

(Pursuant to section 34 of the Waste Management and Pollution Control Act)

Approval Holder City of Darwin
Approval Number EPA304 - 03

Registered Business

Address

City of Darwin

1 Harry Chan Avenue

Darwin NT 0800

ABN 11 503 313 301

Premises Address Lot 03952 Town of Sanderson plan(s) S 79/149A

VANDERLIN DR, HOLMES

Anniversary Date: 19 August

Commencement Date: 19/08/2023

Expiry Date: 18/08/2024

Scheduled Activity Constructing, installing or carrying out works in relation to

premises, other than sewage treatment plants, for the storage,

re-cycling, treatment or disposal of listed wastes on a

commercial or fee for service basis.

Description This approval is for the construction and commissioning of a

leachate treatment plant and irrigation area at the Shoal Bay Waste Management Facility (SBWMF) consisting of the

following:

a. PFAS foam fractionation;

b. foamate storage and drying of foamate produced by the PFAS foam fractionation;

c. sequential batch reactor (SBR) and moving bed biofilm reactor (MBBR) for nitrogen removal;

d. dissolved air floatation (DAF);

- **e.** sludge storage and drying facility for sludge generated by the DAF;
- **f.** bunded areas for chemical storage including sodium hydroxide;
- **g.** constructed and lined wetland planted densely vegetated with an operating depth between 200mm and 300mm;
- **h.** associated infrastructure including pumps, pipelines, bunds, control room, sheds, fencing, signage, carpark, roads and irrigation infrastructure.

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ATTACHMENTS

1 Attachment 1 - Site Layout and Monitoring Location.pdf

INFORMATION ABOUT THIS APPROVAL

This approval does not in any way relieve the approval holder from its obligations to comply with the
 Waste Management and Pollution Control Act (WMPC Act), including the general environmental duty in
 section 12 of the WMPC Act and the duty to notify of incidents causing or threatening to cause pollution
 under section 14 of the WMPC Act.

Duration of an approval (section 41 of the WMPC Act)

- An approval will remain in force until:
 - 1. its expiry date; or
 - 2. a licence for the premises to which the approval relates comes into force; or
 - **3.** where no expiry date is stated in the approval, two years.
- The approval holder may apply to the NT EPA for an extension or reduction of the period specified on an approval.

Amendment or Revocation of conditions of an approval (section 37 of the WMPC Act)

- The approval holder may apply to amend or revoke a condition of this approval.
- A fee applies and the application must be made using the designated form via NT EPA Online.
- The NT EPA may also amend or revoke a condition of this approval as set out in section 38 of the WMPC Act.

Transfer of an approval (section 46 of the WMPC Act)

The approval holder can apply to transfer their approval to another person.

Extension of an approval (section 41 of the WMPC Act)

- The approval holder may apply to extend their approval not earlier than 90 days, and not later than 30 days, before their approval expires.
- A fee applies and the application must be made via NT EPA Online.

Public Register

- A copy of environment protection approvals and any plans for environmental management, required as a condition of an environment protection approval, will be placed on a register in accordance with section 9 of the WMPC Act.
- A copy of the Annual Return will be placed on the register.
- The NT EPA makes this register freely available from the NT EPA website.

Environment Protection Objectives (Part 4 of the WMPC Act), and Water Quality Standards (section 73 of the Water Act)

- An Environment Protection Objective (EPO) is a statutory instrument to establish principles on which:
 - a. environmental quality is to be maintained, enhanced, managed or protected;
 - **b.** pollution, or environmental harm resulting from pollution, is to be assessed, prevented, reduced, controlled, rectified or cleaned up; and
 - c. effective waste management is to be implemented or evaluated.
- In accordance with section 18 of the WMPC Act a beneficial use, quality standard, criteria or objective declared under section 73 of the Water Act and in force is an environment protection objective for the purposes of the WMPC Act.

• The following EPOs and Beneficial Use Declarations (BUDs) are relevant to this approval:

Environmental Interests

- This section highlights sensitivity of the surrounding land use and environment associated with the location of the approved activity.
- Sites of Conservation Significance (SOCS), including
 - Shoal Bay SOCS number 8; and
 - Darwin Harbour SOCS number 6.
- No Ramsar wetlands

Cultural Interests

• It is the approval holder's responsibility to contact the Aboriginal Areas Protection Authority and ensure that any Authority Certificates required as a result of conducting the activity are obtained and complied with.

