Permit[1]

Environmental Protection Act 1994

Environmental authority EPPR00186113

This environmental authority is issued by the administering authority under Chapter 5 of the Environmental Protection Act 1994.

Permit[1] number: EPPR00186113

Environmental authority takes effect on Monday 5 May 2014.

The anniversary date of this environmental authority is the 06 January each year. An annual return and the payment of the annual fee which is currently $0.00 will be due each year on this day.

Environmental authority holder(s)

Name	Registered address
Hopevale Aboriginal Council	Council Administration Office Muni Street HOPE VALE QLD 4895

Environmentally relevant activity and location details

Environmentally relevant activity(ies)	Location(s)
60(2a) Waste disposal facility (any combination of general waste and no more than 10% limited regulated waste): 50 to 2000t per year.	**Hopevale Landfill** Lot 35 on Plan SP232620 Elim Road, HOPEVALE, QLD 4871
63(1b)ii Sewage Treatment: >100 but <1500EP with treated effluent discharged other than as in (1b)i	**Hopevale Sewage Treatment Plant** Lot 35 on Plan SP232620 Elim Road, HOPEVALE, QLD 4871

Additional information:

Environmentally relevant activities:

The description of any environmentally relevant activity (ERA) for which an environmental authority is issued is a restatement of the ERA as defined by legislation at the time the approval is issued. Where there is any inconsistency between that description of an ERA and the conditions stated by an environmental authority as to the scale, intensity or manner of carrying out an ERA, then the conditions prevail to the extent of the inconsistency.

An environmental authority authorises the carrying out of an ERA and does not authorise any environmental harm unless a condition stated by the authority specifically authorises environmental harm.

[1] Permit includes licences, approvals, permits, authorisations, certificates, sanctions or equivalent/similar as required by legislation

A person carrying out an ERA must also be a registered suitable operator under the *Environmental Protection Act 1994* (EP Act).

Contaminated land:

It is a requirement of the EP Act that if an owner or occupier of land becomes aware a notifiable activity (as defined in Schedule 3 and Schedule 4) is being carried out on the land, or that the land has been, or is being, contaminated by a hazardous contaminant, the owner or occupier must, within 22 business days after becoming so aware, give written notice to the chief executive.

	8/3/14
Signature	Date

Mark Cavicchiolo
Department of Environment and Heritage Protection
Delegate of the administering authority
Environmental Protection Act 1994

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Obligations under the *Environmental Protection Act 1994:*

In addition to the requirements found in the conditions of this environmental authority, the holder must also meet their obligations under the EP Act, and the regulations made under the EP Act. For example, the holder must comply with the following provisions of the Act:

- General environmental duty (section 319)
- Duty to notify environmental harm (section 320-320G)
- Offence of causing serious or material environmental harm (sections 437-439)
- Offence of causing environmental nuisance (section 440)
- Offence of depositing prescribed water contaminants in waters and related matters (section 440ZG)
- Offence to place contaminant where environmental harm or nuisance may be caused (section 443)

Conditions of environmental authority:

Environmentally Relevant Activity (ERA)	Location	Applicable Part
Applicable to all Environmentally Relevant Activities authorised under this environmental authority	Applicable to all locations authorised under this environmental authority	Part 1
63(1b)ii Sewage Treatment: >100 but <1500EP with treated effluent discharged other than as in (1b)i	**Hopevale Sewage Treatment Plant** Lot 35 on Plan SP232620 Elim Road, HOPEVALE, QLD 4871	Part 2
60(2a) Waste disposal facility (any combination of general waste and no more than 10% limited regulated waste): 50 to 2000t per year.	**Hopevale Landfill** Lot 35 on Plan SP232620 Elim Road, HOPEVALE, QLD 4871	Part 3

Part 1: General Conditions	
General	
Condition number	**Condition**
P1-G1	Only the **activities** approved in this environmental authority are permitted to be undertaken at the **authorised place.**
P1-G2	All reasonable and practicable **measures** must be taken to minimise the likelihood of **environmental harm** or **environmental nuisance** being caused.
P1-G3	Any breach of a condition of this environmental authority, must be reported to the **administering authority** as soon as practicable, or at most, within 24 hours becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions undertaken.
P1-G4	All information and records that are required by the conditions of this environmental authority must be kept for a **minimum** of five (5) years. Environmental monitoring results must be kept until surrender of this environmental authority. All information and records required by the conditions of this environmental authority must be provided to the **administering authority** upon request.
P1-G5	If **you** become aware of any adverse impact on an **environmental value** you must notify the **administering authority** in writing of the full details of the adverse impact within 24 hours of becoming aware of the impact.
P1-G6	An **appropriately qualified person(s)** must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority.
P1-G7	All analyses required under this environmental authority must be carried out by a laboratory that has **NATA** certification, or an equivalent certification, for such analyses. The only exception to this condition is for the in-situ monitoring of pH and Dissolved Oxygen.
P1-G8	Any written procedure required as a condition of this environmental authority must have due regard and consideration for comments made by the **administering authority.**
P1-G9	When required by the **administering authority**, monitoring must be undertaken in the manner prescribed by the **administering authority**, to investigate a complaint that is not considered by the **administering authority** to be frivolous or vexatious, of **environmental nuisance** arising from the **activity**. The monitoring results must be provided to the **administering authority** upon request.
P1-G10	Other than as permitted within this environmental authority, **the release of a contaminant into the environment** must not occur.

