Permit

Environmental Protection Act 1994

Environmental Authority EPPR00846713

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

Environmental Authority number: EPPR00846713

Environmental authority takes effect on the date it is signed by the delegate. This is the take effect date. The anniversary date of this environmental authority remains 31 August. The payment of the annual fee will be due each year on this day.

Environmental Authority Holder

Names	Registered addresses
Cement Australia (Queensland) Pty Limited	40 McDougall Street MILTON QLD 4064

Environmentally Relevant Activities and Location Details

Environmentally Relevant Activities	Location
ERA 7 - Chemical Manufacturing (6) Manufacturing, in a year, the following quantities of inorganic chemicals, other than inorganic chemicals to which items 1 to 4 apply – (d) more than 100,000t. **ERA 8 – Chemical Storage** (3) Storing more than 500 cubic metres of chemicals of class C1 or C2 combustible liquids under AS 1940 or dangerous goods class 3 under subsection (1)(c). **ERA 15 – Fuel Burning** Using fuel burning equipment that is capable of burning at least 500kg of fuel in an hour **ERA 33 – Crushing, Milling, Grinding or Screening** Crushing, grinding, milling or screening more than 5,000t of material in a year. **ERA 41 – Cement Manufacturing** (1) Manufacturing 200t or more of cement in a year. **ERA 50 – Mineral and Bulk Material Handling** (2) Loading or unloading 100t or more of bulk materials in a day, other than loading or unloading mentioned in item 3, or storing bulk materials. **ERA 55 – Other Waste Reprocessing or Treatment** (1) Operating a facility for receiving and either reprocessing or treating, in a year, the following quantity of general waste – (c) more than 10,000t. **ERA 55 – Other Waste Reprocessing or Treatment** (2) Operating a facility for receiving and either reprocessing or treating, in a year, the following quantity of category 2 regulated waste – (c) more than 10,000t.	**Fishermans Landing** Lot 1/MPH35335 Lot 1/RP614356 Lot 32/DS469 Lot 101/SP224189 Lot 102/SP224189

Environmentally Relevant Activities	Location
ERA 55 – Other Waste Reprocessing or Treatment (3) Operating a facility for receiving and either reprocessing or treating, in a year, the following quantity of category 1 regulated waste – (c) more than 10,000t. **ERA 55 – Other Waste Reprocessing or Treatment** (4) Operating a facility for receiving and either reprocessing or treatment clinical waste or biosecurity waste. **ERA 60 – Waste Disposal** (1) Operating a facility for disposing of, in a year, the following quantity of waste mentioned in subsection (1)(a) – (b) 50,000t to 100,000t. **ERA 60 – Waste Disposal** (2) Operating a facility for disposing of, in a year, the following quantity of waste mentioned in subsection (1)(b) – (a) less than 2,000t. **ERA 61 – Thermal Waste Reprocessing and Treatment** (1) Thermally reprocessing or treating, in a year, the following quantity of general regulated waste – (b) more than 5,000t but not more than 10,000t. **ERA 61 – Thermal Waste Reprocessing and Treatment** (2) Thermally reprocessing or treating, in a year, the following quantity of category 2 regulated waste – (c) more than 10,000t. **ERA 61 – Thermal Waste Reprocessing and Treatment** (3) Thermally reprocessing or treating, in a year, the following quantity of category 1 regulated waste – (c) more than 10,000t. **ERA 61 – Thermal Waste Reprocessing and Treatment** (4) Thermally reprocessing or treating clinical waste or quarantine waste. **ERA 62 – Resource Recovery and Transfer Facility Operation** (1) Operating a facility for receiving and sorting, dismantling, baling or temporarily storing – (c) category 2 regulated waste. **ERA 62 – Resource Recovery and Transfer Facility Operation** (1) Operating a facility for receiving and sorting, dismantling, baling or temporarily storing – (d) category 1 regulated waste. **ERA 63 – Sewage Treatment** (1) Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (b-ii) more than 100 but not more than 1,500EP otherwise.	

Additional information for applicants

Environmentally relevant activities
The description of any environmentally relevant activity (ERA) for which an environmental authority (EA) is issued is a restatement of the ERA as defined by legislation at the time the EA is issued. Where there is any inconsistency between that description of an ERA and the conditions stated by an EA as to the scale, intensity or manner of carrying out an ERA, the conditions prevail to the extent of the inconsistency.
An EA authorises the carrying out of an ERA and does not authorise any environmental harm unless a condition stated by the EA specifically authorises environmental harm.
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 an owner or occupier of contaminated land give written notice to the administering authority if they become aware of the following:

- the happening of an event involving a hazardous contaminant on the contaminated land (notice must be given within 24 hours); or
- a change in the condition of the contaminated land (notice must be given within 24 hours); or
- a notifiable activity (as defined in Schedule 3) having been carried out, or is being carried out, on the contaminated land (notice must be given within 20 business days);

that is causing, or is reasonably likely to cause, serious or material environmental harm.
For further information, including the form for giving written notice, refer to the Queensland Government website www.qld.gov.au, using the search term 'duty to notify'.

Take effect
Please note that, in accordance with section 200 of the EP Act, an EA has effect:

a) if the authority is for a prescribed ERA and it states that it takes effect on the day nominated by the holder of the authority in a written notice given to the administering authority-on the nominated day; or
b) if the authority states a day or an event for it to take effect-on the stated day or when the stated event happens; or
c) otherwise - on the day the authority is issued.

However, if the EA is authorising an activity that requires an additional authorisation (a relevant tenure for a resource activity, a development permit under the *Planning Act 2016* or an SDA Approval under the *State Development and Public Works Organisation Act 1971*), this EA will not take effect until the additional authorisation has taken effect.

If this EA takes effect when the additional authorisation takes effect, you must provide the administering authority written notice within 5 business days of receiving notification of the related additional authorisation taking effect.

If you have incorrectly claimed that an additional authorisation is not required, carrying out the ERA without the additional authorisation is not legal and could result in your prosecution for providing false or misleading information or operating without a valid environmental authority.