RULES FOR INTERPRETING THE CONDITIONS OF THIS APPROVAL

- Where there is a discrepancy between the conditions of this approval and any plan, standard, guideline or other document referred to in this approval, the conditions of this approval prevail to the extent of the inconsistency.
- Any reference to any standard (Australian or international) in this approval means the relevant parts of the current version of that standard.
- A reference to any guideline or code of practice (or to the relevant parts of any guideline or code of practice) in this approval means the current version of the guideline or code of practice.
- Under section 39 of the WMPC Act, any contravention of or failure to comply with this approval by the approval holder may be an offence.
- In determining whether the approval holder has committed an offence, the approval holder may be liable for the conduct of its directors, employees or agents.
- The approval holder should ensure that each of its directors, employees, contractors or agents are aware of, and comply with, this approval.
- In this approval, unless the contrary intention appears, words that are defined in the WMPC Act are intended to have the meaning given to them in that Act.

APPROVAL CONDITIONS

GENERAL

- The approval holder must ensure the contact details recorded in NT EPA Online for this approval are correct at all times.
- 2 The approval holder must at all times have a 24 hour emergency contact.
- The approval holder must cause clear and legible signage, in English, to be displayed in a prominent location at each public entrance to the premises that includes the following details:
 - 3.1 environment protection approval number issued under the WMPC Act; and
 - 3.2 24 hour emergency contact details.
- The approval holder must provide to the NT EPA, within 10 business days of a request, a copy of any document, monitoring data or other information in relation to the activity, in the format requested by the NT EPA.
- All notices, reports, documents or other correspondence required to be provided as a condition of this approval, unless otherwise specified as a condition of this approval, must be provided in electronic form by uploading the document via NT EPA Online (or by emailing waste@nt.gov.au).
- The NT EPA may require the approval holder to submit, revise or amend and resubmit any document. Where the NT EPA requires a document to be submitted or resubmitted, the approval holder must submit it to the NT EPA by the date specified by the NT EPA.
- The approval holder must, for the duration of this approval, implement, maintain and follow a Consultation and Communication Plan which includes a strategy for communicating with persons who are likely to have a real interest in, or be affected by, the activity.
- 8 The approval holder must operate and maintain a community feedback number.
- 9 The approval holder must display the community feedback number:
 - 9.1 where the approval holder has a website, in a prominent location on the approval holder website;
 - 9.2 in the Consultation and Communication Plan; and
 - 9.3 in other publicly available documents relating to the activity.
- The approval holder must maintain a Complaint Log for all complaints received by the approval holder in relation to the activity.
- The approval holder must ensure that the Complaint Log includes, for each complaint received by the approval holder, the following information:
 - 11.1 the person to whom the complaint was made;
 - 11.2 the person responsible for managing the complaint;
 - 11.3 the date and time the complaint was reported;
 - 11.4 the date and time of the event(s) that led to the complaint;
 - the contact details of the complainant if known, or where no details are provided a note to that effect;

- 11.6 the nature of the complaint;
- 11.7 the nature of event(s) giving rise to the complaint;
- 11.8 prevailing weather conditions at the time (where relevant to the complaint);
- 11.9 the action taken in relation to the complaint, including any follow-up contact with the complainant; and
- 11.10 if no action was taken, why no action was taken.