P1-G11	A Site Based Management Plan must be prepared and implemented at the following **sites:** • Hopevale Sewage Treatment Plant • Hopevale Landfill The Site Based Management Plan must identify all **sources** of **environmental harm**, including but not limited to the actual and potential **release** of all **contaminants**, the potential impact of these sources and what actions will be taken to prevent the likelihood of **environmental harm** being caused. The Site Based Management Plan must also provide for and review and continual improvement in the overall environmental performance of all **activities** that are carried out. The Site Based Management Plan must, at a minimum, address the following matters: • Environmental commitments – a commitment by senior management to achieve specified and relevant environmental goals; • Management of **regulated waste(s)**; • Identification of environmental issues and potential impacts; • Control **measures** for routine operation to minimise likelihood of **environmental harm**; • Contingency plans and emergency procedures for non-routine situation; • Organisational structure and responsibility; • Effective communication; • Monitoring of **contaminant releases**; • Conducting environmental impact assessments; • Staff training; • Record keeping; and • Periodic review of environmental performance and continual improvement.
Air	
Condition number	**Condition**
P1-A1	Odours or airborne **contaminants** which are **noxious** or **offensive** or otherwise unreasonably disruptive to public amenity or safety must not be **released** to any **sensitive place** or **commercial place.**
Noise	
Condition number	**Condition**
P1-N1	Noise from the **activity** must not cause **environmental nuisance** at any **sensitive place** or **commercial place.**
Water	
Condition number	**Condition**
P1-WT1	Other than as permitted within this environmental authority, **contaminants** must not be **released** to **waters.**

P1- WT2	**Contaminants** must not be **released** to groundwater.
P1-WT3	Stormwater runoff must be diverted away from areas containing **wastes** or **contaminants.**
P1-WT4	Stormwater runoff that has been in contact with any **contaminants** capable of causing **environmental harm** must not be **released** to **waters** unless treated to a standard approved by the **administering authority** in writing.
Waste	
Condition number	**Condition**
P1-WS1	Other than as permitted within this environmental authority, **waste** must not be buried.
P1-WS2	**Regulated waste(s)** must only be removed from the site by a person lawfully able to transport it to a place lawfully able to receive it.
P1-WS3	**Waste** must not be burnt.
Land	
Condition number	**Condition**
P1-L1	Other than as permitted within this environmental authority, **contaminants** must not be **released** to **land**.
P1-L2	Treatment and management of **Acid Sulfate Soils** must comply with the current edition of the Queensland Acid Sulfate Soil Technical Manual.
P1-L3	All chemicals and petroleum products stored in containers greater than 15L must be stored in an effective containment system that is impervious to the materials within it and managed to prevent **release**.
P1-L4	All containment systems must be constructed and maintained to the relevant Australian Standard and be designed to minimise the collection of rainfall.
P1-L5	Erosion protection **measures** and sediment control **measures** must be implemented and maintained to minimise erosion and the **release** of sediment.
End of Part 1	

Part 2: Hopevale Sewage Treatment Plant	
General	
Condition number	**Condition**
P2-G1	**Contaminant** pumping stations must be fitted with stand by pumps and pump failure alarms as well as high level alarms to warn of an imminent pump station overflow. All alarms must be able to operate without mains power.
P2-G2	An **appropriately qualified person(s)** must design and conduct a Receiving Environment Monitoring Program (REMP) to monitor the effects of the **activity** on the Right Branch of the Endeavour River in accordance with the **administering authorities** REMP Guideline.
P2-G3	The daily operation of the Hopevale Sewage Treatment Plant must be carried out by an **appropriately qualified person(s).**
P2-G4	An Annual Monitoring Report must be prepared each year and made available to the **administering authority** on request. The Annual Monitoring Report must include, but is not limited to the following: • Summary and interpretation of the data obtained from the receiving environment monitoring program; • A summary of the previous twelve months monitoring results obtained in accordance with the monitoring requirements for section two of this environmental authority and in geographical form showing the relevant **release** limits; • An evaluation / explanation of the data obtained from any monitoring programs required under a condition of part two of this environmental authority; and • An outline of actions taken or proposed to minimise the environmental risk from any deficiency identified by the monitoring or recording programs.
Air	
Condition number	**Condition**
Nil site specific conditions.	
Water	
Condition number	**Condition**
P2-WT1	**Treated sewage wastewater** must only be **released** to **waters** from the Hopevale Sewage Treatment Plant from the following release point: • Release point W1 at coordinates -15.286417 ° and 145.115430° – Hopevale Sewage Treatment Plant discharge pipe to an un-named tributary of the Endeavour River Right Branch.

P2-WT2

Treated sewage wastewater must only be **released** to **waters** from the Hopevale Sewage Treatment Plant via release point W1 and in accordance with the limits specified in *Table 1– Release limits* and the associated requirements.

Table 1 – Release limits

Quality Characteristic	Minimum	80th percentile	Short term 80th percentile	Long term 80th percentile	Median	Maximum	Monitoring frequency
5-day Biochemical Oxygen Demand (mg/L)	-		25	20	-	60	Quarterly
Suspended Solids **(mg/L)**	-		60	30	-	90	Quarterly
pH (pH Units)	6.5		-	-	-	8.5	Quarterly
Dissolved Oxygen **(mg/L)**	2		-	-	-	-	Quarterly
Faecal Coliforms (Organisms /100ml)	-	4000	-	-	1000	-	Quarterly
Ammonia Nitrogen **(mg/L)**	-	-	-	-	-	1	Quarterly

Associated requirements

1. **COD** may be monitored as an alternative to BOD_5 once a reliable correlation has been determined through analysis of a minimum number of 24 wastewater samples over a minimum period of 12 months and with the agreement of the **administering authority.**

P2-WT3

The **release** of **treated sewage wastewater** to **waters** from release point W1 must not:

- Produce any slick or visible evidence of oil or grease;
- Contain visible scum, litter or other matter; and
- Contain any other properties or **contaminants** at a concentration that is capable of causing **environmental harm**

P2-WT4

The total quantity of **treated sewage wastewater released** to **waters** via release point W1 must not exceed the limits specified in *Table 2 – Maximum release limits*, on any one **day**.

Table 2 – Maximum release limits

Release point	Maximum release on any dry weather day	Maximum release on any wet weather day
W1	200m^3 per **day**	400m^3 per **day**

P2-WT5

The volume of **treated sewage wastewater released** to **waters** from the Hopevale Sewage Treatment Plant via release point W1 must be determined daily. Records of any determinations must be made to the **administering authority** on request.

P2-WT6

Monitoring of **contaminant releases** to **waters** must be undertaken in accordance with *Table 3 - Monitoring frequency* and the associated monitoring requirements.

