Government of Western Australia
Department of Water and Environmental Regulation

Amended Licence

Licence Number	L5271/1983/14
Licence Holder	Alcoa of Australia Limited
ACN	004 879 298
Registered business address	181-205 Davy Street BOORAGOON WA 6154
File Number	DEC643/3
Duration	17/06/2014 to 16/06/2025
Date of amendment	6 January 2021
Prescribed details	Pinjarra Alumina Refinery South West Hwy PINJARRA WA 6208 Legal description – Lot 19 on Diagram 44739, Part of Lot 109 on Diagram 60089, Part of Lot 151 on Plan 10914, Lot 221 on Plan 302632, Lot 222 on Plan 302638, Part of Lot 251 on Plan 35963 and Lot 252 on Plan 35963 As depicted in Schedule 1

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)
Category 46: Bauxite refining
Category 52: Electric power generation
Category 64: Class II and III putrescible landfill site
Category 67: Fuel burning

This Amended Licence is granted to the Licence Holder, subject to the following conditions, on 6 January 2021, by:

Amine Fisher
Digitally signed by Amine Fisher
Date: 2021.01.06 13:14:34 +08'00'

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

DEFINITIONS

'Annual Audit Compliance Report (AACR)' means a report submitted in a format approved by the CEO (relevant guidelines and templates may be available on the Department's website);

'Act' means the *Environmental Protection Act 1986;*

'Annual Exceedance Probability' (AEP) means the probability that a particular flood value will be exceeded in any one year;

'Annual Period' means a 12 month period commencing from 1 January until 31 December in that year;

'AS 1940:2004' means the storage and handling of flammable and combustible liquids;

'Australian Standard 5667' means the most recent version and relevant part of *AS/NZ 5667*;

'Availability' means (relative to calciner dust concentration CEMS), the time the CEMS is connected to the calciner stack and producing dust concentration data;

'BMS trip' means the operation of the Burner Management System (BMS) to trip and cut gas when it detects an explosion risk;

'CEMS' means continuous emissions monitoring system;

'CEMS Code' means the code of practice that details design, installation, performance, maintenance & verification for CEMS, as well as QA upon acquired data. The Code is titled *Department of Environment and Conservation Continuous Emission Monitoring System (CEMS) Code for Stationary Source Air Emissions*, October 2006;

'CO' means carbon monoxide;

'Dangerous Goods' means, as defined by the *Dangerous Goods Safety (General) Regulations 2007*;

'CEO' means Chief Executive Officer of the Department of Water and Environmental Regulation

'CEO' for the purposes of notification means:

Director General
Department administering the *Environmental Protection Act 1986*
Locked Bag 10
Joondalup DC WA 6919
or:
info@dwer.wa.gov.au

'Department' means the department established under section 35 of the *Public Sector Management Act 1994* (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.

'Engineer' means a person who:

(a) holds a Civil Engineering tertiary qualification; and

(b) has a minimum of ten years of experience working in the area of civil engineering; and

(c) holds a membership of the Institute of Engineers Australia.

'ESP' means Electrostatic Precipitator;

'Licence' refers to this document, which evidences the grant of a licence by the CEO under section 57 of the EP Act, subject to the specified conditions contained within.

'Licence Holder' refers to the occupier of the premises being the person to whom this Licence has been granted, as specified at the front of this Licence;

'mg/m^3' means milligrams per cubic metre;

'mg/L" means milligrams per litre;

'mS/cm' means millisiemens per centimetre;

'NATA' means National Association of Testing Authorities;

'normal operating conditions' (relative to stack emissions) means operation of a particular process excluding startup, shutdown or upset conditions;

'NOx' means oxides of nitrogen;

'Oxalate Kiln RTO bed recovery' means a process where an individual RTO bed is periodically isolated and heated to higher than normal operating temperatures in order to remove accumulated deposits to maintain efficient function of the bed;

'Oxalate storage area' means an area specifically designed for the temporary storage of oxalate waste;

'ppm' means parts per million;

'Premises' refers to the premises to which this Licence applies, as specified at the front of this Licence and as shown on the premises map Figure 1 in Schedule 1 to this Licence.

'RSA' means Residue Storage Area;

'RTO' means Regenerative Thermal Oxidiser;

'start-up and shutdown conditions' means the period of time immediately after commencing operation and immediately after stopping operation, during which time the plant is not running at steady state condition;

'Spillway' a structure to provide the controlled discharge from a dam or Residue Storage Area.

'Wet winter' means rainfall from 1 May to 30 September in each calendar year that is greater than or equal to 814mm as measured by the Alcoa Pinjarra Meteorological Station located at Oakley South;

‘µg/m^3’ means micrograms per cubic metre, expressed as dry at 0 degrees Celsius and 1.0 atmosphere pressure (101.325 kilopascals);

‘USEPA’ means United States Environmental Protection Agency; and

Other terms take their meaning preferentially from the *Environmental Protection Act.*

END OF DEFINITIONS

Licence history

Instrument	Date	Summary of changes
L5271/1983/14	13/06/2014	Licence re-issue
L5271/1983/14	29/04/2016	Department initiated amendment in accordance with section 59(1)(k) of the *Environmental Protection Act 1986* to amend the duration of the licence date month year.
L5271/1983/14	28/07/2016	Amendment Notice 2: on 28 March 2016 an application for amendment was received to amend waste management conditions S1(a) and S1(b).
L5271/1983/14	28/07/2017	Amendment Notice 3: on 22 November 2016 an application for licence amendment received for works associated with a residue filtration project that will alter the way the residue mud component of residue slurry is processed, handled and deposited.
L5271/1983/14	28/08/2018	Amendment Notice 4: on 17 June 2018 the Licence Holder requested to amend the licence to remove references to an emergency containment pond and associated spillway that formed part of the proposed secondary containment infrastructure for the residue mud filtration facility.
L5271/1983/14	06/01/2021	Installation and operation of a spillway on the RSA5 perimeter drain. Consolidation of previous amendments to this licence granted through amendment notices.