OPERATIONAL

- The approval holder must ensure any plant and equipment used by the approval holder in conducting the activity:
 - 12.1 is reasonably fit for the purpose and use to which it is put;
 - 12.2 is maintained; and
 - 12.3 is operated by a person trained to use the plant and equipment.
- The approval holder must ensure that wastewater generated from washing plant and equipment associated with the activity does not cause pollution.
- The approval holder must segregate waste generated by the activity in clearly designated areas for recycling, re-use or disposal.
- The approval holder must ensure that all materials that are likely to cause environmental harm are handled and stored in areas with a containment system in accordance with the relevant Australian Standard. Where no relevant Australian Standard exists, the containment system must be sized to contain 110% of the volume of the largest container within the area.
- Prior to the commissioning and operation of the irrigation area, the approval holder must have completed the final landfill cap for the landfill stages that are incorporated in the irrigation area. This includes:
 - 16.1 satisfying all conditions associated with an environmental protection approval or licence for the capping; and
 - 16.2 certification from an appropriately qualified person that the design and construction meet the objectives detailed in the NT EPA 2013 Guidelines for the Siting, Design and Management of Solid Waste Disposal Sites in the Northern Territory.
- 17 The approval holder must ensure that the design and location of the irrigation area is suitable for the irrigation activities to be undertaken such that:
 - 17.1 the integrity of the landfill cap is not compromised physically or chemically;
 - 17.2 the topography does not promote ponding within or runoff outside of the irrigation area; and
 - 17.3 adequate buffer distances are in place to ensure spray drift does not migrate outside of the site boundary.
- Prior to construction of the activity the approval holder must develop and implement a Construction Environmental Management Plan (CEMP) for the activity that identifies potential environmental impacts associated with the activity and mitigation measures to be implemented. The CEMP must include:
 - 18.1 erosion and sediment control measures;

- 18.2 emergency response plan that addresses procedures for responding to emergencies associated with the activity that may cause environmental harm;
- 18.3 environmental nuisance control measures: and
- 18.4 any other control measures to manage construction environmental impacts associated with the activity.
- The approval holder must provide a Construction Quality Assurance Plan (CQAP) for the activity to the NT EPA at least 5 business days prior to commencing construction of the activity. The CQAP must:
 - 19.1 include a scope of works;
 - 19.2 include the final specifications and design drawings of the works;
 - 19.3 provide the technical qualifications of the persons(s) who will be overseeing the CQAP;
 - 19.4 describe the details of any proposed inspection, testing and verification methods (including procedures, responsibilities, frequency and reporting); and
 - 19.5 include roles and responsibilities for the implementation of the CQAP.
- The NT EPA may require the approval holder to revise, amend and/or resubmit the CQAP submitted under condition 19. Where the NT EPA requires the CQAP to be resubmitted, the approval holder must submit it to the NT EPA by the date specified by the NT EPA.
- 21 The approval holder must design and construct the activity in a manner which ensures that:
 - 21.1 groundwater is protected from impacts of leachate;
 - 21.2 the wetland liner achieve a maximum permeability of not greater than 1x10⁻⁹m/s; and
 - 21.3 the wetland liner is located above the maximum groundwater elevation with an unsaturated zone immediately below the liners of at least 2 meters.
- This approval does not permit the operation of the leachate treatment plant or disposal of treated leachate to land other than for commissioning purposes. Operation of the leachate treatment plant and disposal of treated leachate to land can only occur once an application to amend Environmental Protection Licence EPL188-03 has been approved.

DISCHARGES AND EMISSIONS

- The approval holder must ensure there is no migration or overflow of a contaminant or waste, which causes or may cause environmental harm, beyond the boundary of the land on which the premises are located. (For the avoidance of doubt, this condition is not intended to authorise the discharge of a contaminant or waste to any land or water which discharge has not been specifically authorised by another condition of this approval.)
- The approval holder must not allow a contaminant or waste, which causes or may cause environmental harm, to enter water.

The approval holder must ensure that stormwater does not come into contact with a contaminant or waste, which causes or may cause environmental harm.

Discharges to land

For the purposes of conditions 24 to 26, inclusive, the word "land" does not include water on, above, or under land.

- Discharge to land is only permitted in this approval for the commissioning of irrigation equipment. Prior to commissioning the approval holder must:
 - 26.1 develop and implement an irrigation commissioning plan, including monitoring program, to validate that irrigation infrastructure is functioning correctly and meeting design objectives;
 - 26.2 have completed the installation and development of all groundwater monitoring wells; and
 - 26.3 have completed baseline monitoring for surface water and groundwater.
- 27 The approval holder must install, operate and maintain a device to measure and record, for each discharge event:
 - 27.1 the time the discharge commenced and the duration of the discharge;
 - 27.2 the discharge rate of flow; and
 - 27.3 the discharge volume.
- The approval holder must ensure that the discharge to land via irrigation complies with the definition of treated leachate in this approval and does not:
 - 28.1 contain any floating debris, oil, grease, petroleum hydrocarbon sheen, scum, litter or other objectionable matter;
 - 28.2 cause or generate odours that may be considered environmental nuisance;
 - 28.3 cause surface ponding or run off of wastewater;
 - 28.4 pollute groundwater or water within a waterway;
 - 28.5 cause erosion or degradation of soil; or
 - 28.6 cause adverse impacts on plants or animals.