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)

Other permits required
This permit only provides an approval under the *Environmental Protection Act 1994*. In order to lawfully operate you may also require permits / approvals from your local government authority, other business units within the department and other State Government agencies prior to commencing any activity at the site.

Development Approval
This permit is not a development approval under the *Planning Act 2016*. The conditions of this environmental authority are separate, and in addition to, any conditions that may be on the development approval. If a copy of this environmental authority is attached to a development approval, it is for information only, and may not be current. Please contact the Department of Environment, Science and Innovation to ensure that you have the most current version of the environmental authority relating to this site.



Signature

18/09/2024

Date

Rebecca Griffiths
Department of Environment, Science and Innovation
Delegate of the administering authority
Environmental Protection Act 1994

Enquiries:
Utilities and Government Organisations Assessment
Phone: 1300 130 372 (option 4)
Email: palm@des.qld.gov.au

Conditions of environmental authority

PART 1

Environmentally Relevant Activities	Locations
ERA 15 – Fuel Burning Using fuel burning equipment that is capable of burning at least 500kg of fuel in an hour **ERA 33 – Crushing, Milling, Grinding or Screening** Crushing, grinding, milling or screening more than 5, 000t of material in a year. **ERA 41 – Cement Manufacturing** (1) Manufacturing 200t or more of cement in a year. **ERA 50 – Mineral and Bulk Material Handling** (2) Loading or unloading 100t or more of bulk materials in a day, other than loading or unloading mentioned in item 3, or storing bulk materials. **ERA 55 – Other Waste Reprocessing or Treatment** (1) Operating a facility for receiving and either reprocessing or treating, in a year, the following quantity of general waste – (c) more than 10, 000t. **ERA 55 – Other Waste Reprocessing or Treatment** (2) Operating a facility for receiving and either reprocessing or treating, in a year, the following quantity of category 2 regulated waste – (c) more than 10, 000t. **ERA 55 – Other Waste Reprocessing or Treatment** (3) Operating a facility for receiving and either reprocessing or treating, in a year, the following quantity of category 1 regulated waste – (c) more than 10, 000t. **ERA 55 – Other Waste Reprocessing or Treatment** (4) Operating a facility for receiving and either reprocessing or treatment clinical waste or biosecurity waste. **ERA 60 – Waste Disposal** (1) Operating a facility for disposing of, in a year, the following quantity of waste mentioned in subsection (1)(a) – (b) 50, 000t to 100, 000t. **ERA 60 – Waste Disposal** (2) Operating a facility for disposing of, in a year, the following quantity of waste mentioned in subsection (1)(b) – (a) less than 2, 000t. **ERA 61 – Thermal Waste Reprocessing and Treatment** (1) Thermally reprocessing or treating, in a year, the following quantity of general regulated waste –	**Fishermans Landing** Lot 1/MPH35335 Lot 1/RP614356 Lot 32/DS469 Lot 101/SP224189 Lot 102/SP224189

(b) more than 5, 000t but not more than 10, 000t. **ERA 61 – Thermal Waste Reprocessing and Treatment** (2) Thermally reprocessing or treating, in a year, the following quantity of category 2 regulated waste – (c) more than 10, 000t. **ERA 61 – Thermal Waste Reprocessing and Treatment** (3) Thermally reprocessing or treating, in a year, the following quantity of category 1 regulated waste – (c) more than 10, 000t. **ERA 61 – Thermal Waste Reprocessing and Treatment** (4) Thermally reprocessing or treating clinical waste or quarantine waste. **ERA 62 – Resource Recovery and Transfer Facility Operation** (1) Operating a facility for receiving and sorting, dismantling, baling or temporarily storing – (c) category 2 regulated waste. **ERA 62 – Resource Recovery and Transfer Facility Operation** (1) Operating a facility for receiving and sorting, dismantling, baling or temporarily storing – (d) category 1 regulated waste. **ERA 63 – Sewage Treatment** (1) Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (b-ii) more than 100 but not more than 1, 500EP otherwise.	

The environmentally relevant activities conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

Agency Interest: General	
Condition number	**Condition**
1-G1	All reasonable and practicable **measures** must be taken to prevent or minimise environmental harm caused by the activities.
1-G2	The **activity** must be undertaken in accordance with written procedures that: 1. identify potential risks to the environment from the **activity** during routine operations and emergencies; and 2. establish and maintain control **measures** that minimise the potential for environmental harm; and 3. ensure plant, equipment and **measures** are maintained in a proper and effective condition; and 4. ensure plant, equipment and **measures** are operated in a proper and effective manner; and 5. ensure that staff are trained and aware of their obligations under the *Environmental Protection Act 1994*; and

	6. ensure that reviews of environmental performance are undertaken at least annually.
1-G3	All **records** must be kept for a period of at least five years and provided to the **administering authority** upon request.
1-G4	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.
1-G5	Chemicals, wastes and fuels in containers of greater than 15 litres must be stored within a **secondary containment system**.
1-G6	Unloading, loading and any internal transfer of liquids must be undertaken in a manner that minimises the possibility of spillage, occurs on an area that is impervious to the liquid, and sufficiently graded and bunded to retain any spillage or leakage.
1-G7	All analyses required under this environmental authority must be carried out by a laboratory that has National Association of Testing Authorities (**NATA**) certification, or an equivalent certification, for such analyses, wherever such is available.
1-G8	All instruments, equipment and measuring devices used for measuring or monitoring in accordance with any condition of this environmental authority must be calibrated, and appropriately operated and maintained.
1-G9	When required by the **administering authority**, monitoring must be undertaken in the manner prescribed by the **administering authority** to investigate a complaint of **environmental nuisance** arising from the **activity**. The monitoring results must be provided within 10 business days to the **administering authority** upon its request.
1-G10	Any breach of a condition of this environmental authority must be reported to the **administering authority** as soon as practicable within 24 hours of becoming aware of the breach. **Records** must be kept including full details of the breach and any subsequent actions taken.
1-G11	All complaints received must be recorded and kept in a log book with the following details: 1. time, date and nature of complaint; 2. type of communication (telephone, letter, personal etc.); 3. name, contact address and contact telephone number of complainant (Note: if the complainant does not wish to be identified then “Not identified” is to be recorded); 4. response and investigation undertaken as a result of the complaint; 5. name of person responsible for investigating complaint; and 6. action taken as a result of the complaint investigation and signature of responsible person.
1-G12	An annual monitoring report must be prepared by an **appropriately qualified person(s)** and submitted to the **administering authority** with the annual return each year. The annual monitoring report must include: 1. A summary of the previous 12 months monitoring data obtained in accordance with any of the monitoring requirement of this environmental authority; and 2. An evaluation/explanation of the data from any monitoring programs, including graphical representations showing relevant limits and trends against all historical data; and