Table 3 – Monitoring frequency

Quality Indicator (units)[1]	Measurement (units)[2]	Minimum frequency[3]	Monitoring location
5-day Biochemical Oxygen Demand	**(mg/L)**	Quarterly	Release Point W1
Suspended Solids	**(mg/L)**	Quarterly	Release Point W1
pH	(pH Units)	Quarterly	Release Point W1
Dissolved Oxygen	**(mg/L)**	Quarterly	Release Point W1
Faecal Coliforms	(Organisms /100ml)	Quarterly	Release Point W1
Ammonia Nitrogen	**(mg/L)**	Quarterly	Release Point W1

Associated monitoring requirements

1. Monitoring must be in accordance with the Water Quality Sampling Manual and all monitoring devices must be effectively calibrated and maintained.
2. All monitoring devices must be effectively calibrated and maintained in accordance with the manufacturer's instructions.
3. Monitoring must be undertaken any time the activity is in operation and samples must be taken during a release.

P2-WT7

All **contaminant** pumping station overflows must be screened and de-gritted to prevent the release of gross solids.

P2-WT8

The holder of this environmental authority must notify the **administering authority** in writing within 24 hours of a **contaminant** pump station overflow.

Land

Condition number	Condition
Nil site specific conditions.	

Noise

Condition number	Condition
Nil site specific conditions.	

Waste	
Condition number	**Condition**
P2-WS1	**The holder** of this environmental authority must keep records of all **regulated waste(s)** removed from the **authorised place**. Records must, at a minimum, include the following information: • Type of **regulated waste(s)** removed; • Date the **regulated waste(s)** was removed; • Quantity of **regulated waste(s)** removed; • The intended destination of the **regulated waste(s)** removed; and • Person / business responsible for its removal.
P2-WS2	**Regulated waste(s)** must only be accepted into the Hopevale Sewage Treatment Plant when such **wastes** are comingled with normal domestic sewage or in accordance with a trade waste policy.
P2-WS3	Records of any trade waste agreements for discharge of **regulated waste(s)** to sewer must be made available to the **administering authority** on request.
End of Part 2	

Part 3: Hopevale Landfill	
General	
Condition number	**Condition**
P3-G1	The Site Based Management Plan prepared for the Hopevale Landfill must include a Site Development Plan that identifies any past, present or future areas of **land** to be impacted whilst undertaking the **activity** at the following locations: The Site Development Plant must, at a minimum, include the following information: • The location (including geospatial coordinates) and dimensions of any area used as part of the **waste operations area**; • The location (including geospatial coordinates) of any **leachate** storage tank, dam, pond or collection system; • The location (including geospatial coordinates) of any stormwater drains or diversion embankments; • The location (including geospatial coordinates) of all **landfill units**; and • The location (including geospatial coordinates) of all rehabilitated **landfill units** or **landfill units** currently being rehabilitated in accordance with the conditions of this environmental authority.
P3-G2	The daily operation of the Hopevale Landfill must be carried out by an **appropriately qualified person(s).**
P3-G3	All reasonable and practicable **measures** must be taken to contain litter within the **waste operations area,** and retrieve litter **released**.
P3-G4	A **leachate** collection system must be designed by an **appropriately qualified person** and installed and maintained to: • Collect **leachate** generated in the **landfill unit**; and • Convey the collected **leachate** out of the **landfill unit** to an appropriate **leachate** storage facility.
P3-G5	**Leachate** and stormwater runoff which has been in contact with **waste** materials in the **landfill unit**, must be collected in the **leachate** storage facility and be: • Treated in the **leachate** treatment plant and discharged to sewer in accordance with the requirements of the relevant water utility; or • Recirculated through **waste** disposed in the **landfill unit**; or • Treated by alternative technologies agreed by the **administering authority** for offsite disposal, discharge, or on-site reuse; or • Disposed of at a facility that is approved to receive such **waste**.

P3-G6	All reasonable and practicable **measures** must be taken to exclude vectors and pest species to the extent necessary to prevent: • **Environmental nuisance** to occupiers of neighbouring premises; and • Any danger or risk to the health of any persons.
P3-G7	**Waste** disposal activities must not extend beyond the **boundary** of the **waste operations area.**
Air	
Condition number	**Condition**
P3-A1	The following materials must not be used for dust suppression purposes: • **Leachate** or landfill gas condensate; and • **Oily wastes** or other hydrocarbons.
Water	
Condition number	**Condition**
P3-WT1	A liner system must be installed and maintained to: • Prevent the **release** of **contaminants**, including **leachate** to **land** and **waters**; and • Prevent subsurface migration of landfill gas from the **landfill unit.**
Land	
Condition number	**Condition**
P3-L1	When the deposition of **waste** to the **landfill unit** ceases, a final **capping** system to the **landfill unit** must be designed by an **appropriately qualified person** and installed to minimise: • Infiltration of **water** into the **landfill unit** and **water** ponding on the surface; and • The likelihood of any erosion occurring to either the final **capping** system or the landfilled materials. *Note: A final capping system is not required where the deposition of waste to a landfill unit ceases temporarily for the purpose of using an alternative working face.*