MONITORING

- 29 The approval holder must conduct baseline monitoring for surface water and groundwater at locations detailed in Attachment 1.
- The approval holder must develop, implement, maintain and follow environmental monitoring plans ("the Monitoring Plans") for construction, leachate treatment plant commissioning, irrigation infrastructure commissioning and baseline environmental monitoring from the commencement date of this approval.
- The approval holder must ensure that all samples and field environmental data are representative of the conditions at the time of sampling.
- The approval holder must ensure that all samples and field environmental data are collected in accordance with recognised Australian Standards and guidelines (such as AS/NZS 5667, ANZECC /ARMCANZ).

- The approval holder must ensure that all monitoring samples are analysed at a laboratory with current NATA accreditation or equivalent, for the parameters to be measured.
 - For the purposes of this condition, the word "land" does not include water [or air] on or above land.
- 34 The approval holder must for all land based monitoring points specified in the Monitoring Plan:
 - 34.1 install and maintain appropriate identification signage so that they are reasonably identifiable at all times; and
 - 34.2 maintain safe access and egress, as is reasonably practicable.
- The approval holder must ensure any samples collected in accordance with the Monitoring Plan or in connection with the activity or this approval, are obtained by, or under the supervision of a qualified sampler.
- The approval holder must ensure that, for each sample collected in accordance with the Monitoring Plan or the activity the following information must be recorded and retained:
 - 36.1 the date on which the sample was collected;
 - 36.2 the time at which the sample was collected;
 - 36.3 the location at which the sample was collected;
 - 36.4 the name of the person who collected the sample;
 - 36.5 the chain of custody forms relating to the sample;
 - 36.6 the field measurements (if any) and analytical results (if any) relating to the sample; and
 - 36.7 laboratory quality assurance and quality control documentation.
- 37 The approval holder must ensure that any groundwater encountered during construction is:
 - 37.1 sampled for parameters as specified in Table 1.

Table 1. Field parameters and analytical suite for monitoring intercepted groundwater

Field Parameters	Laboratory Parameters
рН	Major ions (Ca, Mg, Na, K, CO ₃ , HCO ₃ , Cl, SO ₄)
Electrical Conductivity	Nutrients (nitrate, nitrite, ammonia, total nitrogen, total phosphorus)
Temperature	total and dissolved Al, Cd, Cr, Cu, Fe, Pb, Mn, Ni, Zn
Dissolved Oxygen	Chemical Oxygen Demand
	Total Organic Carbon
	Total Recoverable Hydrocarbons
	Total Phenolics
	Benzene, Toluene, Ethylbenzene, Xylene and Naphthalene
	PFAS

- 37.2 transferred to the leachate management system if it is contaminated by landfill leachate or construction activities; and
- 37.3 transfers are measured using a flow meter to record the volume of groundwater intercepted and transferred.