	3. An outline of action taken, and proposed to be taken, to minimise the environmental risk from any deficiency identified by the monitoring or recording programs.
Agency Interest: Air	
Condition number	**Condition**
1-A1	**Release of contaminants to atmosphere** Contaminants from the site activities must only be released to air in accordance with Part 1 Table 1 and the associated monitoring conditions.
1-A2	Contaminant releases to atmosphere must not exceed limits stated in Part 1 Table 1 unless the following applies: 1. Power failure: For the duration of the emergency conditions during a major electrical failure; 2. Light up: Conducted as per IEMS procedures; 3. Supervised calibration test: For the duration of the elevated level tests; 4. **Commissioning**: For the duration as defined in Definitions; or 5. Trial burning: In accordance with conditions K1 to K20.
1-A3	The sulphur content in any fuel or blend of fuels burned in industrial fuel burning equipment is not to exceed three per cent (3%) by weight.
1-A4	The only types of fuel to be burned in industrial fuel burning equipment are listed in Part 1 Table 2.
1-A5	Condition 1-A5 does not apply during trial burning of waste.
1-A6	Dust suppression measures will be employed to prevent dust moving beyond the site boundaries.

Part 1 Table 1

Release point number and description	Contaminant release	Minimum release height (metres)	Maximum release limit (refer Note 3 & 3)
A4 – Main stack 442-SK1	Total solid particulate	125.0	100 mg/N m^3 (dry)
	Oxides of nitrogen as NO_2		1200 mg/N m^3 (dry) at 7% O_2
	Sulphur dioxide		100 mg/N m^3 (dry) at 7% O_2
	Hydrogen chloride (HCl)		200 mg/N m^3 (dry) at 7% O_2
	Total fluoride (as HF)		50 mg/N m^3 (dry) at 7% O_2
	Total volatile organic compounds (refer note 1)		20 mg/N m^3 (dry) at 7% O_2

	Total heavy metals (refer note 2)		1 mg/N m^3 (dry) at 7% O_2
	Polycyclic aromatic hydrocarbons (PAH) as BaP (BaP-TEQ for PAHs including half LOD)		0.1 µg/N m^3 (dry) at 7% O_2
	Dioxins and furans (NATO '89 I-TEQ for PCDDs and PCDFs including half LOD)		0.1 ng/S m^3 (dry) at 11% O_2
A5 - 4B2 cooler stack – SK1 & SK2	Total solid particulate	32.0	100 mg/N m^3 (dry) at 7% O_2
A8 - Coal mill bag filter stack	Total solid particulate	44.6 at RL 13.5	100 mg/N m^3 (dry) at 7% O_2

Note 1: **Total Volatile Organic Compound (VOC)** is the summation of individual VOCs as reported by measurement using USEPA Method 18.
Note 2: Total heavy metals includes antimony, arsenic, cadmium, lead, mercury, beryllium, chromium, cobalt, manganese, nickel, selenium, and vanadium and their compounds.
Note 3: Averaging time for monitoring to follow, where applicable, Table 1 of EPA Victoria (2002) *A guide to the sampling and analysis of air emissions and air quality*. For Total Solid Particles – 24-hour averaging period**. For continuous monitoring parameters averaging time is 24-hour rolling average.** The following is provided for consideration: https://www.epa.vic.gov.au/~/media/Publications/440%201.pdf.

Associated requirements

1. You must conduct and keep records of a monitoring program of contaminant releases to the atmosphere at the release points, frequency, and for the contaminants specified in *Part 1 Table 1* and in accordance with condition 1-A9 which complies with the following:
    i. Monitoring provision for the release points listed in *Table 1* must comply with the Australian Standard AS 4323.1 - 1995 "Stationary source emissions Method 1: Selection of sampling provisions".
    ii. All determinations of contaminant releases to the atmosphere must be made in accordance with methods prescribed in the **administering authority's** Air Quality Sampling Manual (most recent edition). If monitoring requirements are not described, monitoring protocols must be in accordance with a method as approved by Victorian, New South Wales or United States EPAs.
    iii. All air emission stack monitoring must be conducted by an experienced person or body which holds current National Association of Testing Authorities (**NATA**).
2. The method of measurement and reporting of noise levels must comply with the **administering authority's** *Noise Measurement Manual Version 4* (August 2013), or more recent editions or supplements to that document as become available.

Part 1 Table 2

Fuel/Type	Producer
Coal (including coal fines metallurgical coke fines and petroleum coke fines)	N/A
Natural Gas	N/A
Diesel	N/A
Fuel oil	N/A
Recycled hydrocarbons comprising waste oils	N/A
Greasers and degreasers	N/A
RF12	N/A
Butane	N/A
Tyres (without rims)	N/A
Pharmaceutical products (tablets, capsules and liquids and their packaging)	N/A
Used fabric filter bags	Cement Australia (Qld) Pty Ltd operations and licensed subsidiaries dealing with the manufacturing and handling of cement lime or fly ash
Fabric filter bags containing fly ash	Coal fired power stations
Petroleum products absorbent materials and used oil filters	N/A
Solvent based fuel	N/A
Industrial Wash Waters	N/A
Plastic bucket packaged wastes	N/A
Calcined spent cell lining	Boyne Smelter Limited
Anode dust	Boyne Smelter Limited
Mining and refinery condensate	N/A
Ozone depleting substances and Synthetic Greenhouse Gases	N/A
Liquids containing per and poly fluoroalkyl substances **(PFAS)**	N/A
Wood based fuel	N/A

1-A7

Co-incineration of liquids containing PFAS

The incineration of liquids containing **PFAS** must be undertaken in accordance with the following:

1. The introduction must only be through the main burner and / or the calciner.
2. A minimum temperature of 1200 degrees Celsius must be maintained in the burning zone of the kiln at all times when liquids containing **PFAS** are being introduced.