Interpretation

In this licence:

(a) the words ‘including’, ‘includes’ and ‘include’ in conditions mean “including but not limited to”, and similar, as appropriate;

(b) where any word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;

(c) where tables are used in a condition, each row in a table constitutes a separate condition;

(d) any reference to an Australian or other standard, guideline, or code of practice in this licence:

  (i) if dated, refers to that particular version; and

  (ii) if not dated, refers to the latest version and therefore may be subject to change over time;

(e) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act; and

(f) unless specified otherwise, all definitions are in accordance with the EP Act.

NOTE: This licence requires specific conditions to be met but does not provide any implied authorisation for other emissions, discharges, or activities not specified in this licence.

Licence conditions

Construction phase

Infrastructure and equipment

WKS1 The Licence Holder must:

(i) construct and install the infrastructure and equipment;
(ii) in accordance with the corresponding construction and installation requirements; and
(iii) at the corresponding infrastructure location

as set out in Table 1.

Table 1: Infrastructure and equipment requirements table

Infrastructure and equipment	Construction and installation requirements	Infrastructure location
RSA5 perimeter drain Spillway	In accordance with final design in Schedule 1: Figure 3 and Figure 4 In accordance with ANCOLD Guidelines on Tailings Dams, Planning, Design, Construction, Operation and Closure 2012	Residue perimeter drain adjacent to the south west corner of RSA5 as shown in Schedule 1: Figure 2.

Compliance reporting

WKS2 The Licence Holder must within 60 days of the spillway being constructed:

(i) undertake an audit of their compliance with the requirements of condition WKS1; and
(ii) prepare and submit to the CEO an audit report on that compliance.

WKS3 The report required by condition WKS2, must include as a minimum the following:

(i) certification by a suitably qualified Engineer that the spillway, as specified in condition WKS1, has been constructed in accordance with the relevant requirements specified in condition WKS1;
(ii) as constructed plans and a detailed site plan for the spillway specified in condition WKS1; and
(iii) be signed by a person authorised to represent the licence holder and contains the printed name and position of that person.

General Conditions

Licence limit exceedance reporting

G1(a) The Licence Holder shall advise the CEO in writing within seven (7) working days of becoming aware of a monitoring result that either numerically exceeds the applicable limit specified in condition A3 or the applicable limits specified in conditions A9(b) or A9(c) for more than 60 consecutive minutes or numerically drops below the applicable limit specified in A9(a) for more than 60 consecutive minutes.

G1(b) The Licence Holder shall ensure that the written advice required by condition G1(a) includes:

(iv) the date, time and probable reason for the exceedance;
(v) an estimate of the period over which the limit was or is likely to be exceeded; and
(vi) an estimate of the extent of the discharge over that period and indication of known or potential environmental impacts.

G1(c) The Licence Holder shall provide a full report (unless otherwise approved by the CEO) on its investigations into any exceedance reported under condition G1(a) within 7 working days of becoming aware of the exceedance, and it shall include, but not be limited to:

(i) the date, time and reason for the exceedance;
(ii) the period over which the exceedance occurred;
(iii) the extent of the discharge over that period and potential or known environmental consequences; and
(iv) corrective action taken or planned to prevent a recurrence of the exceedance.

Target exceedance reporting

G2 The Licence Holder shall advise the CEO in writing within seven (7) working days of becoming aware of a monitoring result that numerically exceeds the applicable targets specified in condition A7(a), A7(b), A7(c) and A14.

Spillway discharge reporting

G3 The Licence Holder shall advise the CEO in writing within one (1) working day of there being a discharge of process water from the spillway, and within one (1) working day of the discharge ceasing.

Annual environmental report

G4 The Licence Holder shall provide to the CEO, by 31 March in each year, a report containing the data and monitoring information required under monitoring and reporting conditions of this licence for the period 1 January to 31 December of the preceding year:

(i) the report shall contain an assessment of the data against any limits set in this licence. It shall identify any data exceeding those limits;
(ii) the Licence Holder shall list any monitoring methods used to collect and analyse data required by any condition of this licence to demonstrate they comply with the methods specified in this licence; and
(iii) the report shall include an analysis of any complaints received.

Annual audit compliance report

G5 The Licence Holder must:

(g) undertake an audit of their compliance with the conditions of this licence during the preceding annual period; and

(h) prepare and submit to the CEO by 31 March in each year, after the end of that annual period an Annual Audit Compliance Report in the approved form.

Air pollution control conditions

Ambient dust monitoring

A1(a) The Licence Holder shall monitor ambient dust levels using high volume samplers at stations at the Pinjarra Race Track, Fairbridge Airstrip and Oakley South.

A1(b) The Licence Holder shall provide a report to the CEO within 2 working days of becoming aware of a 24 hour average ambient dust level above 260 μg/m^3, when monitored at any of the locations specified in condition A1(a).

Dust control

A2 The Licence Holder shall implement dust control measures, routine maintenance and housekeeping to minimise the generation of airborne dust from the refinery, bauxite stockpiles and residue storage area.

Air emission limits

A3 Subject to Condition A4, the Licence Holder shall not exceed any limit for an emission source specified in Table 2.