RECORDING AND REPORTING

- The approval holder must keep records of all non-compliances with this approval. These records must be adequate to enable the approval holder to comply with the non-compliance notification conditions of this approval.
- The approval holder must notify the NT EPA of any non-compliance with this approval by completing the Non-Compliance Notification via NT EPA Online (or by emailing waste@nt.gov.au), as soon as practicable after (and in any case within 24 hours after) first becoming aware of the non-compliance.
- The approval holder must include in the notification of non-compliance the following information:
 - 40.1 when the non-compliance was detected and by whom;
 - 40.2 the date and time of the non-compliance;
 - 40.3 the actual and potential causes and contributing factors to the non-compliance;
 - 40.4 the risk of environmental harm arising from the non-compliance;
 - 40.5 the action(s) that have or will be undertaken to mitigate any environmental harm arising from the non-compliance;
 - 40.6 corrective actions that have or will be undertaken to ensure the non-compliance does not reoccur;
 - 40.7 if no action was taken, why no action was taken; and
 - 40.8 a date when an incident investigation report will be submitted to the NT EPA.
- The approval holder must ensure that all interceptions with groundwater are recorded, including the following information for each:
 - 41.1 the time and date and GPS coordinates of where groundwater was intercepted;
 - 41.2 the volume intercepted and transferred and where it was transferred; and
 - 41.3 analytical results from sampling undertaken as a condition of this approval.
- The approval holder must complete and provide to the NT EPA, within 20 business days of completion of the activity, a Monitoring Report for all environmental monitoring carried out under this approval The approval holder must ensure the monitoring report:
 - 42.1 is prepared in accordance with the requirements of the NT EPA 'Guideline for Reporting on Environmental Monitoring';
 - 42.2 includes a tabulation in Microsoft Excel format of all monitoring data required as a condition of this approval;
 - 42.3 includes an assessment of environmental impact from the activity.
- The NT EPA may require the approval holder to revise or amend and resubmit any Monitoring Report. Where the NT EPA requires the Monitoring Report to be resubmitted, the approval holder must submit it to the NT EPA by the date specified by the NT EPA.

- The approval holder must submit to the NT EPA, at the completion of the activity, a review of the completed activity with certification from a qualified person(s) that the works conducted:
 - 44.1 were constructed in accordance with the plans provided in condition 19 or as revised under condition 20;
 - 44.2 'as constructed' will deliver the intended performance; and
 - 44.3 are compliant with condition 21 of this approval.
- Where the completed activity was not constructed in accordance with the plans provided under condition 18 or condition 19, the approval holder must submit to the NT EPA amended plans reviewed by a qualified person(s), to reflect the design 'as constructed'.

END OF APPROVAL CONDITIONS

This approval is not valid unless signed below:

Penny Renc

Acting Director Environmental Operations Delegate of the Northern Territory Environment Protection Authority

Dated: 16/08/2023

DEFINITIONS

All terms in the Approval which are defined in the *Waste Management and Pollution Control Act* have the meaning given in that Act unless otherwise or further defined in this section.

DEFINITION In this approval, unless a contrary intention appears:

24 hour emergency

contact

the phone number of a person who can be contacted at any time and be capable of responding to and providing information about any incident associated with the

activity.

Activity the Scheduled activity as described on the covering page of this approval.

Air includes any layer of the atmosphere.

Annual fee yearly fee payable in respect of the activity as specified in the WMPC Act and the

Regulations.

Annual Return an NT EPA prescribed format for demonstrating and reporting compliance with the

conditions of this approval and providing information on waste volumes for the

preceding 12 month period.

ANZECC/ARMCANZ Australian and New Zealand Environment and Conservation Council and

Agriculture and Resource Management Council of Australia and New Zealand, 2000: National Water Quality Management Strategy: Australian Guidelines for

Water Quality Monitoring and Reporting.

Asbestos containing

material

any material that contains asbestos.

Business days a day not Saturday, Sunday or a public holiday, in the Northern Territory.

Community feedback

number

a telephone number enabling members of the public to contact, at any time, a person or voice mail system that can accept, on behalf of the approval holder, enquiries or complaints about the activity, and to which the approval holder must

respond.

Complaint Log a register of complaints to be maintained by the approval holder that records the

details of each complaint received in relation to the activity.

Consultation and Communication Plan

a written plan documenting proposed consultation and communications for the activity before, during and after the activity which includes a strategy for

communicating with members of the public who are likely to have a real interest in,

or be affected by, the activity.

Contact details includes the 24 hour emergency contact, and name, position title and phone

number of a representative of the approval holder who can be contacted about the

approval and activity.

Contaminant a solid, liquid or gas or any combination of such substances and includes:

(a) noise, odour, heat and electromagnetic radiation;

(b) a prescribed substance or prescribed class of substances; and

(c) a substance having a prescribed property or prescribed class of properties.

Discharges allow a liquid, gas or other substance to flow out from where it has been confined.

Disposal schedule a plan for disposing of asbestos containing material such that asbestos containing

material is not stored in perpetuity.