<table>
<tr><td></td><td>
3. A minimum temperature of 850 degrees Celsius must be maintained in the calcining zone of the kiln at all times when liquids containing **PFAS** are being introduced.
4. **PFAS** must be retained in the main burner or calciner (wherever introduced) for at least 2 seconds.
5. Liquids containing **PFAS** introduced into the calciner and / or main burner must have a total organic fluorine (TOF) concentration of no more than 0.5%.
6. The total rate of introduction of **PFAS** in liquids must not exceed 5kg per hour of TOF.
</td></tr>
<tr><td>1-A8</td><td>The destruction efficiency of PFAS compounds must be not less than 99.99% under all operating conditions. Where the PFAS compounds concentration is below the detection limit and 50% of LOR was selected for the calculated destruction efficiency, the destruction efficiency of PFAS compounds must be not less than 98%.</td></tr>
<tr><td>1-A9</td><td>A monitoring program must be conducted of contaminant releases to the atmosphere at the release points, at the minimum frequency and for the parameters specified in Part 1 Table 3.

Part 1 Table 3
<table>
<tr><th colspan="3">Monitoring of contaminants releases to air</th></tr>
<tr><th>Release point number</th><th>Contaminants monitored</th><th>Sampling frequency (refer Note 3 for averaging time)</th></tr>
<tr><td rowspan="11">A4 (Main stack 442-SK1)</td><td>Total solid particulate</td><td rowspan="3">Continuous</td></tr>
<tr><td>Oxides of nitrogen as NO2</td></tr>
<tr><td>Sulphur dioxide</td></tr>
<tr><td>Hydrogen chloride (HCl)</td><td rowspan="8">6 monthly</td></tr>
<tr><td>Total fluoride (as HF)</td></tr>
<tr><td>Total volatile organic compounds (refer Note 1)</td></tr>
<tr><td>Total heavy metals (refer Note 2)</td></tr>
<tr><td>Polycylic aromatic hydrocarbons (PAH) as BaP (BaP-TEQ for PAHs including half LOD)</td></tr>
<tr><td>Dioxins and furans(NATO ’89 I-TEQ for PCDDs and PCDFs including half LOD)</td></tr>
<tr><td>A5 (4B2 cooler stack – SK1 & SK2)</td><td>Total solid particulate</td><td rowspan="2">12 monthly</td></tr>
<tr><td>A8 (Coal mill bag filter stack)</td><td>Total solid particulate</td></tr>
<tr><td colspan="3">PFAS Incineration
When liquids containing PFAS are being incinerated the monitoring above is to also include the parameters at the frequencies below.</td></tr>
<tr><th>Release point number</th><th>Contaminants monitored</th><th>Sampling frequency</th></tr>
</table>
</td></tr>
</table>

A4 (Main stack 442-SK1)	**PFAS** extended suite of 21 compounds (as per *Part 1 Table 4 – Standard PFAS Suite*)	12 monthly

Associated requirements

1. You must conduct and keep records of a monitoring program of contaminant releases to the atmosphere at the release points, frequency, and for the contaminants specified in *Part 1 Table 3* which complies with the following:
   i. Monitoring provision for the release points listed in *Part 1 Table 3* must comply with the Australian Standard AS 4323.1 - 1995 *Stationary source emissions Method 1: Selection of sampling provisions*.
   ii. All determinations of contaminant releases to the atmosphere must be made in accordance with methods prescribed in the **administering authority's** Air Quality Sampling Manual (most recent edition). If monitoring requirements are not described, monitoring protocols must be in accordance with a method as approved by Victorian, New South Wales or United States EPAs.
   iii. All air emission stack monitoring must be conducted by an experienced person or body which holds current National Association of Testing Authorities (**NATA**).

Note 1: **Total Volatile Organic Compound (VOC)** is the summation of individual VOCs as reported by measurement using USEPA Method 18.
Note 2: Total heavy metals includes antimony, arsenic, cadmium, lead, mercury, beryllium, chromium, cobalt, manganese, nickel, selenium, and vanadium and their compounds.
Note 3: Averaging time for monitoring to follow, where applicable, Table 1 of EPA Victoria (2002) *A guide to the sampling and analysis of air emissions and air quality*. For Total Solid Particles – 24-hour averaging period**. For continuous monitoring parameters averaging time is 24-hour rolling average.** The following is provided for consideration: https://www.epa.vic.gov.au/~/media/Publications/440%201.pdf.

Part 1 Table 4

Acronym	Compound
PFBS	Perfluorobutanesulfonic acid
PFBA	Perfluorobutanoic acid
PFHxS	Perfluorohexanesulfonic acid
PFOS	Perfluorooctanesulfonic acid
PFDS	Perfluorodecanesulfonic acid
PFPeA	Perfluoropentanoic acid
PFHxA	Perfluorohexanoic acid
PFHpA	Perfluoroheptanoic acid
PFOA	Perfluorooctanoic acid
PFNA	Perfluorononaoic acid
PFDA	Perfluorodecanoic acid
PFUnA	Perfluoroundecanoic acid
PFDoA	Perfluorododecanoic acid