Table 2: Licence Limits

Emission Source(s)	Parameter	Licence Limit
Calciners 1, 2, and 3 as individual emission points	Particulates	250 mg/ m^{3*x}
Calciners 4, 5, 6 and 7 as individual emission points	Particulates	150 mg/ m^{3*x}

* expressed dry at 0 degrees Celsius and 1.0 atmosphere (101.325 kilopascals)

X the addition of diluting gases shall not be used to achieve compliance with emissions limits.

Calciners – start-up/shutdown and ESP failure

A4 The Licence Holder is exempt from compliance with the calciner particulate limit specified in Table 2 in the events specified in Table 13 of Schedule 2, if the Licence Holder's response is in accordance with the corresponding actions to be taken in each case described in Table 13 of Schedule 2.

Calciners – requirement to shut down

A5(a) The Licence Holder shall, subject to conditions A4 and A6, shut-down feed to any calciner if the dust concentration meter for that calciner records a dust concentration that exceeds the relevant particulate limit specified in Table 2 for more than 60 consecutive minutes.

A5(b) The Licence Holder shall, subject to conditions A4 and A6, immediately shut off the feed to the affected calciner in the event of a complete failure of a calciner ESP continuing for more than 10 consecutive minutes.

A6 Where feed has ceased to a calciner in accordance with conditions A5(a) or A5(b) and Table 13 of Schedule 2, the Licence Holder shall not recommence feed to the calciner until:

(i) the identified cause of any cease of feed has been rectified; or
(ii) a plan is submitted to the CEO outlining the troubleshooting actions to be undertaken that require recommencement of feed.

Calciners – air emission targets

A7(a) The Licence Holder shall target particulates emission levels of less than 150 mg/m^3 for 95% of the time of each calendar month other than for those events specified in Table 13 of Schedule 2 from each of calciner stacks 1, 2 and 3.

A7(b) The Licence Holder shall target particulates emission levels of less than 80 mg/m^3 for 95% of the time of each calendar month excluding those events specified in Table 13 of Schedule 2 from each of calciner stacks 4, 5 and 6.

A7(c) The Licence Holder shall target particulates emission levels of less than 50 mg/m^3 for 95% of the time of each calendar month excluding those events specified in Table 13 of Schedule 2 from calciner stack 7.

Stack emission testing and reporting

A8 The Licence Holder shall monitor the emission sources in Column 1 of Table 3, for the parameters in Column 2 of Table 3, at the frequency listed in Column 3 of Table 3, using the methods in Column 5 of Table 3.

Table 3: Monitoring Program - Stacks

Column 1	Column 2	Column 3	Column 4	Column 5
Emissions Source(s)	**Parameter**	**Frequency**	**Units**	**Method**
Oxalate Kiln	Particulates	Quarterly	mg/m^3	USEPA Method 5 or 17
Calciner 1,2,3,4,5,6,7	Particulates	Half-yearly	mg/m^3	USEPA Method 5 or 17
	NOx	Quarterly	mg/m^3	USEPA Method 7E or approved modification of USEPA Method 7E
	CO	Quarterly	mg/m^3	USEPA Method 10 or approved modification of USEPA Method 10
Powerhouse Boilers 2,3,4,5,6,7	NOx	Quarterly	mg/m^3	USEPA Method 7E or approved modification of USEPA Method 7E
	CO	Quarterly	mg/m^3	USEPA Method 10 or approved modification of USEPA Method 10

Air quality – oxalate kiln stack

A9(a) The Licence Holder shall, subject to Conditions A10 and A13, cease feed to the oxalate kiln when the temperature inside the Oxalate Kiln RTO combustion zone drops below the minimum temperature limit of 750^{o}C for more than 60 consecutive minutes.

A9(b) The Licence Holder shall, subject to Conditions A10 and A13, cease feed to the oxalate kiln when the CO concentration from the Oxalate Kiln RTO Outlet Ducting has exceeded the limit of 100ppm for more than 60 consecutive minutes, other than during periods when Oxalate Kiln RTO bed recovery is taking place.

A9(c) The Licence Holder shall, subject to Conditions A10 and A13, cease feed to the oxalate kiln when the CO concentration from the Oxalate Kiln RTO Outlet Ducting has exceeded the limit of 240ppm for more than 60 consecutive minutes during periods when Oxalate Kiln RTO bed recovery is taking place.

Oxalate kiln – start-up/shut down and wet scrubber failure

A10 The Licence Holder is exempt from compliance with the Oxalate Kiln Emission Limits specified in conditions A9(a), A9(b) and A9(c) in the events set forth in Table 4, if the Licence Holder response is in accordance with the corresponding actions to be taken described in Table 4 for each event.

Table 4: Oxalate Kiln Exemption Events

Section	Event Title	Action to be taken
(i)	Oxalate Kiln start up	CO All practicable measures to minimise the discharge of particulate matter and CO into the environment
(ii)	Oxalate Kiln shut down	CO All practicable measures to minimise the discharge of particulate matter and CO into the environment

Oxalate kiln – management of RTO bypass

A11 The Licence Holder shall immediately cease feed to the Oxalate Kiln if the RTO has been bypassed for more than 10 consecutive minutes.

Oxalate kiln – management of wet scrubber failure

A12 The Licence Holder shall immediately cease feed to the Oxalate Kiln if the Wet Scrubber has completely failed for more than 10 consecutive minutes.