Emergency Response

Plan

a written plan documenting the approval holder's procedures for responding to emergencies caused by, resulting from or associated with the activity and that may cause environmental harm.

Environmental audit has the meaning given in section 47 of the WMPC Act.

Environmental harm (a) any harm to or adverse effect on the environment; or

(b) any potential harm (including the risk of harm and future harm) to or potential adverse effect on the environment, of any degree or duration and includes environmental nuisance.

Environmental nuisance

means:

(a) an adverse effect on the amenity of an area that:(i) is caused by noise, smoke, dust, fumes or odour; and

(ii) unreasonably interferes with or is likely to unreasonably interfere with the enjoyment of the area by persons who occupy a place within the area or are otherwise lawfully in the area; or

(b) an unsightly or offensive condition caused by contaminants or waste.

Incident includes:

(a) an accident, emergency or malfunction; and

(b) a deliberate action, whether or not that action was taken by the person conducting the activity in the course of which the incident occurred.

Land includes water and air on, above or under land.

Landfill cell a purpose built area for the disposal of waste within a landfill.

Landfill Closure and Post

Closure Plan

a written plan which specifies the landfill closure and post-closure activities as set out in the NT EPA Guidelines for the Siting, Design and Management of Solid Waste Disposal Sites in the Northern Territory.

Leachate

any liquid produced by the action of water percolating through waste, and that contains contaminants.

Leachate treatment plant

a facility designed for the treatment of leachate produced by the Shoal Bay Waste Management Facility consisting of:

- a. PFAS foam fractionation;
- **b.** foamate storage and drying of foamate produced by the PFAS foam fractionation;
- sequential batch reactor (SBR) and moving bed biofilm reactor (MBBR) for nitrogen removal;
- **d.** dissolved air floatation (DAF);
- e. sludge storage and drying facility for sludge generated by the DAF;
- f. bunded areas for chemical storage including sodium hydroxide;
- g. constructed and lined wetland planted densly vegetated with an operating depth between 200mm and 300mm;
- **h.** associated infrastructure including pumps, pipelines, bunds, control room, sheds, fencing, signage, carpark, roads and irrigation infrastructure.

Listed waste a waste included under Schedule 2 of the Regulations.

Litter litter, garbage, rubbish, refuse or waste matter, and includes the body of a dead

animal.

Maintain kept in a manner that it does not present or cause a risk of environmental harm or a

hazard to persons or property or, for the purposes of documents including plans, a process of reviewing and amending documentation to ensure it is relevant.

Material environmental

environmental harm that:

harm

- (a) is not trivial or negligible in nature;
- (b) consists of an environmental nuisance of a high impact or on a wide scale;(c) results, or is likely to result, in not more than \$50,000 or the prescribed amount (whichever is greater) being spent in taking appropriate action to prevent or minimise the environmental harm or rehabilitate the environment; or
- (d) results in actual or potential loss or damage to the value of not more than \$50,000 or the prescribed amount (whichever is greater).

NATA National Association of Testing Authorities, Australia.

Non-compliance failure or refusal to comply, whether by act or omission, with obligations or

requirements and includes any exceedance of a approval limit.

Non-compliance notification

an NT EPA prescribed format for notifying the NT EPA of a non-compliance.

NT EPA Online online system for Environment Protection Approval (EPL), Environment Protection

Approval (EPA) and Waste Discharge Approval (WDL) lodgement and maintenance

NT EPA Online Vehicle

Register

the vehicle register found at NT EPA Online.

Plant and equipment all material items used in association with the activity, including (but not limited to)

storage vessels and containers, pipe work and hosing, vehicles (including vessels),

tools, and measuring equipment.

Point source discharge means any discernible, confined or discrete conveyance from which contaminants

or waste are or may be discharged.

Pollute (a) emit, discharge, deposit, or disturb, directly or indirectly, a contaminant or

waste; or

(b) cause, permit, or fail to prevent, directly or indirectly, the emission, discharge,

deposition, disturbance or escape of a contaminant or waste.

Pollution (a) a contaminant or waste that is emitted, discharged, deposited or disturbed or

that escapes; or

(b) a contaminant or waste, effect or phenomenon, that is present in the

environment as a consequence of an emission, discharge, deposition, escape or

disturbance or a contaminant or waste.