	PFTrDA — Perfluorotridecanoic acid PFTeDA — Perfluorotetradecanoic acid PFOSA — Perfluorooctanesulfonamide NEtFOSAA — N-ethyl-Perfluorooctanesulfonamidoacetic acid NMeFOSAA — N-methyl-perfluorooctanesulfonamidoacetic acid 4:2 FTS — 1H.1H.2H.2H-Perfluorohexanesulfonic acid 6:2 FTS — 1H.1H.2H.2H-Perfluorooctanesulfonic acid 8:2 FTS — 1H.1H.2H.2H-Perfluorodecanesulfonic acid
1-A10	A continuous emission monitoring system (CEMS) must be used for monitoring parameters such as stack gas temperature, oxygen content, particulates, oxide on nitrogen, sulphur dioxide, carbon monoxide, ammonia, hydrogen chloride and volatile organic compounds.
1-A11	The temperatures of the main burner and calcining zone must be monitored continuously.
Agency Interest: Water	
Condition number	**Condition**
1-WT1	**Quantity of contaminants released** The total quantity of contaminants released from release point W1 during any day must not exceed 17,000m^3.
1-WT2	**Quality characteristics of release to waters** You are authorised to release contaminants from release points specified in *Part 1 Table 5*. The release of contaminants to **waters** must comply at the release points specified in *Part 1 Table 5*, with each of the limits specified in *Part 1 Table 6*.
1-WT3	A **Groundwater monitoring system** must: 1. Be designed and installed by an **appropriately qualified person(s)** with experience and qualifications in hydrology and **groundwater** monitoring; and 2. Include a sufficient number of bores installed at locations and depths which yield representative **groundwater** samples from at least the uppermost aquifer so as to: i. Detect any seepage of contaminants to **groundwater** from site; and ii. Establish the quality of **groundwater** affected by any seepage of contaminants; and 3. Include monitoring of background **groundwater** quality, with both hydraulically **up-gradient bore(s)** or **background bore(s)** that have not been affected by any release of contaminants to **groundwater** from the **activity** and hydraulically **ground-gradient bore(s)** of the **activity**.
1-WT4	Stormwater and surface runoff must be directed from the plant, stockpile areas and railway loop to the ponds marked pond 1 to pond 7 on the plan attached to this environmental authority (Attachment 1 – Approved Plan).
	Part 1 Table 5 **Release point no.** / **Source description** / **Location** / **Release point**

W1	Wash-down water, storm water runoff and treated sewage from sewerage plant	Overflow from Pond 1	Port Curtis via CA site
W2	Wash-down water and stormwater runoff	Overflow from Pond 2	Port Curtis via CA site
W3	Wash-down water and stormwater runoff	Overflow from Pond 3	Port Curtis via rail loop
W4	Wash-down water, storm water runoff and runoff from sewage irrigation	Overflow from Pond 4	Port Curtis via CA site
W5	Wash-down water and stormwater runoff	Overflow from Pond 5	Port Curtis via Serrant Road
W6	Wash-down water, storm water runoff and runoff from sewage irrigation	Overflow from Pond 6	Port Curtis
W7	Treated sewage from sewerage plant	Sewerage treatment plant outlet pipe	Sewage Fall Out

Part 1 Table 6

Quality characteristics	**Release point no.**	**Discharge limit**	**Limit type**	**Frequency**
pH	W1, W2, W3, W4, W5, W6, W7	6.5-9.0	Min-max	**Bimonthly**
Suspended solids	W1, W2, W3, W4, W5, W6, W7	100mg/L	Max	**Bimonthly**
Dissolved oxygen	W1, W2, W3, W4, W5, W6, W7	2.0mg/L	Min	**Bimonthly**
Free chlorine	W7	0.3-0.7mg/L	**80th percentile**	**Bimonthly**
5 day biological oxygen demand	W7	20mg/L	Max	**Bimonthly**

Associated requirements

1. Water quality monitoring must be in accordance with the methods prescribed in the current edition of the **administering authority's** Monitoring and Sampling Manual;
2. Samples must be taken using representative samples;
3. All determinations must employ analytical practical quantification limits sufficiently low enough to enable comparisons to be made against water quality objectives/limits relevant to the particular water quality characteristics;
4. Monitoring must be undertaken during a release as per the frequency stated;
5. All monitoring devices must be correctly calibrated and maintained.

Agency Interest: Land	
Condition number	**Condition**
1-L1	Contaminants must not be released to **land**.
Agency Interest: Waste Management	
Condition number	**Condition**
1-WS1	**Regulated waste** can be recycled in compliance with condition K1 to condition K20 of this environmental authority by: (a) Blending it with raw materials for use in the manufacture of cement; and (b) Subject to condition K1, adding it to fuel sources for use in industrial fuel burning equipment.
Kiln Burning Trials (conditions K1 to K20 inclusive)	
K1	**Notification procedure** (a) The **administering authority** must be notified in writing of any proposed new alternative fuels or materials prior to their addition into the process. (b) The notification must include, but not be limited to the following: i. The exact make-up of the alternative fuels or materials; ii. Quantity of fuel or material to be added into the process; iii. Estimated feed rate; iv. Overall effect on and reason for addition into the process; and v. All contaminants that will be produced.
K2	The **administering authority** will assess the notification described in condition K1 and determine whether the inclusion of the alternative fuel or material into the process constitutes grounds for the trial procedures set out in this to be initiated.
K3	Waste burning trials must not commence until condition K1 has been confirmed. The **administering authority** must authorise the proposed waste burning trial in writing.
K4	This must be applied when trial burning of wastes as set out in *Part 1 Table 7* is to be undertaken or when the **administering authority** determines in accordance with condition K1 and condition K2 above that any alternative fuel or material constitutes grounds for the initiation of the trial procedures.
K5	Radioactive substances must not be trialled.
K6	The following records must be kept and must be available to an authorised person or the **administering authority**: (a) Name of producer/supplier of the waste; (b) Name of the waste transporter; (c) Date of receipt of waste on site; (d) Mass/volume of waste accepted;