P3-L2	**Land** that has been disturbed for activities conducted under this environmental authority must be rehabilitated in a manner such that: • Suitable species of vegetation for the location **are** established and sustained for earthen surfaces; • Potential for erosion is minimised; • The quality of **water**, including seepage, **released** from the site **does** not cause **environmental harm**; • Potential for **environmental nuisance** caused by dust is minimised • The **water** quality of any residual **water** body does not have potential to cause **environmental harm**; • The final landform is stable and protects public safety; and • The **contaminant** concentrations within the final **capping** layer are appropriate for the final **land** use and in accordance with the 'National Environmental Protection (Assessment of Soil Contamination) Measure 1999.'
P3-L3	Following cessation of deposition of **waste** in the **landfill unit**, post-closure care of the **landfill unit** must be conducted for a period of 30 years or until the **administering authority** determines, on the basis of correct information, that the **landfill unit** and surrounding site are stable and that no **release** of **waste** materials, **leachate** or other **contaminants** that may cause is likely.
P3-L4	The program of post-closure care implemented must be effective in preventing and/or minimising the likelihood of **environmental harm** being caused. The program must include **measures** to: • Maintain the structural integrity and effectiveness of the final **capping** system; • Maintain and operate the **leachate** collection system; and • Maintain the **groundwater monitoring system** and monitor quality of groundwater at a frequency sufficient to detect any **release** of **contaminants** to groundwater.
P3-L5	A site management plan pursuant to Chapter 7, Part 8, Division 5 of the *Environmental Protection Act 1994* must be developed and provided to the **administering authority** at least 12 months before the expected final receipt of **waste** in the **landfill unit**. The site management plan must include, but is not to be limited to, the future **land** use and actions intended to taken for compliance with the closure and post-closure care requirements of this approval.
P3-L6	A firebreak must be installed and maintained around the **waste operations area.**
P3-L7	**Leachate** is not permitted to be **released** to any **landfill unit** that has received its final **capping** as specified in condition P3-L1 unless the quality of the **leachate** is such that it will not cause any **environmental harm** through soil contamination or damage to vegetation.

Noise	
Condition number	**Condition**
Nil site specific conditions.	

Waste	
Condition number	**Condition**
P3-WS1	Only the following waste streams are permitted to be received for disposal at the Hopevale Landfill: • **Construction and demolition waste**; • **Domestic waste;** • **Commercial waste;** • Solid inert waste; • **Green Waste;** • **Asbestos waste, friable asbestos waste** or **asbestos waste containing material** • **Untreated infectious waste** (when such wastes cannot be removed for more appropriate treatment and disposal elsewhere); and • Minor quantities of **regulated waste(s)** that are incidental to and commingled with **domestic waste**.
P3-WS2	The following waste streams are permitted to be temporarily stored at the Hopevale Landfill for a period of no greater than six (6) months: • Batteries; • **Oily wastes**; • Tyres; • Recyclable waste; and • Car bodies.

P3-WS3	The following waste streams are not permitted to be accepted at the Hopevale Landfill:
	• **Clinical waste;**
	• **Animal waste;**
	• **Chemical waste;**
	• **Human tissue waste;**
	• **Cytoxic waste;**
	• **Pharmaceutical waste;**
	• **Liquid wastes** or semiliquid wastes other than:
	  • **Liquid wastes** or semiliquid **waste** which has been produced in the carrying out of the **activity; or**
	  • **Liquid wastes** or semiliquid **waste** that is incidental to, and commingled with a permitted waste stream.
	• Hot ash;
	• Material that is smouldering or aflame;
	• Material containing a substance which is ignitable, corrosive, reactive or **toxic material** (other than materials containing a **toxic material** from a domestic premises) unless approved in writing by the **administering authority** and the **waste** material is to be deposited into a dedicated monocell;
	• All **radioactive wastes**, unless otherwise approved under the *Radiation Safety Act 1999* or approved contaminated soil.
	• Explosives or ammunition, pyrotechnics or propellants, apart from trace residues that are no longer capable of supporting combustion or an explosive reaction; and
	• **Regulated waste(s)** (excluding those approved in condition P3-WS2 of this environmental authority).

P3-WS4	**Waste** deposited into the active **landfill unit** must be **covered** as soon as practicable to limit stormwater infiltration, prevent exposure of **waste** and prevent issues arising from vectors and pest species. *Note: Material used to cover waste deposited into the active landfill unit must not contain any contaminant at a level that exceeds the limits specified in Table 6* – Maximum total contaminant levels in soils used as cover material.
P3-WS5	All batteries, chemicals, fuels and other **liquid** substances (excluding **leachate**) with potential to cause **environmental harm** must be stored in a designated area(s) shown on the Site Development Plan.
P3-WS6	All batteries, chemicals, fuels and other **liquid** substances (excluding **leachate**) with potential to cause **environmental harm** must be stored within a secondary containment system that is **covered** and impervious to the material within it.
P3-WS7	No more than 500 tyres are permitted to be stored at the Hopevale landfill at any one time.
P3-WS8	Untreated infectious **waste** must be buried in a dedicated **landfill unit.**
P3-WS9	All reasonable and practicable **measures** must be taken to ensure that untreated infectious **waste** is buried in a manner that prevents **environmental harm.**
P3-WS10	All untreated infectious **waste** must be buried to a minimum depth of two (2) meters below the surface level of the designated **landfill unit** and no closer than two (2) meters from any perimeter embankment.
P3-WS11	**Asbestos waste, friable asbestos waste** and **asbestos waste containing material** must be buried in a dedicated **landfill unit.**
P3-WS12	All reasonable and practicable **measures** must be taken to ensure that **asbestos waste, friable asbestos waste** and **asbestos waste containing material** is buried in a manner that prevents **environmental harm.**
P3-WS13	All **Asbestos waste, friable asbestos waste** and **asbestos waste containing material** must be buried to a minimum depth of two (2) meters below the surface level of the designated **landfill unit** and no closer than two (2) meters from any perimeter embankment.
P3-WS14	**The holder** of this environmental authority must keep records of all **regulated waste(s)** removed from the **authorised place**. Records must, at a minimum, include the following information: • Type of **regulated waste(s)** removed; • Date the **regulated waste(s)** was removed; • Quantity of **regulated waste(s)** removed; • The intended destination of the **regulated waste(s)** removed; and • Person / business responsible for its removal.
End of Part 3	

Definitions

Key terms and/or phrases used in this document are defined in this section and **bolded** throughout this document. Where a term is not defined, the definition in the *Environmental Protection Act 1994*, its regulations or environmental protection policies must be used. If a word remains undefined it has its ordinary meaning.