Oxalate kiln – recommencement of feed after shutdown

A13 Where feed has ceased to the Oxalate Kiln in accordance with conditions A9(a), A9(b), A9(c), A11, or A12, the Licence Holder shall not recommence feed to the Oxalate Kiln until:

(i) the identified cause of any cease of feed has been rectified; or

(ii) a plan is submitted to the CEO outlining the troubleshooting actions to be undertaken that require recommencement of feed.

Air quality target – oxalate kiln

A14 The Licence Holder shall report to the CEO any exceedance of the target specified in Table 5, as determined pursuant to condition A8 in accordance with condition G2.

Table 5: Licence air emission Targets		
Emission Source	**Parameter**	**Emission Target**
Oxalate Kiln Stack	Particulates	30mg/m^{3*x}

* expressed dry at 0 degrees Celsius and 1.0 atmosphere (101.325 kilopascals)
x the addition of diluting gases shall not be used to achieve compliance with emission targets

Continuous monitoring program – calciners and oxalate kiln

A15(a) The Licence Holder shall monitor particulates from the calciners and CO levels from the Oxalate Kiln with a monitoring system that is regularly maintained and calibrated in accordance with Section 2 Quality Assurance / Quality Control of the CEMS Code.

A15(b) The Licence Holder shall ensure that the monitoring systems required by Condition A15(a) are operated to achieve at least a 90% availability on a monthly basis, excluding for the calciners, periods when the main calciner blower is not operational or, for the Oxalate Kiln, while the Oxalate Kiln is not in operation.

WATER POLLUTION CONTROL CONDITIONS

Management of residue disposal areas

W1 The Licence Holder shall ensure bauxite residue and associated liquor are contained in the RSA's and facilities in a manner that prevents discharge to surface waters (except in accordance with conditions W5 and W6), prevents damage to native vegetation, and minimises seepage and potential discharge to underground waters.

Maintenance of drainage below residue dam

W2 The Licence Holder shall maintain embankment seals, perimeter interception drains, and gravity base drainage systems on residue areas to minimise seepage and collect drainage.

Water quality monitoring and criteria

W3(a) The Licence Holder shall monitor surface and groundwater at the locations specified in Table 6 Column 1 at the frequency detailed in Table 6 Column 2, for each of the parameters listed in Table 6 Column 3.

Table 6: Surface and Groundwater Monitoring Program

Column 1	Column 2	Column 3	Column 4
Location	**Frequency**	**Parameter**	**Target**
Surface water stations: R1E R1F, and R2A,	Monthly (when flowing).*	pH	pH 5.0-9.5,
		Electrical Conductivity or Total Dissolved Solids	Less than 5000µS/cm (or equivalent TDS)
Groundwater bores: ML051A, ML052A, ML002A, ML003A, ML004A, ES097A, ES065A, ES066A, ES067A, ES067B, ES070A, ES080A ML055A, ML075A, ML079A, ML103A, ML103B, ML117A	Twice yearly at 6 monthly intervals, at similar times each year*.	pH Electric Conductivity or Total Dissolved Solids Alkalinity Sodium-Chloride Ratio Standing Water Level	N/A

*CEO approval shall be obtained to depart from the frequency stated for groundwater bores and surface water stations.

W3(b) The Licence Holder shall ensure that all water samples are collected in accordance with the AS/NZS 5667.

W3(c) The Licence Holder shall ensure that all water samples are submitted to a laboratory with current NATA accreditation for the analysis specified, and analysed in accordance with the current “Standard Methods for Examination of Water and Wastewater-APHA-AWWA-WEF”.

W3(d) The Licence Holder shall conduct the following monitoring program at surface water stations R1E, R1F and R2A if the target values outlined in Table 6 Column 4 are not met:

(i) measure sodium: chloride ratio;
(ii) measure Alkalinity; and
(iii) undertake verification measurement of pH and Electrical Conductivity or Total Dissolved Solids at upstream and downstream locations.

W3(e) The Licence Holder shall provide a report to the CEO within 3 weeks of completion of the monitoring program containing the results together with explanation of the cause of the excursion from the target values referred to in Condition W3(d), and a description of any impact to the environment and identifying appropriate remedial measures.

Liquid Chemical Storage

W4(a) The Licence Holder shall store environmentally hazardous chemicals including but not limited to fuel, oil or other hydrocarbons (where the total volume of each substance stored on the premises exceeds 250 litres) within low permeability (10^{-9} metres per second or less) compound(s) designed to contain not less than 110% of the volume of the largest storage vessel or inter-connected system, and at least 25% of the total volume of substances stored in the compound, except:

(i) those storage areas constructed prior to 2003; and
(ii) double-walled tanks pursuant to condition W4(d).

W4(b) The Licence Holder shall ensure that the compound(s) described in Part (a) to this condition will:

(i) be graded or include a sump to allow recovery of liquid;
(ii) be chemically resistant to the substances stored;
(iii) include valves, pumps and meters associated with transfer operations wherever practical. Otherwise the equipment shall be adequately protected (e.g. bollards) and contained in an area designed to permit recovery of spilled chemicals;
(iv) be designed such that jetting from any storage vessel or fitting will be captured within the bunded area in accordance Australian Standard 1940-2004;
(v) be designed such that chemicals which may react dangerously if they come into contact, are in separate bunds in the same compound or in different compounds; and
(vi) be controlled such that the capacity of the bund is properly maintained (e.g. regular inspection and pumping of trapped uncontaminated rain water).

W4(c) The Licence Holder shall immediately recover, or remove and dispose of, liquid resulting from spills or leaks of chemicals including but not limited to fuel, oil or other hydrocarbons, whether inside or outside the low permeability compound(s).