	(e) Details of analysis conducted on the waste prior to receipt on site; (f) Details of kiln conditions; (g) Results of stack emission testing; and (h) Pre-trial report.
K7	**Waste criteria** (a) Only waste listed in *Part 1 Table 7* or other wastes approved by the **administering authority** in writing can be trialled as alternative fuels or materials in kiln burning. (b) Kiln burning trials must not be carried out on any alternative fuels or materials until the **administering authority** has approved on-site storage techniques, inspection methods, contaminant release limits, air quality monitoring, and duration of the trial with the exception of those listed in *Part 1 Table 7* until written agreement has been provided by the **administering authority**.
K8	Chemical analysis of the air shall be performed according to *Part 1 Table 8* and approval conditions for other wastes as per condition K7 of this environmental authority. The results must comply with each of the corresponding limits specified in *Part 1 Table 8* and approval conditions for other wastes as per condition K7 of this environmental authority. Contaminant emissions to air during trials must comply with limits prescribed in *Part 1 Table 8*.
K9	Sampling of bulk waste shall be conducted to determine **maximum** concentrations in bulk sample as listed in *Part 1 Table 7*. Waste used in trials must be analysed in accordance with *Part 1 Table 7*.
K10	**Pre-trial report** A pre-trial report must be submitted to the **administering authority** at least thirty (30) days prior to the commencement of a trial.
K11	The pre-trial report must include, but not be limited to the following: (a) Proposed dates of trial commencement and completion; (b) Any available information about the history of a particular alternative fuel or material proposed to be burned in cement kilns in this trial; (c) Estimated quantity and definition of alternative fuel or material to be burned; (d) Estimated feed method and estimated feed rate; (e) On-site storage techniques including handling and inspection methods; (f) Proposed air monitoring that will be conducted and predicted ground level concentrations of contaminants; and (g) Probable cease trial limits.
K12	A mass balance equation must be calculated for each trial, or proposed trial, for chemicals required by the **administering authority**.
K13	The main stack gas must be monitored on request but not more frequently than at least once every two (2) months during the trial or more often as directed by the **administering authority**. Additional stack monitoring must be conducted during trials as often as directed by the **administering authority** and or at least every two (2) months.
K14	Where stack emission testing detects a concentration of one or more analytes greater than the corresponding limit in *Part 1 Table 8*, or for other wastes greater than the contaminant release limits set in the approved trial conditions as per condition K7 of this environmental

	authority, then waste feed shall temporarily cease until the situation has been satisfactorily rectified to bring the stack emissions into compliance with the aforementioned limits. If any release limit specified in *Part 1 Table 8* is exceeded, the trial must stop and not re-commence until the issue causing exceedances are investigated and rectified.
K15	An air dispersion model to estimate a 24 hour ground level continuous must be undertaken using stack monitoring obtained during each trial. Results of stack emission testing must be used in an air dispersion model to estimate 24 hour average ground level concentrations that occurred during the trial for each of the analytes listed in *Part 1 Table 8* and as approved in accordance with condition K7.
K16	Burning zone temperature of the kiln and oxygen concentration inside the kiln must be monitored continuously during trials.
K17	Total solid particulates and nitrogen oxide must be monitored throughout the trial such that an average of the preceding 24 hours is available to the **administering authority** upon request.
K18	**Cease trial** A shut-off facility must be installed to stop waste feeding into the kiln in the event that any of the following conditions are detected: (a) Burning zone temperature in the kiln chambers less than 1,200 degrees centigrade; (b) Gases exiting the chamber indicate that the reducing conditions (less than 1% oxygen) are evident; or (c) Stack emission testing detects elevated concentrations of contaminants as described in condition K14.
K19	The **administering authority** shall be notified within 24 hours or as soon as practical if the cease trial has occurred, as per condition K18.
K20	**Post-trial report** A post-trial report must be provided to the **administering authority** within 60 days of the completion of each trial and must contain at least the following: (a) Total quantity of waste burned during the trial; (b) Dates and times when the trial commenced and concluded; (c) Feed method and feed rate; (d) Kiln conditions, including temperature and oxygen concentrations; (e) Every stack emission result for each analyte required to be tested in the trial; (f) Result of any air dispersion modelling; (g) Any changes to plant pollution control equipment, kiln or stack conditions that may change air emissions; (h) Overall effectiveness of the trial; (i) Complaints and/or enquiries received during the trial; and (j) Whether the waste is suitable for burning in the kiln.
	Part 1 Table 7 **Description of wastes** / **Number** Oil and oily mineral substances / 1

Hydrocarbon (liquids & solids) hydrocarbon/oil mixtures and hydrocarbon solid mixtures	2
Tar or coke products obtained from refining, distillation, pyrolysis, chemical and metal reduction industries	3
Soaps, fatty solids, oils of animal or vegetable origin	4
Plastic	5
Wood and paper products	6
Aluminium smelting products (comtor ash, kiln grade spar, burnt off butts)	7

Part 1 Table 8

Analyte	**Maximum concentration in stack gas**	**Maximum concentration in bulk sample**	**Number**
Stack gas temperature		N/A	1-7
Stack gas exit velocity and volume flow rate		N/A	1-7
Aerosols			
Total solid particulate	200mg/Nm_3, 24hr av.	N/A	1-7
Total fluoride (as HF)	50mg/Nm_3	-	1-7
Chlorine and chlorine compounds; expressed as chlorine for compounds other than HCL	200mg/Nm_3	10,000mg/kg (as chlorine)	5
Inorganic gases			
Oxides of nitrogen as NO_2 (ref. O_2 level at 7%)	1200mg/Nm_3	N/A	1-7
Sulphuric acid mist and sulphur dioxide	100mg/Nm_3	N/A	1-7
Ammonia	200mg/Nm_3	N/A	4
HCL	200mg/Nm_3	N/A	5
Cyanide	N/A	100mg/kg	1-7
Hydrogen sulphide	5mg/Nm_3	N/A	1,3
Organic gases			
Total hydrocarbons	10mg/Nm_3	N/A	1-7
Total polyaromatic hydrocarbons	0.1 µg/Nm_3	N/A	1-7

TEQ of USEPA 16 priority PAHs based on WHO environmental health criteria 202			
Polychlorinated compounds Total polychlorinated biphenyls WHO 1998 BaP-TEQ	0.1 µg/Nm_3	25mg/kg	1,2,3
Total PCDD/PCDF 1-TEQ @ 11% oxygen	0.1 µg/Nm_3	N/A	1-7

PART 2

Environmentally relevant activities	Location
ERA 7 - Chemical Manufacturing (6) Manufacturing, in a year, the following quantities of inorganic chemicals, other than inorganic chemicals to which items 1 to 4 apply – (d) more than 100, 000t. **ERA 8 – Chemical Storage** (3) Storing more than 500 cubic metres of chemicals of class C1 or C2 combustible liquids under AS 1940 or dangerous goods class 3 under subsection (1)(c). **ERA 33 – Crushing, Milling, Grinding or Screening** Crushing, grinding, milling or screening more than 5, 000t of material in a year.	**Fishermans Landing** Lot 101/SP224189 Lot 102/SP224189