Word / Phrase	Definition:
Activity	Means the environmentally relevant activities, whether resource activities or prescribed activities, to which the environmental authority relates.
Acid Sulphate Soils	Means sediments that contain iron sulphides.
Administering authority	Means the Department of Environment and Heritage Protection or its successor or predecessors.
Appropriately qualified person(s)	Means a person or persons who has professional qualifications, training, skills or experience relevant to the nominated subject matter and can give authoritative assessment, advice and analysis to performance relative to the subject matter using the relevant protocols, standards, methods or literature.
ADWF	Means average dry weather flow.
Animal waste	Means any discarded materials, including carcasses, body parts, blood or bedding, originating from animals contaminated with an agent infectious to humans or from animals inoculated during research, production of biological or pharmaceutical testing with infectious agents.
Asbestos waste containing material	Means any material, object, product or debris that contains asbestos waste.
Asbestos waste	Means all removed asbestos waste-containing materials and disposable items used during the asbestos waste removal work, such as plastic sheeting used for an enclosure or to cover surfaces in the asbestos waste work area, disposable coveralls, disposable respirators and rags used for cleaning etc.
Authorised place	Means the place to which this environmental authority relates.
Background	Means noise, measured in the absence of the noise under investigation, as L A90,T being the A-weighted sound pressure level exceeded for 90 percent of the time period of not less than 15 minutes, using Fast Response.
Biosolid	Means any organic solids derived from the treatment of sewage at the Sewage Treatment Plant.
Boundary	Means within one metre of the cadastral boundary of the authorised place.
Capping	Means the covering of a landfill or sanitary depot trench with impervious materials to inhibit penetration by liquids.
Clay lined	Means a landfill lined with compacted clay at least 600 mm thick achieving a maximum permeability of 1 X 10^{-9} metres per second or alternate such as an engineered geosynthetic agreed in writing as equivalent in performance by the administering authority.
Chemical waste(s)	Means waste generated from the use of chemicals in medical, dental, veterinary and laboratory procedures, including, for example; mercury, formalin and

	gluteraldehyde.
Clinical waste(s)	Means waste that has the potential to cause disease including, for example, animal waste, discarded sharps, human tissue waste; and laboratory waste.
COD	Means chemical oxygen demand determined using standard tests (e.g. those used by NATA laboratories).
Commercial place	Means a place used as a workplace, an office or for business or commercial purposes and includes a place within the curtilage of such a place reasonably used by persons at that place.
Commercial waste	Means waste, other than green waste, recyclable waste, interceptor waste or waste discharged to a sewer, produced as a result of the ordinary use or occupation of commercial premises.
Compaction	Means increasing the density of waste in landfills by the repeated passage of heavy machinery over its surface.
Contaminant(s)	Means: • A gas, liquid or solid; or • An odour; or • An organism *whether alive or dead), including a virus; or • Energy, including noise, heat, radioactivity and electromagnetic radiation; or • A combination of contaminants.
Construction or demolition waste	Means waste resulting from carrying out a construction or demolition activity, but does not include paper, cardboard, unseasoned timber, vegetation, paper-covered plasterboard, metals (other than steel reinforcing rods) and regulated waste.
Cover	Means material used to cover wastes deposited in landfills or sanitary depots.
Cytotoxic waste	Means waste that is contaminated by a cytotoxic drug.
Day	Means any 24 hour period
Dry weather day	Means a day during which no rain falls within the catchment of the Sewage Treatment Plant for the commencement of measurement for that day. The term also excludes days during which measurement is made which occur within three (3) days following cumulative rainfall of 100 mm over the three (3) preceding days.
Domestic waste	Means waste, other than domestic clean-up waste, green waste, recyclable waste, interceptor waste or waste discharged to a sewer, produced as a result of the ordinary use or occupation of domestic premises.
Double lined	Means a landfill lined with compacted clay at least 600mm thick achieving a maximum permeability of $1x10^{-9}$ metres per second overlain with 1.5mm HDPE synthetic liner or alternate double liner system agreed in writing as equivalent in performance by the administering authority.
Dwelling	Means any of the following structures or vehicles that is principally used as a residence including: • A house, unit, motel, nursing home or other building or part of a building;

	• A caravan, mobile home or other vehicle or structure on land; • A water craft in a marina.
Environmental harm	As defined under the *Environmental Protection Act 1994.*
Environmental nuisance	As defined under the *Environmental Protection Act 1994.*
Environmental value	Means: • A quality or physical characteristic of the environment that is conducive to ecological health or public amenity or safety; or • Another quality of the environment identified and declared to be an environmental value under an environmental protection policy or regulation.
Equivalent person (EP)	Means a wastewater flow of 200 litres per person per day.
Friable asbestos waste(s)	Means asbestos waste-containing material which, when dry, is or may become crumbled, pulverised or reduced to powder by hand pressure. Note: This may include asbestos waste containing materials that have been subjected to conditions, such as weathering, physical damage, water damage etc that leave them in a state where they meet the above definition.
General waste	Means waste other than regulated waste.
Green waste	Means grass cuttings, trees, bushes, shrubs, tree lopping's, bushes or shrubs, or similar matter produced as a result of the ordinary use or occupation of premises.
Groundwater Monitoring System	Means a system of groundwater monitoring devices, such as monitoring bores, used to provide data in respect to the level and quality of groundwater in the uppermost aquifer where the location of the groundwater monitoring devices is such that comparisons of groundwater quality and groundwater level can be made between groundwater flowing from beneath the site (down-gradient flow) of the activity and groundwater flowing towards the site of the activity (up-gradient flow).
HDPE	Means high density polyethylene
Human tissue waste	Means the following: • Tissue, blood, blood products and other body fluids that are removed from a person during surgery an autopsy or another medical procedure; • Tissue, blood, blood products and other body fluids that are removed from a person during post-operative care or treatment; • Specimens of tissue, blood, blood products and other body fluids and container in which the specimen are kept; and • Discarded material saturated with, or containing free-flowing blood and other body fluids.
Incompatible waste(s)	Means wastes that are likely to interact and increase the risk to human health and/or the environment when mixed or brought into contact.
Industrial waste	Means interceptor waste.
Land	As defined under the *Environmental Protection Act 1994.*
Landfill facility	Means land and structures at the site approved for the disposal of waste(s).

