transported from the Premises.
 - c. The quantity of each load of treated leachate, in litres, transported from the Premises.
 - d. The name of the receiving facility, address and environment protection licence number or other approval each facility has that permits the receipt of treated leachate.
 - e. For each load of treated leachate, the name of the transport company that transported the treated leachate and name of person who transported each load of treated leachate from the Premises.
 - f. The freeboard level of each of the Relevant Dams, ED1 and the PCD as recorded on the Thursday prior to the submission of the weekly report.
4. By no later than **29 November 2024** the licensee must install temporary storage tanks for storing treated leachate with a combined capacity of 40.5 ML (temporary storage tanks). The Licensee must:
 - a. Install a temporary storage tank or tanks with a combined capacity of 40.5 ML within a suitable area(s) of the Plant Collection Area (PCA) which is identified in Attachment A of this Notice.
 - b. Ensure each tank installed complies with the Building Code of Australia under the *Environmental Planning and Assessment Act 1979* and includes the following:
 - i. Bunding built to the relevant standard and with sufficient storage for 110% of the capacity of the largest tank within the bund.
 - ii. High level alarms installed on each tank.



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- iii. Leak detection/loss of containment systems/alarms for each tank and associated pipework.
5. By no later than **5pm on 13 December 2024** the Licensee must submit the following documents in relation to the temporary storage tanks required to be installed in Direction 4:
 - a. as-constructed drawings for each temporary storage tank including all associated pipework.
 - b. a Construction Quality Assurance (CQA) report for each of the temporary storage tanks and associated bunded area
 - c. a report provided by an independent, suitably qualified and experienced engineer/expert that the tanks meet the requirements of Direction 4.
6. The Licensee must not use the temporary storage tanks required under Direction 4, other than for integrity testing with clean water, until it has further written approval for their use for treated leachate storage from the EPA.
7. Following the EPA's written approval under Direction 6, the Licensee must begin transferring treated leachate to the temporary storage tanks.
8. When a temporary storage tank reaches its operational capacity, it must be emptied, and its contents transported to a facility or facilities that can lawfully receive it or transferred to an alternative storage tank or leachate storage dam that has sufficient capacity to not exceed a freeboard limit of 0.5 metres.
9. When the relevant dams are at or below the 0.5 metre freeboard level, the temporary storage tanks must be emptied, decommissioned and removed from the Premises within three months, unless the Licensee can provide evidence to the EPA that the required statutory approvals have been obtained under the *Environmental Planning and Assessment Act 1979* to authorise the ongoing use of the temporary storage tanks, including in any other location on the Premises.
10. By **5pm on 18 October 2024** the Licensee must submit a written report that assesses the feasibility of the use of thermal evaporators such as Circulating Flash Evaporators (CFE) to reduce the level of treated leachate stored in dams at the Premises. The report must include but need not be limited to:
 - a. Considerations and implications of using landfill gas to power the thermal evaporator.
 - b. Any potential air emissions including estimates of concentrations based on the characteristics and quality of the treated leachate.
 - c. Prioritisation of dams that could utilise thermal evaporators to reduce treated leachate dam levels based on the risk of overflow and subsequent pollution incidents.
 - d. Timeframes to install thermal evaporators.
 - e. Any other limitations or considerations for the EPA's review.
11. By **5pm on 18 October 2024** the Licensee must submit a written report prepared by a competent person as defined in the *Dam Safety Regulation 2019* to undertake a risk assessment of the Relevant Dams and ED1. The assessment must include, but need not be limited to:
 - a. A summary of findings from visual inspections of each Relevant Dam.
 - b. An assessment of structural integrity and environmental risks if freeboard is exceeded in the Relevant Dams and ED1 over the short, medium and long term.
 - c. Recommended measures or rectification works necessary to be undertaken to ensure the structural integrity of the Relevant Dams and ED1 and mitigate environmental risks,

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including any updates to the freeboard levels for each Relevant Dam and ED1, including having regard to the EPA's *Environmental Guidelines: Solid waste landfills* (2016) as applicable.

12. All information and documentation required by these Directions must be submitted electronically to info@epa.nsw.gov.au the attention of EPA Metro South.

FEE TO BE PAID

- You are required by law to pay a fee for the administrative costs of issuing this notice. An invoice for the fee has been attached to this notice.
- It is an offence not to pay this fee. However, you can apply for an extension of time to pay the fee or for the fee to be waived. At the end of this notice there is information about how and when to pay the fee and how to apply for an extension or a waiver of the fee.



Lara Barrington
Unit Head

(by Delegation)

WARNINGS AND INFORMATION ABOUT THIS CLEAN-UP NOTICE

- This notice is issued under section 91 of the Act.
- It is an offence against the Act not to comply with a clean-up notice unless you have a reasonable excuse.
- Details provided in this notice will be available on the Public Register in accordance with section 308 of the Act
- If this notice is issued to a corporation and the notice is not complied with by the date specified, the EPA may, under s 91A(2) of the Act, issue a supplementary clean-up notice to a current or former director or manager, or a related body corporate, directing them to carry out, or ensure the carrying out of, clean-up action specified in the supplementary notice.



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Penalty for not complying with this notice

- The maximum penalty that a court may impose for a corporation is \$2,000,000 and a further \$240,000 for each day the offence continues. The maximum penalty that a court may impose for an individual is \$500,000 and a further \$120,000 for each day the offence continues.

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When this notice begins to operate

- This notice operates from the day the notice is given, unless a later date is specified in the notice.

Continuing obligation

- Under section 319A of the Act, your obligation to comply with the requirements of this notice continues until the notice is complied with in full, even if the due date for compliance has passed.

Cost recovery from the person(s) who caused or contributed to the incident

- If you comply with this clean-up notice but you are not the person who caused, or solely caused, the pollution incident to which the notice relates, you have a right to go to court to recover your costs, or part of your costs, of complying with the notice from persons who caused or contributed to the incident.

Deadline for paying the fee

- The fee must be paid by **no later than 30 days after the date of this notice**, unless the EPA extends the time to pay the fee, or waives the fee.

How to pay the fee

- Possible methods of payment are listed on the last page of the attached invoice/statement.
- Please include the payment slip from the attached invoice/statement with your payment.

How to apply for an extension of time to pay/waive the fee

- Any application for an extension of time to pay the fee or for the fee to be waived must be made in writing to the EPA. The application should set out clearly why you think your application should be granted.

Other costs

- The Act allows the EPA to recover from you reasonable costs and expenses it incurs in monitoring action taken under this notice, ensuring the notice is complied with and associated matters.
- If you are required to pay these other costs and expenses you will later be sent a separate notice called a "Notice Requiring Payment of Reasonable Costs and Expenses".

Variation of this notice

- The requirements of this notice may only be varied or revoked by written notice issued by the EPA.

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Attachment A: Location of Dams at the Premises