W4(d) Where environmentally hazardous chemicals including but not limited to fuel, oil or other hydrocarbons on the premises are stored in double-walled tanks, the Licence Holder shall ensure the double-walled tanks comply with Australian Standard AS 1940:2004.

Spillway

W5 The Licensee Holder must ensure that all emissions specified in Table 7 are discharged only from the corresponding discharge point and only at the corresponding discharge point location.

Table 7: Authorised discharge points

Emission	Discharge point	Discharge point location
Process water	RSA5 perimeter drain spillway	As shown in Schedule 1: Figure 1

W6 The Licensee Holder must ensure that the spillway listed in Table 8 and located at the corresponding spillway location is maintained and operated in accordance with the corresponding operational requirements set out in Table 8.

Table 8: Infrastructure and equipment requirements		
Site infrastructure and equipment	**Operational requirement**	**Infrastructure location**
RSA5 perimeter drain spillway	(a) The Licence Holder must manage the Runoff Collection Pond such that it does not activate the Spillway other than as a result of a Wet Winter. (b) The Spillway shall not be activated after 15 December in each calendar year.	As shown in Schedule 1: Figure 1

Waste control conditions

Waste acceptance at landfills

S1(a) The Licence Holder is permitted to dispose of wastes generated at the premises by the Licence Holder and wastes from the Alcoa Booragoon Office, Alcoa Peel Regional Office, Huntly and Willowdale Minesites, Kwinana and Wagerup refineries, Alcoa Farmlands Operations, and Alcoa Bunbury Port Facility of the types listed in Column 1 of Table 9 at the locations detailed in Column 2 of Table 9.

Table 9: Waste Permitted for Disposal	
Column 1	**Column 2**
Waste Type	**Location**
Bayer process waste	RSA
Waste meeting acceptance criteria specified for Class II landfills in the document produced by the Department, and titled "*Landfill Waste Classifications and Waste Definitions 1996* (as amended from time to time)" and hydrocarbon contaminated wastes	Landfill area within RSA
Asbestos waste	Landfill area within RSA
Hydrocarbon waste oil	RSA

S1(b) The Licence Holder shall ensure the hydrocarbon waste oil referred to in Table 9 of condition S1(a) is used in accordance with the following requirements:

(i) waste oil must only be applied to limestone, sand or gravel roads within the confines of the Residue Storage Area;

(ii) it is only applied at the minimum required rate for effective dust suppression; and

(iii) it is only applied such that any run-off from an applied surface is contained by the closed-circuit internal drainage collection system.

S1(c) The Licence Holder is not permitted to dispose of wastes listed in Table 10 at the premises.

Table 10: Waste Not Permitted for Disposal
Waste from other premises and the public unless otherwise approved by the CEO.
Elemental mercury collected as a waste stream

Storage of oxalate

S2(a) The Licence Holder shall store oxalate separated from the process stream either within a tank or tanks at the refinery, within the storage area located in the RSA, or in other areas as approved by the CEO.

S2(b) The Licence Holder shall ensure that oxalate is in a moist state when discharged into the oxalate storage area located in the RSA.

S2(c) The Licence Holder shall, within 12 hours of oxalate being discharged into the approved oxalate storage ponds, ensure the oxalate is kept moist or maintained under water or beneath a full surface cover that ensures dust is not generated from oxalate storage and does not impinge on the ability to fully recover oxalate.

Filtration facility

R1 The Licence Holder shall ensure the infrastructure specified in column 1 of Table 11 is maintained and operated in accordance with the requirements in columns 2 and 3 of that table.

Table 11: Operation of Infrastructure Requirements		
Column 1	**Column 2**	**Column 3**
Infrastructure	**Description**	**Operational requirements**
Filtration facility	Tanks fitted with high-level alarm systems. Secondary containment	Runoff, drainage or spillage is contained and directed into process water systems for reuse. A minimum capacity of 110% of the largest tank or vessel within the filtration facility is maintained.

Schedule 1: Maps

Premises map

The prescribed premises is the area of land shown in Figure 1 below and described in Table 12.

Table 12: Premises infrastructure location			
Description	**Lot**	**Plan/Diagram**	**Locality**
Water Corporation Wastewater Treatment Plant	19	44739	Oakley
Paddock West of RSA	Part of Lot 109	60089	Pinjarra
RSA and Refinery	Part of Lot 151	10914	Oakley
Area West of RSA	221	302638	Pinjarra
Southwest Corner of RSA	222	302638	Oakley
RSA and Refinery	Part of Lot 251	35963	Oakley
Pinjarra Cogeneration Plant	Lot 252	35963	Oakley