Landfill unit	Means a discrete area of land or an excavation that receives solid waste.
Leachate	Means a liquid that has passed through or emerged from, or is likely to have passed through or emerged from, a material stored, processed or disposed of at the site that contains soluble, suspended or miscible contaminants likely to have been derived from the said material.
Liquid	Means any substance that: • Has an angle of repose of less than five degrees; or • Becomes free flowing at or below 60 degrees Celsius or when it is transported; or • Is not generally capable of being picked up by a spade or shovel.
Liquescent waste(s)	Means waste tending toward a liquid state; waste that is not spadeable.
Long term 80th percentile	Means the value which is exceeded by twenty (20) percent of the values for the quality characteristic in question and should be calculated on the basis of a log – normal distribution using twelve (12) months consecutive results for the characteristic.
Maximum	Means that the measured value of the quality characteristic or contaminant must not be greater than the release limit stated.
Measures	Has the broadest interpretation and includes plant, equipment, physical objects, bunding, containment systems, monitoring, procedures, actions, directions and competency.
Minimum	Means that the measured value of the quality characteristic or contaminant must not be less than the release limit stated.
Median	Median for this quality characteristic must be based on the results of at least five (5) samples, with individual sampled being collected at intervals of not less than thirty (30) minutes.
mg/L	Means milligrams per Litre.
NATA	Means National Association of Testing Authorities, Australia
Noxious	Means harmful or injurious to health or physical well-being.
Offensive	Means causing offence or displeasure; is unreasonably disagreeable to the sense; disgusting, nauseous or repulsive.
Oily waste	Means hydrocarbons and water mixtures or emulsions, including oil and water mixtures or emulsions, which is the regulated waste item 37 of Schedule 7 of the Environmental Protection Regulation 2008. Oily waste does not include mineral oil (item 34) that is not in a mixture or emulsion with water. Vegetable oil (item 63) is also excluded.
Operator	Means the person carrying out the activity.
Packaged regulated waste(s)	means regulated waste in a container with: • A capacity of not more than 450 litres; and • A net mass of not more than 400 kilograms.

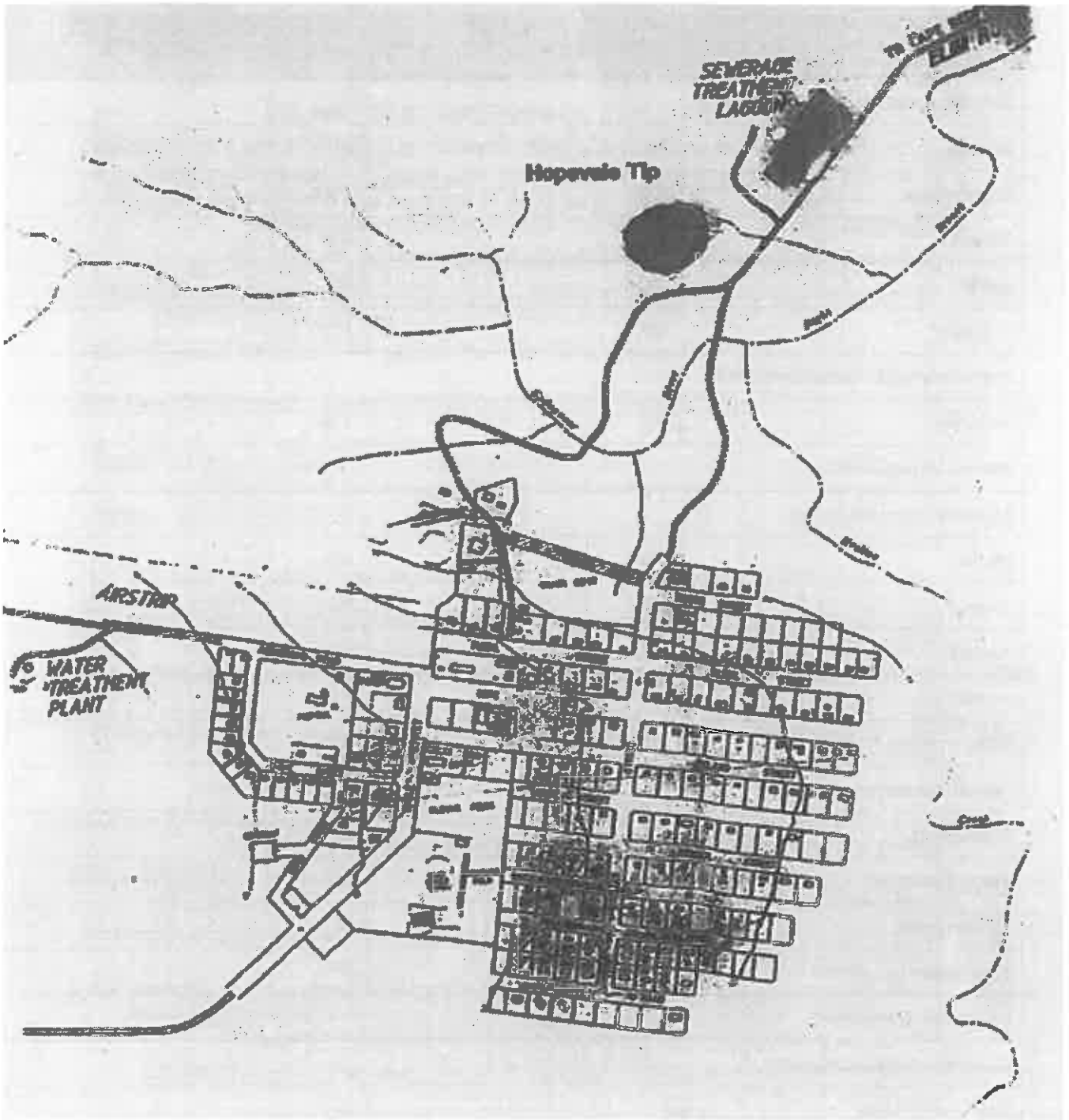
Permeability	Means a measure of the rate at which a fluid will pass through a medium. The coefficient of permeability of a given fluid is an expression of the rate of flow through unit area and thickness under unit differential pressure at a given temperature. Synonymous with hydraulic conductivity when the fluid is water.
Pharmaceutical waste(s)	Means waste arising from pharmaceutical products that have passed their recommended shelf life, pharmaceutical products discarded due to off-specification batches or contaminated packaging, pharmaceutical products returned by patients or discarded by the public, pharmaceutical products no longer required by the public and waste generated during the manufacture of pharmaceutical products.
Prescribed contaminants	Means contaminants listed within Schedule 9 of the Environmental Protection Regulation 2008.
Radioactive waste	Means waste that is contaminated with a radioactive substance.
Range	Means that the measured value of the quality characteristic or contaminant must not be greater than the higher release limit stated nor lower than the lower release limit stated.
Release (of a contaminant into the environment)	Means to: • Deposit, discharge, emit or disturb the contaminant; and • Cause or allow the contaminant to be deposited, discharged, emitted or disturbed; and • Fail to prevent the contaminant from being deposited, discharged emitted or disturbed; and • Allow the contaminant to escape; and • Fail to prevent the contaminant from escaping.
Regulated waste(s)	Means waste that: • Is commercial or industrial waste, whether or not it has been immobilised or treated; and • Is of a type, or contains a constituent of a type, mentioned in schedule 7 Environmental Protection Regulation 2008. Waste prescribed under subsection (1) includes: • For an element—any chemical compound containing the element; and • Anything that contains residues of the waste
Sensitive place	Means the following and includes a place within the curtilage of such a place reasonably used by persons at that place: • A dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or • A motel, hotel or hostel; or • A kindergarten, school, university or other educational institution; or • A medical centre or hospital; or • A protected area under the Nature Conservation Act 1992, the Marine Parks Act 1992 or a World Heritage Area; or • A public thoroughfare, park or gardens; or • For noise, a place defined as a sensitive receptor for the purposes of the Environmental Protection (Noise) Policy 2008.
Short term 80th percentile	Means that not more than one (1) of the measured values of the quality characteristics are to exceed the stated release limit for any five (5) consecutive samples where:

	(a) the consecutive samples are taken over a five (5) week period (b) the consecutive samples are taken at approximately equal periods; and (c) the time interval between the taking of each consecutive sample is not less than six (6) days
TCLP	Means a toxicity characteristic leaching procedure.
Total nitrogen	Means the sum of Organic Nitrogen, Ammonia Nitrogen, Nitrite plus Nitrate Nitrogen, which must be reported separately, expressed as mg/L as Nitrogen. This includes both the inorganic and organic fraction of nitrogen.
Total Phosphorus	Means the sum of the reactive phosphorus, acid-hydrolysable phosphorus and organic phosphorus, as mg/L of Phosphorus. This includes both the inorganic and organic fraction of phosphorus.
Toxic material	Means: • Cytotoxic wastes; • Drugs and poisons as cited in the Standards for Uniform Scheduling of Drugs and Poisons (Schedules 8 and 9 Drugs as per the Poisons (Health and Drugs) Regulation 1996); and • Any other material that: o Has contaminant concentrations in the waste exceeding the allowable levels in Table 4 of Schedule 2 of this environmental authority; or o Has leaching contaminant levels in the waste when measured in accordance with toxicity characteristic leaching procedure (TCLP), exceeding the concentrations prescribed in Table 5 of Schedule 2 of this environmental authority.
Treated sewage wastewater	Means effluent that exits the Sewage Treatment Plant following treatment.
Untreated infectious waste(s)	Means waste containing viable micro-organisms or their toxins which are known or suspected to cause disease in animals or humans.
Vibration	Means the oscillating or periodic motion of a particle, group of particles, or solid object about its equilibrium position.
Waste(s)	As defined under the *Environmental Protection Act 1994.*
Waste operations area	Means the following areas: • Waste receiving • Sorting • Treating • Recycling • Disposal
Water(s)	Means a river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water natural or artificial watercourse, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off, and groundwater and any part-thereof.
Wet weather day	Means a day which is not a dry weather day.
You / the holder	Means the entity that this environmental authority is issued to or any person(s)

	working under this environmental authority.
5-day Biochemical Oxygen Demand	Means the 5 day biochemical oxygen demand determined using a test sample uninhibited for either carbonaceous material or nitrogen at twenty degrees centigrade.
80th percentile	Means that the measured values of the quality characteristic must not be greater than the release limit for any more than one (1) out of the five (5) consecutive samples.

Schedules:

Schedule 1 - Site plan



Schedule 2 – Waste Materials

Table 4 – Maximum contaminant levels in soils

Contaminant	Maximum contaminant level for clay lined landfills (mg/kg)	Maximum contaminant level for double lined landfills (mg/kg)
Monocyclic aromatic hydrocarbons (MAH)		
Benzene	10	20
Ethyl Benzene	500	1,000
Toluene	300	600
Xylene	250	500
Total MAH	500	1,000
Polycyclic aromatic hydrocarbons (PAH)		
Total PAH	500	1,000
Phenolic contaminants		
Non halogenated compounds:		
Phenol	100	250
m-cresol	250	500
o-cresol	250	500
p-cresol	250	500
Total non halogenated phenol	250	500
Halogenated phenol		
Chlorophenol	1	5
Pentachlorophenol	5	20
Trichlorophenol	5	20
Total halogenated phenol	5	20
Chlorinated Hydrocarbons		
Chlorinated aliphatic compounds:		
Carbon tetrachloride	5	10
1,2 Dichloroethane	10	20
l,1 Dichloroethene	1	1
Tetrachloroethene	10	20
Trichloroethene	25	25

Contaminant	Maximum contaminant level for clay lined landfills (mg/kg)	Maximum contaminant level for double lined landfills (mg/kg)
Total chlorinated aliphatic compounds	50	50
Chlorinated aromatic compounds:		
Chlorobenzene	100	200
Hexachlorobenzene	1	1
Total chlorinated aromatic compounds	100	200
Non scheduled solid polychlorinated biphenyls (PCBs)	2	50
Pesticides		
Total organochlorine	5	50
Total herbicides	25	50
Total carbamates	25	50
Total organophosphorus	10	50
Petroleum hydrocarbons		
Total petroleum hydrocarbons (C_6-C_9)	500	1,000
Total petroleum hydrocarbons (C_{10}-C_{14})	5,000	10,000
Total petroleum hydrocarbons (C_{15}-C_{28})	10,000	50,000
Total petroleum hydrocarbons (C_{29}-C_{36})	10,000	50,000