The environmentally relevant activities conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

Agency interest: General	
Condition number	**Condition**
2-G1	When required by the **administering authority**, monitoring must be undertaken in the manner prescribed by the **administering authority** to investigate a complaint of **environmental nuisance** arising from the **activity**. The monitoring results must be provided within 10 business days to the **administering authority** upon its request.
Agency interest: Air	
Condition number	**Condition**
2-A1	Other than as permitted within this environmental authority, odours or airborne contaminants must not cause **environmental nuisance** to any **sensitive place** or **commercial place**.
2-A2	**Other Release Points** Particulate matter must not be released to the atmosphere from a release point mentioned in *Part 2 Table 2* without continuous treatment through an appropriate control, for example a baghouse.
2-A3	The sulphur content in any fuel or blend of fuels burned in industrial fuel burning equipment is not to exceed three per cent (3%) by weight.

Part 2 Table 1

Release of contaminants to air					
Release point number	**Minimum release height (metres)**	**Minimum velocity (m/sec)**	**Contaminant release**	**Release limit 24 hour average (mg/Nm_3)**	**Sampling frequency**
K1 main stack (411-BF1)	125	18	Particulates	100 dry	Continuous
K1 main stack	125	18	Oxides of nitrogen	1,200 dry and 7% oxygen	Continuous

Associated requirements

1. The release of contaminants to the atmosphere from a point source must only occur from those release points identified in *Part 2 Table 1* and must be directed vertically upwards without any impedance or hindrance.

Part 2 Table 2

Release point number	
Storage bin	451-BF1
Transfer point	4C1-BF1
Transfer point	4C1-BF2
Transfer point	4C1-BF3
Transfer point	4C1-BF4
Transfer point	4C1-BF5
Transfer point	4C1-BF6
Silo extraction and crushing	612-BF1
Product dispatch	633-BF1

Agency interest: Land

Condition number	**Condition**
2-L1	Contaminants must not be released to **land**.

Agency interest: Noise

Condition number	**Condition**
2-N1	Noise from activities must not cause an **environmental nuisance** at any noise affected premises.

Definitions

Key terms and/or phrases used in this document are defined in this section. Applicants should note that 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.

Activity	The environmentally relevant activities, whether resource activities or prescribed activities, to which the environmental authority relates.
Administering authority	the Department of Environment, Science and Innovation or its predecessor or successor.
Appropriately qualified person(s)	A person or persons who has professional qualifications, training, skills and experience relevant to the EA requirement and can give authoritative assessment, advice and analysis in relation to the EA requirement using the relevant protocols, standards, methods or literature.
Background bore	**groundwater** monitoring bore, constructed in accordance with the Australian Standard AS/NZS 5667.11 Water Quality Sampling: Guidance on Sampling Groundwaters, and used to sample **groundwater** from an aquifer the water quality of which may be potentially affected by the **activity**. This may be an **up-gradient bore, down-gradient bore** or bore in the same aquifer in a nearby location unaffected by the **activity**.
Bi-monthly	twice a month.
Commissioning	the date following the completion of the guaranteed performance test on the new kiln.
Cubic metre (m^3)	the volume of the dry gaseous contaminant which occupies one (1) cubic metre at a temperature of zero (0) degrees Celsius and at an absolute pressure of 101.3 kilopascals.
Destruction efficiency (DRE)	the mass feed rate of an individual combustible compound minus the mass emission rate of an individual combustible compound, divided by the mass feed rate of an individual combustible compound.
Down-gradient bore	a **background bore** in a location hydraulically down gradient of those aspects of the **activity** that may affect groundwater quality.
Environmental nuisance	as defined in the *Environmental Protection Act 1994*.
Groundwater	water that occurs naturally in, or is introduced artificially into, an aquifer.
Groundwater monitoring system	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).
Industrial wash waters	industrial wash waters which meet the specification listed in *Definitions Table 1*