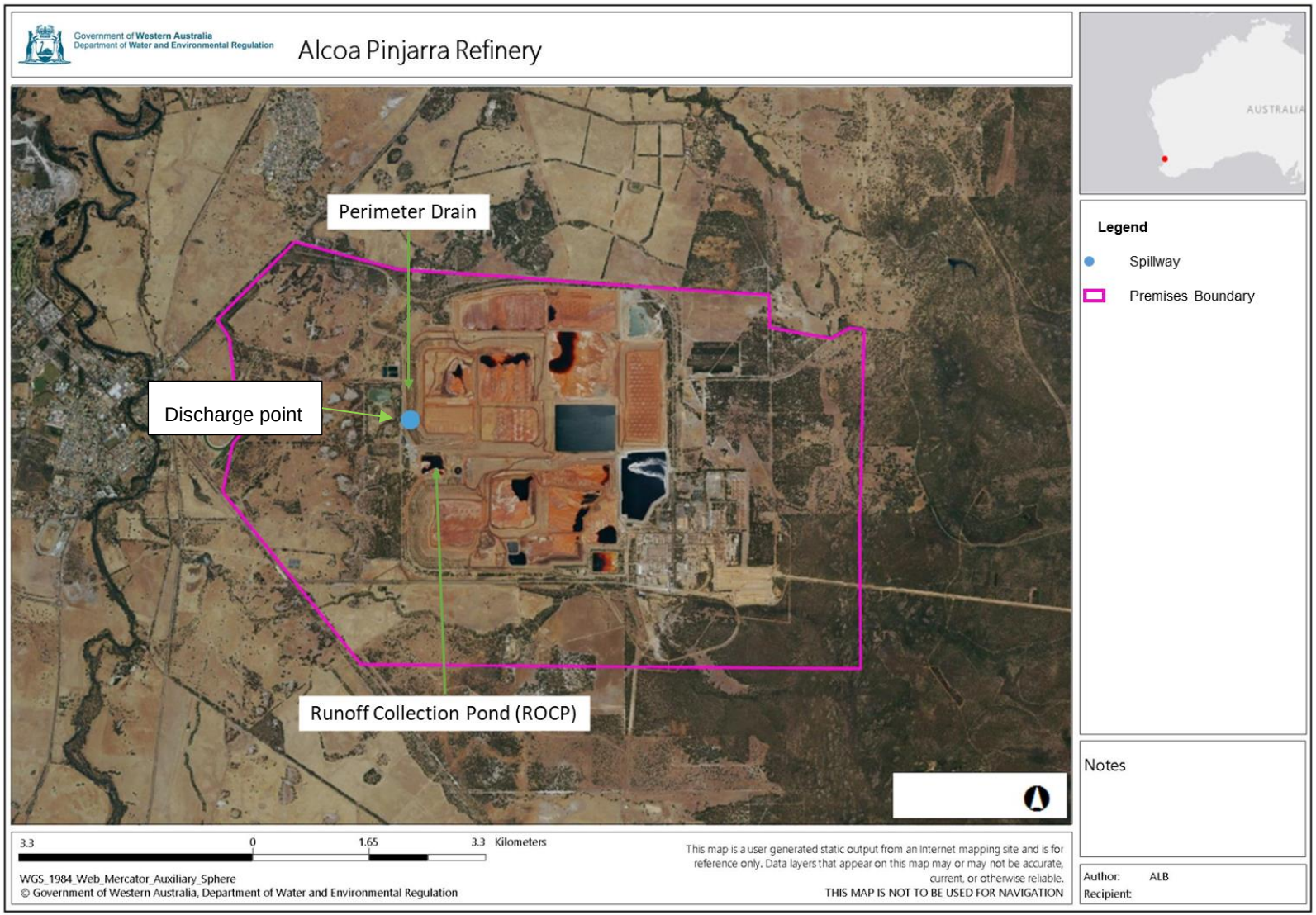
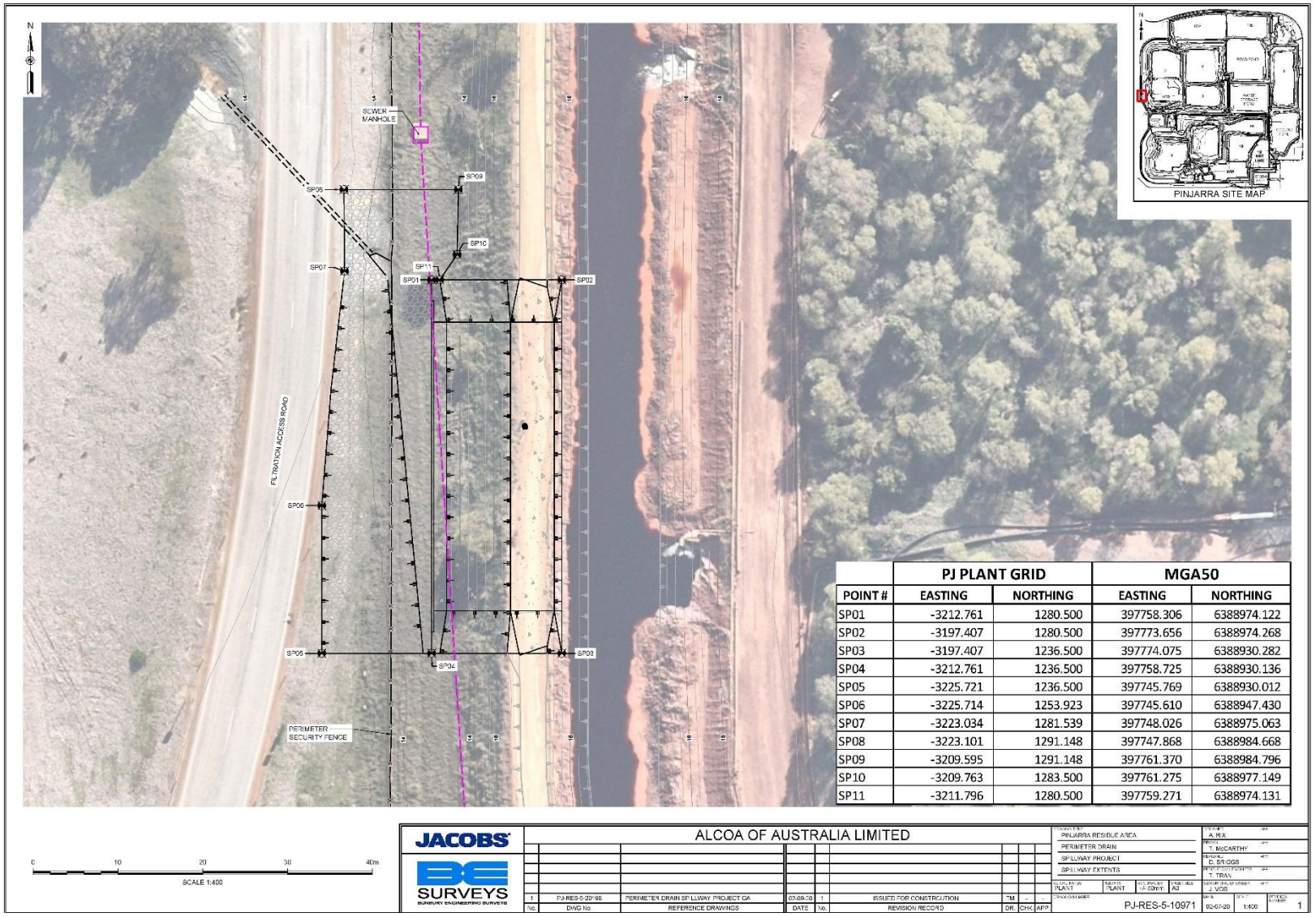