Table 5 – Allowable leaching contaminant levels

Contaminant	Allowable leaching contaminant levels (TCLP*) for clay lined landfills (mg/L)	Allowable leaching contaminant levels (TCLP) for double lined landfills (mg/L)
Non specific contaminants		
Biochemical oxygen demand	20,000	20,000
Total organic carbon	10,000	10,000
Petroleum hydrocarbons	25	50
Metals/non-metals		
Antimony	0.5	5
Arsenic	0.5	5
Barium	10	100

Contaminant	Allowable leaching contaminant levels (TCLP*) for clay lined landfills (mg/L)	Allowable leaching contaminant levels (TCLP) for double lined landfills (mg/L)
Cadmium	0.05	0.5
Chromium	0.5	5
Cobalt	0.5	5
Copper	10	100
Lead	0.5	5
Mercury	0.01	0.1
Molybdenum	0.1	5
Nickel	0.5	5
Selenium	0.1	1
Silver	0.5	5
Thallium	0.1	1
Tin	0.3	3
Vanadium	0.5	5
Zinc	50	500
Inorganic anions		
Bromide	5	50
Chloride	6,000	6,000
Cyanide (total)	1	5
Fluoride	15	150
Nitrate	100	1,000
Sulphate	2,500	4,000
Monocyclic aromatic hydrocarbon (MAH)		
Benzene	0.1	1
Ethyl benzene	5	50
Toluene	3	30
Xylene	2	20
Total MAH	5	50
Polycyclic aromatic hydrocarbons (PAH)		

Contaminant	Allowable leaching contaminant levels (TCLP*) for clay lined landfills (mg/L)	Allowable leaching contaminant levels (TCLP) for double lined landfills (mg/L)
Anthracene	0.07	0.7
Benz (a) anthracene	0.005	0.05
Benz (c) phenanthrene	0.005	0.05
Benzo (a) pyrene	0.002	0.02
Benzo (b) fluoranthene	0.005	0.05
Benzo (k) fluoranthene	0.005	0.05
Chrysene	0.01	0.1
Dibenz (a,h) anthracene	0.002	0.02
Dibenz (a,h) pyrene	0.01	0.1
Dimethylbenz (a) anthracene	0.005	0.05
Fluoranthene	0.02	0.2
Indeno (1,2,3-cd) pyrene	0.01	0.1
Naphthalene	0.07	0.7
Phenanthrene	0.01	0.1
Pyrene	0.07	0.7
Total PAH	0.1	1
Phenolic contaminants		
Non halogenated compounds:		
Phenol	1	10
m-cresol	2	20
o-cresol	2	20
p-cresol	2	20
Halogenated phenols		
Chlorophenol	0.01	0.1
Pentachlorophenol	0.1	1
Trichlorophenol	0.1	1
Chlorinated hydrocarbons		
Chlorinated aliphatic compounds		

Contaminant	Allowable leaching contaminant levels (TCLP*) for clay lined landfills (mg/L)	Allowable leaching contaminant levels (TCLP) for double lined landfills (mg/L)
Carbon tetrachloride	0.03	0.3
1,2 Dichloroethane	0.1	1
1,1 Dichloroethene	0.003	0.03
Tetrachloroethene	0.1	1
Trichloroethene	0.3	3
Chlorinated aromatic compounds		
Chlorobenzene (total)	1	10
Hexachlorobenzene	0.002	0.02
Pesticides		
Organochlorine		
Aldrin	0.001	0.01
Chlordane	0.006	0.06
Chlorpyrifos	0.01	0.03
Dieldrin	0.001	0.01
DDT	0.003	0.03
Endrin	0.001	0.01
Heptachlor	0.003	0.03
Lindane	0.1	1
Methoxychlor	0.1	1
Toxaphene	0.005	0.05
Herbicides		
2,4-D	0.1	1
2,4-DB	0.2	2
2,4,5 -T	0.002	0.02
MCPA	0.2	2
Carbamates:		
Carbaryl	0.06	0.6
Carbofuran	0.03	0.3

Contaminant	Allowable leaching contaminant levels (TCLP*) for clay lined landfills (mg/L)	Allowable leaching contaminant levels (TCLP) for double lined landfills (mg/L)
Organophosphoru		
Diazinon	0.01	0.1
Methyl Parathion	0.006	0.06
Parathion	0.03	0.3
Triazines:		
Atrazine	0.01	0.03
Simazine	0.01	0.03
Fluorinated organic compounds		
Total fluorinated organic compounds (if leachate reused on or off-site)	0.0003	0.0003
Total fluorinated organic compounds (if leachate not reused on or off-site)	0.05	0.05
For any waste or soil contaminated by radioactive material, the gross alpha and gross beta activity concentration in the Toxicity Characteristic Leaching Procedure (TCLP) extracts from the material are no more than 100 times the concentrations for the screening of gross alpha and gross beta activity concentrations specified in the National Health and Medical Research Council (NHMRC) Australian Drinking Water Guidelines, 2011.		

*Allowable leaching levels to be determined using the TCLP procedure mentioned in United States Environmental Protection Agency (EPA), Washington DC (2008) "Test methods for evaluating solid waste, physical/chemical methods" Document number SW 846. 3rd Edition or more recent editions or supplement to that procedure as they become available.

Table 6 – Maximum total contaminant levels in soils used as cover material (note: this material is not suitable for final capping)

Contaminant	Maximum total contaminant levels in soils used as cover material (mg/kg)
Arsenic (total)	200
Beryllium	40
Cadmium	40
Chromium (iii)	240,000
Chromium (vi)	200
Copper	2,000
Lead	600
Manganese	3,000
Mercury (inorganic)	30
Methyl Mercury	20

Nickel	600
Zinc	14,000
PFOS (Perfluoro-octane sulfonate)	6
PFOA (Perfluoro-octanoic acid)	16
Total fluorinated organic compounds	10 (not including PFOS & PFOA)

END OF PERMIT