Premises the premises identified in this approval which includes equipment, plant and

structures, whether stationary or portable, and the land on which premises are

situated.

Public entrance access to the premises that is utilised by the public.

Putrescible waste the component of the waste stream liable to become putrid. For example, organic

matter that has the potential to decompose with the formation of malodorous

substances, usually refers to vegetative, food and animal products.

Qualified person a person registered under Section 68 of the WMPC Act.

Qualified sampler a person who has training and experience in obtaining samples from the relevant

environmental medium.

Regulations Waste Management and Pollution Control (Administration) Regulations.

Rehabilitation Plan

a written plan to ensure that the objectives of rehabilitation are achieved as set out in the NT EPA Guidelines for the Siting, Design and Management of Solid Waste Disposal Sites in the Northern Territory.

Serious environmental harm

environmental harm that is more serious than material environmental harm and includes environmental harm that:

- (a) is irreversible or otherwise of a high impact or on a wide scale;
- (b) damages an aspect of the environment that is of a high conservation value, high cultural value or high community value or is of special significance;
- (c) results or is likely to result in more than \$50,000 or the prescribed amount (whichever is greater) being spent in taking appropriate action to prevent or minimise the environmental harm or rehabilitate the environment; or
- (d) results in actual or potential loss or damage to the value of more than \$50,000 or the prescribed amount (whichever is greater).

Solid inert waste

solid waste that has no active chemical or biological properties. These wastes do not undergo environmentally significant physical, chemical or biological transformation.

Stormwater

water flowing over ground surfaces, in natural streams and drains as a direct result of rainfall over a catchment and consists primarily of rainfall runoff.

Treated leachate

Leachate collected from the Shoal Bay Waste Management Facility that has been treated using the approved treatment plant such that the concentration of:

- a. PFAS are reduced to less than the marine guideline values for 95% species protection detailed in the PFAS National Environmental Management Plan, January 2018;
- b. E. coli is reduced to less than 10,000 CFU/100mL, as per the requirements for Class D wastewater in the Northern Territory Environmental Health Draft Guidelines for wastewater works Design Approval of Recycled Water Systems, July 2014;
- c. concentration of contaminants are reduced to less than the short-term use trigger values (up to 20 years) as detailed in Volume 1, Table 4.2.10 of the ANZECC/ARMCANZ;
- **d.** electrical conductivity is not greater than 21 dS/m;
- e. total nitrogen is not greater than 170mg/L; and
- f. total phosphorous in not greater than 8 mg/L.

Treated leachate disposal area

an irrigation area covering up to 8 hectares on landfill Stages 3 and 4, using prepared and ameliorated soils, monto vetiver grass (*Chrysopogon zizanioides*) and fit for purpose irrigation infrastructure to ensure treated leachate is irrigated in a manner that:

- a. surface runoff does not occur as a result of irrigation;
- **b.** nutrients and contaminants present in the treated leachate do not migrate to the receiving environment;
- c. spray drift outside of the irrigation area does not occur; and
- d. vetiver grass will be evaluated for its reuse potential before the first harvest and reuse suitability will be evaluated based on contaminant concentration in the biomass. If contaminated, the harvested vetiver grass will be disposed to an appropriately licenced facility.

Trigger values

assigned value for each indicator used to assess the risk to an environmental value, a value that initiates some type of pre-defined management action.

Waste (a) a solid, a liquid or a gas; or

(b) a mixture of such substances,

that is or are left over, surplus or an unwanted by-product from any activity (whether or not the substance is of value) and includes a prescribed substance or class of

substances.

Waste transport certificate the NT EPA waste tracking documentation used to track listed waste being

transported interstate as required in accordance with the National Environment Protection (Movement of Controlled Waste Between States and Territories)

Measure.

Wastewater water that contains a contaminant or waste.

Water includes:

(a) surface water, ground water and tidal waters;

(b) coastal waters of the Territory, within the meaning of the Coastal Waters

(Northern Territory Powers) Act 1980 of the Commonwealth; and

(c) water containing an impurity.

WMPC Act the Northern Territory Waste Management and Pollution Control Act.