Figure 1: Map of the boundary of the prescribed premises and authorised discharge point



	PJ PLANT GRID		MGA50	
POINT #	EASTING	NORTHING	EASTING	NORTHING
SP01	-3212.761	1280.500	397758.306	6388974.122
SP02	-3197.407	1280.500	397773.656	6388974.268
SP03	-3197.407	1236.500	397774.075	6388930.282
SP04	-3212.761	1236.500	397758.725	6388930.136
SP05	-3225.721	1236.500	397745.769	6388930.012
SP06	-3225.714	1253.923	397745.610	6388947.430
SP07	-3223.034	1281.539	397748.026	6388975.063
SP08	-3223.101	1291.148	397747.868	6388984.668
SP09	-3209.595	1291.148	397761.370	6388984.796
SP10	-3209.763	1283.500	397761.275	6388977.149
SP11	-3211.796	1280.500	397759.271	6388974.131

Figure 2: Location of proposed spillway

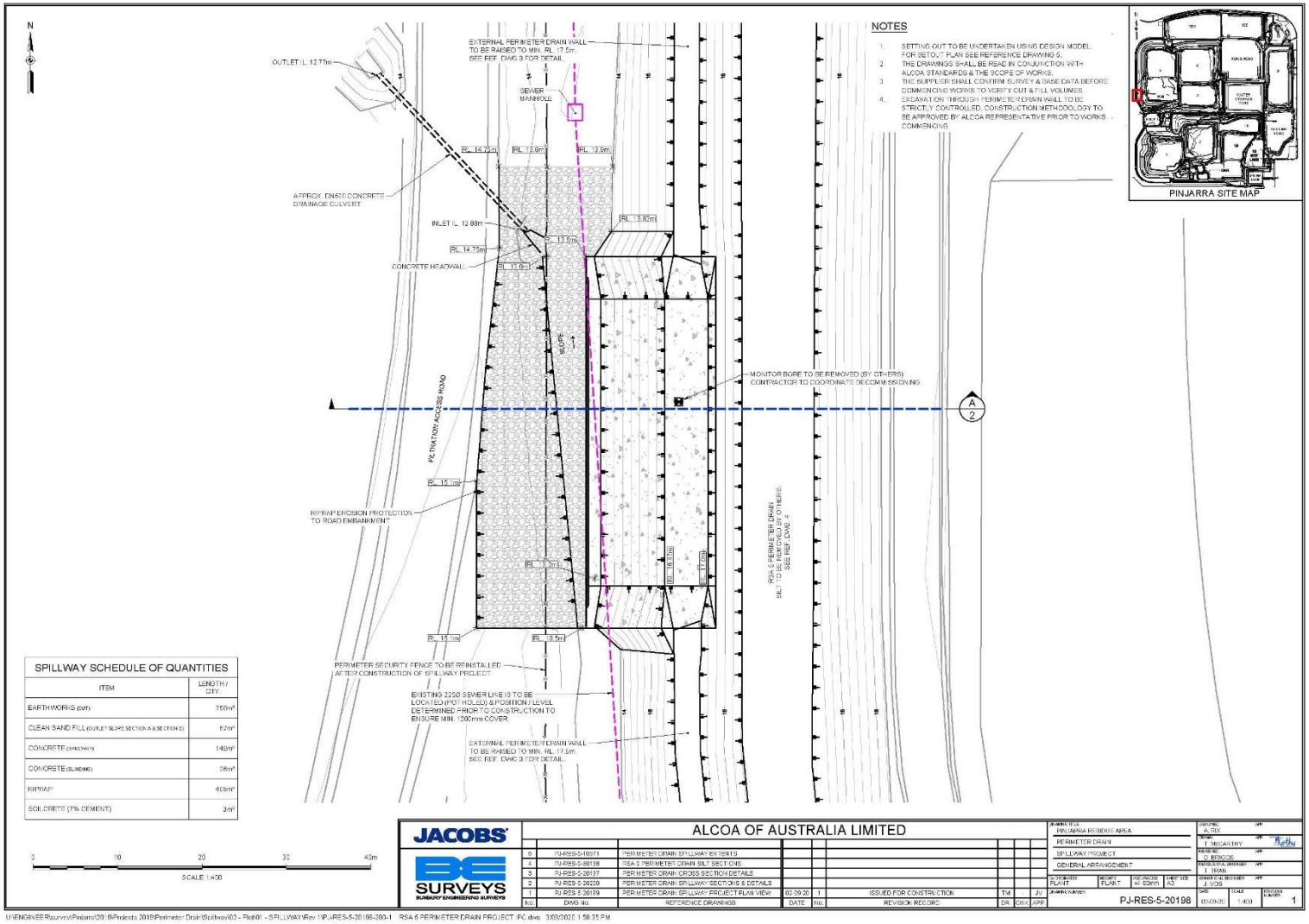


Figure 3: Spillway design for construction phase – plan view

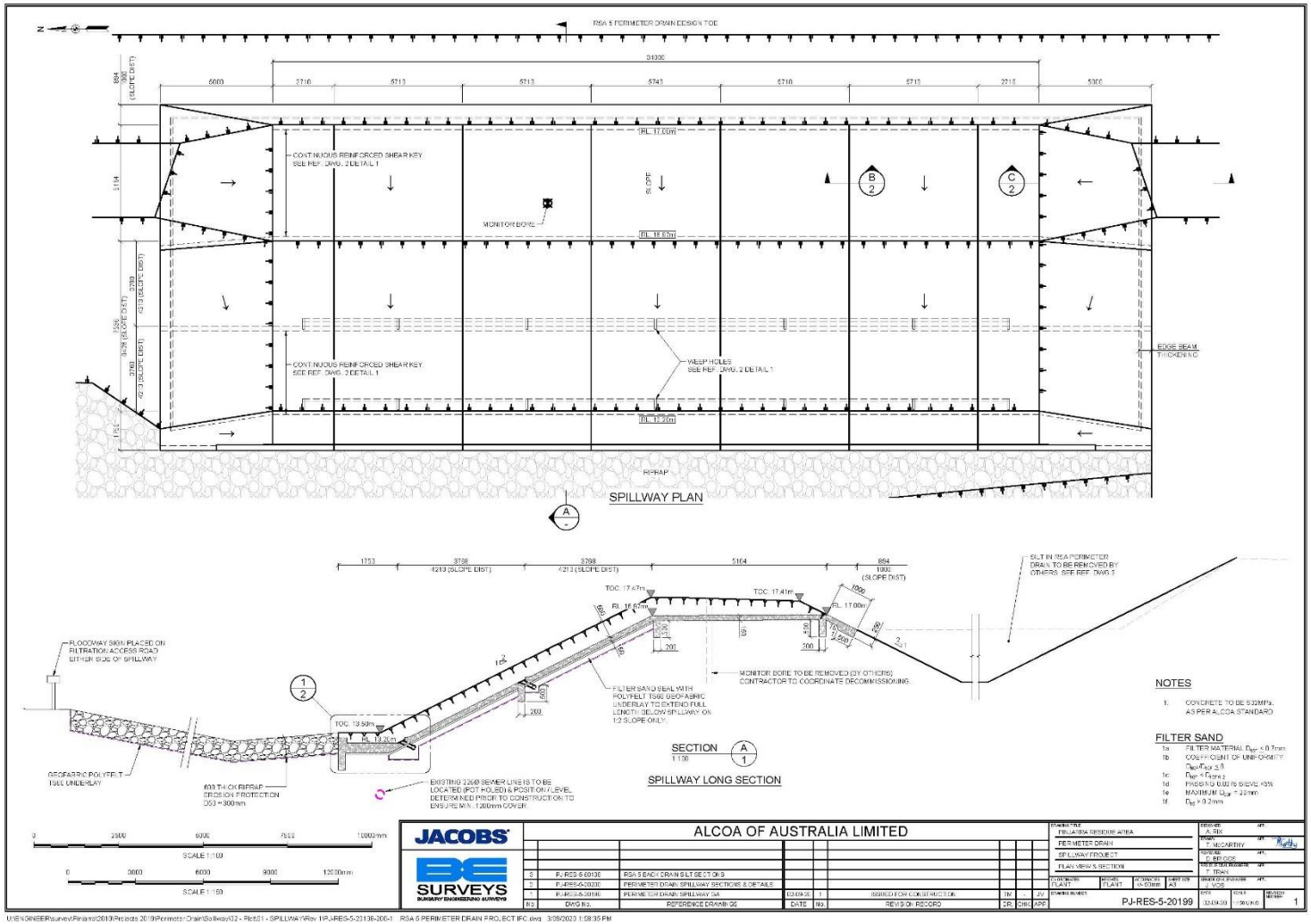


Figure 4: Spillway design for construction phase – cross-section view

Schedule 2: Calciner exemption events

Table 13: Exemption Events - Calciners			
Section	**Event Title**	**Action to be Taken**	**Comments**
(i)	Calciner start up	All practicable measures to minimise the discharge of particulate matter into the environment	AS3814-2018: Industrial and commercial gas-fired appliances, requires that ESP's and associated vessels be purged with at least 5 air changes before starting any combustion process associated with an ESP as a safety requirement to avoid potential explosion caused by sparking within the ESP.
(ii)	Calciner shut down and/or cessation of feed to calciners	All practicable measures to minimise the discharge of particulate matter into the environment	When shutting calciners down and/or ceasing aluminium hydrate feed to the calciners, the efficiency of the ESP is reduced due to unstable operating conditions caused by the reduction of the gas/products and air flows.
(iii)	Dust concentration meter correlation	All practicable measures to minimise the discharge of particulate matter into the environment	
(iv)	Dust concentration meter calibration and maintenance	All practicable measures to minimise the discharge of particulate matter into the environment	
(v)	Calciner BMS trip	All practicable measures to minimise the discharge of particulate matter into the environment	