Definitions Table 1

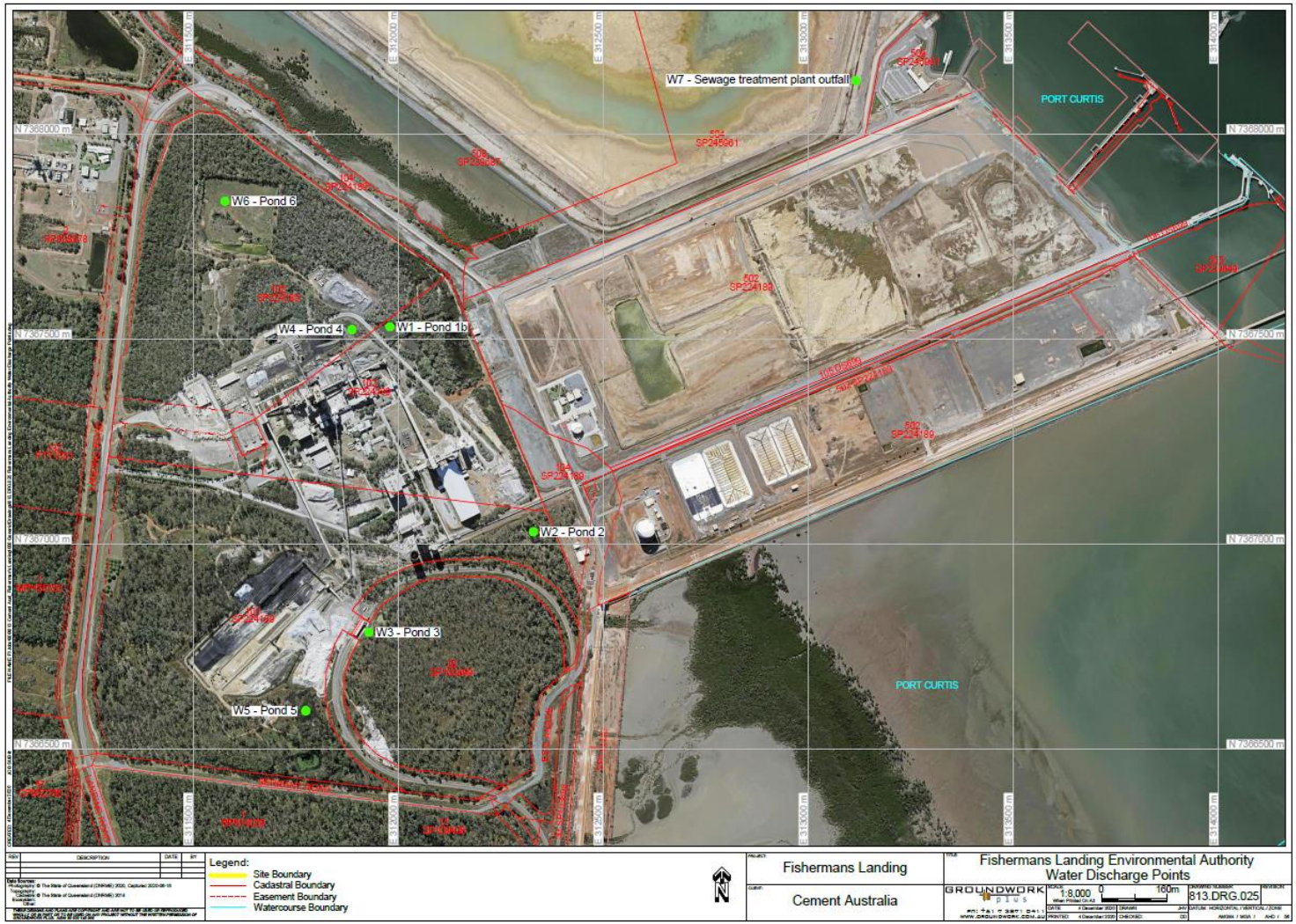
	Unit	Condensate Specification	
		Lower Limit	Upper Limit
Constituent			
PCBs	ppm	0	50
Sulfur as (S)	% w/w	0	3
Total Fluorides	% w/w	0	0.1
Total Organic Fluorides	% w/w	0	0.05
Total Chlorides	% w/w	0	1
Heavy Metals			
Sum of Antimony(Sb), Arsenic(As), Cobalt(Co), Nickel(Ni), Lead(Pb), Vanadium(V), Chromium(Cr)	ppm	0	2,500
Antimony (Sb)	ppm	0	200
Arsenic (As)	ppm	0	200
Cobalt (Co)	ppm	0	200
Nickel (Ni)	ppm	0	1000
Lead (Pb)	ppm	0	1000
Vanadium (V)	ppm	0	1000
Chromium (Cr)	ppm	0	1000
Sum of Mercury(Hg), Cadmium(Cd), Thallium(Tl)	ppm	0	20
Mercury (Hg)	ppm	0	10
Cadmium (Cd)	ppm	0	14
Thallium (Tl)	ppm	0	7
Selenium (Se)	ppm	0	1000

Land	land excluding waters and the atmosphere.
$L_{A10\ adj,\ 15\ mins}$	the A-weighted sound pressure level exceeded for 10 percent (10%) of the time period not less than 15 minutes using fast response.
Maximum	the measured value of the quality characteristic or contaminant must not be greater than the release limit stated.
mg/L	milligrams per litre.
Mining and refinery condensates	fuel derived from mining and refining processes which meets the specifications listed in *Definitions Table 1*.
Minimum	measured value of the quality characteristic or contaminant must not be less than the release limit stated.
Ozone Depleting Substances and	chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), hyrdrofluorocarbons (HFCs) and perfluorocarbons (PFCs) that is, or

<table>
<tr><td>Synthetic Greenhouse Gases</td><td>has been used as a refrigerant in refrigeration or air conditioning equipment.</td></tr>
<tr><td>Plastic bucket packaged wastes</td><td>also known as “small packaged waste”, which when tested from a composite representative sample, meets the specification listed in Definitions Table 1.</td></tr>
<tr><td>PFAS</td><td>Means per and poly fluoroalkyl substances.</td></tr>
<tr><td>RF12</td><td>lube type petroleum distillate/oil blend supplied by True Blue Recycling.</td></tr>
<tr><td>Regulated waste</td><td>as defined in the Environmental Protection Regulation 2019.</td></tr>
<tr><td>Solvent-based fuel</td><td>waste-derived, solvent based, liquid fuel with concentrations of environmentally significant components as per Definitions Table 2.

Definitions Table 2
<table>
<tr><th>Constituent of Potential Environmental Significance</th><th>Range</th></tr>
<tr><td>Total Chlorides (%w/w)</td><td>0-1.0</td></tr>
<tr><td>Total Fluorides (%w/w)</td><td>0-0.1</td></tr>
<tr><td>Sulfur (%w/w)</td><td>0-3.0</td></tr>
<tr><td>Antimony (ppm)</td><td>0-200</td></tr>
<tr><td>Arsenic (ppm)</td><td>0-200</td></tr>
<tr><td>Cadmium (ppm)</td><td>0-10</td></tr>
<tr><td>Hexavalent Chromium (ppm)</td><td>0-500</td></tr>
<tr><td>Lead (ppm)</td><td>0-1000</td></tr>
<tr><td>Mercury (ppm)</td><td>0-10</td></tr>
<tr><td>Thallium (ppm)</td><td>0-1</td></tr>
<tr><td>Nickel (ppm)</td><td>0-200</td></tr>
<tr><td>Selenium (ppm)</td><td>0-1000</td></tr>
<tr><td>Vanadium (ppm)</td><td>0-100</td></tr>
<tr><td>PCB (ppm)</td><td>0-50</td></tr>
</table></td></tr>
<tr><td>Waters</td><td>includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water natural or artificial watercourse, bed and banks 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.</td></tr>
<tr><td>Up-gradient bore</td><td>a background bore, in a location hydraulically up gradient of all potential influences of the activity that may affect groundwater quality.</td></tr>
<tr><td>80th percentile</td><td>that the measured values of the quality characteristic must not be greater than the release limit for any more than one out of five consecutive samples where the time interval between taking of each consecutive sample is not less than three days.</td></tr>
</table>

Attachment 1: Approved Plan



END OF PERMIT