



Alcoa

Alcoa Australia

**2025 Audit
Compliance Report**

**Ministerial Statement 728
– Wagerup Refinery –**

ABSTRACT

TITLE: Alcoa 2025 Audit Compliance Report
MS728 – Wagerup Refinery

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KEY WORDS: Department of Water and Environment Regulation, Annual Environmental Report

ABSTRACT: This Audit Compliance Report summarises environmental performance for the 2025 reporting period against the requirements of Ministerial Statement 728 granted for the Wagerup Alumina Refinery – Production to a Maximum Capacity of 4.7Mtpa and Associated Bauxite Mining (and as amended by Ministerial Statements 1069 and 1157) held by Alcoa of Australia Limited (Alcoa).
The report is an extract of the full Annual Environmental Report submitted to the regulator on 31 March 2026 and covering reporting requirements of the Part IV and V approvals held by Alcoa.

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Glossary and Acronyms

Abbreviation	Definition
°C	Degrees Celsius
µg/m ³	Micrograms per cubic metre
µS/cm	Micro Siemens per centimetre
AACR	Annual Audit Compliance Report
ABA	Acid Base Accounting
AER	Annual Environmental Report
Ag	Silver
AHD	Australian Height Datum
Al	Aluminium
Alcoa	Alcoa of Australia Limited
ANZECC	Australian and New Zealand Environment and Conservation Council
APHA-AWWA-WEF	American Public Health Association - American Water Works
APTD	Arundel Pre-treatment Dams
AQMP	Air Quality Management Plan
ARMCANZ	Agriculture and Resource Management Council of Australia and New Zealand
As	Arsenic
AS/NZS	Australian Standard / New Zealand Standard
ASI	Aluminium Stewardship Initiative
B	Boron
BAM	Beta Attenuation Monitors
BEMP	Biodiversity Environmental Management Plan
BESRA	Biodiversity and Ecosystem Services Risk Assessment
BOD	Biochemical Oxygen Demand
BTC	Below Top of Casing
BWT	Below water table
Ca	Calcium
CAP	Compliance Assessment Plan
CAR	Compliance Assessment Report
CCS	Crown Condition Score
Cd	Cadmium

Abbreviation	Definition
CEF	Controlled Environment Facility
CEMS	Continuous Emission Monitoring System
CEO	Chief Executive Officer of the Department of Water and Environmental Regulation
CFU/100 ml	Colony forming units per 100 ml
CHMP	Cultural Heritage Management Plan
Cl	Chloride
CL	Control Limit
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
CO ₃	Calcium Carbonate
COD	Chemical Oxygen Demand
CPS	Clearing Permit System
Cr	Chromium
Cu	Copper
DAF	Dissolved Air Flotation
DBCA	Department of Biodiversity Conservation and Attractions
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DCM	Dust Concentration Monitor
DCMP	Drainage Control Management Plan
DEC	Department of Environment and Conservation (now DWER)
DEED	Department of Energy and Economic Diversification
DEM	Dust Extinction Moisture
DEMIRS	Department of Mines, Industry Regulation and Safety (now DMPE)
DJTSI	Department of Jobs, Tourism, Science and Innovation
DMP	Department of Mines and Petroleum (now DEMIRS)

Abbreviation	Definition
DMPE	Department of Mines, Petroleum and Exploration
DSI	Detailed Site Investigation
DWER	Department of Water and Environmental Regulation
EC	Electrical Conductivity
EMP	Environmental Management Plan
EMP	Environmental Management Plan
EMS	Environmental Management System
EP Act	<i>Environmental Protection Act 1986 (WA)</i>
EPA	Environmental Protection Authority
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
ERD	Environmental Review Document
ERMP	Environmental Review and Management Program
ESD	Environmental Scoping Document
ESP	Electrostatic Precipitator
EWI	Early Warning Indicator
FCA	Forest Clearing Advice
Fe	Iron
FMP	Fauna Management Plan
FRC	Forest Research Centre
FVEMP	Flora and Vegetation Management Plan
GDA94	Geocentric Datum Australia 1994
GDP	Ground Disturbance Permit
GDV	Groundwater Dependent Vegetation
GHGMP	Greenhouse Gas Management Plan
GISTM	Global Industry standard on Tailings Management
GL	Gigalitres
GL/a	Gigalitres per annum
GMMP	Groundwater Monitoring and Management Plan
GPS	Global Positioning System
GRI	Global Reporting Initiative
GWL	Groundwater License
GWL	Groundwater Level
ha	Hectares
HCO ₃	Bicarbonate
HDPE	high-density polyethylene
Hg	Mercury
hr	Hour(s)
HSE	Health, Safety and Environment
HVAS	High Volume Air Sampler
IBSA	Index of Biodiversity Surveys for Assessments

Abbreviation	Definition
ICMM	International Council on Mining and Metals
IRP	Impact Reconciliation Plan
IRR	Impact Reconciliation Report
iSA	in-pit storage area
ISO	International Standards Organisation
ITAG	Independent Technical Advisory Group
JTSI	Department of Jobs, Tourism, Science and Industry (now DEED)
K	Potassium
kg/ha/yr	Kilograms per hectare per year
KIC	Kwinana Industries Council
kL	Kilolitre
kt	Kilo tonnes
ktpa	Kilo tonnes per annum
L	Litres
LiDAR	Light Detection and Ranging
LOA	Life of Asset
mAHD	metres Australian Height Datum
mbgl	Metres below ground level
mbToC	Metres below top of casing
MCP	Mine Closure Plan
Mg	Magnesium
mg/L	Milligrams per Litre
mg/m ³	Milligrams per cubic metre
ML	Mineral Lease
ML	Mega litres
MMP	2024-2028 Mining and Management Programme (Technical Rollover of the 2023-2027 Mining and Management Programme)
MMPLG	Mining and Management Program Liaison Group
Mn	Manganese
Mo	Molybdenum
MOG	Mine Operations Group
MRF	Mining Rehabilitation Fund
MS	Ministerial Statement
MSAVI	Modified Soil Adjusted Vegetation Index
Mt	Million tonnes
Mtpa	Million tonnes per annum
MW	Megawatt
Mwt	Million wet tonnes
Mwtpa	Million wet tonnes per annum
MZ	Management Zone
Na	Sodium
Na:Cl	Sodium Chloride ratio
NAF	Non-Acid Forming
NATA	National Association of Testing Authorities

Abbreviation	Definition
NDVI	Normalized Difference Vegetation Index
NEPM	National Environment Protection Measures
NF	No Flow
Ni	Nickel
NO ₃	Nitrate
NO _x	Nitrogen Oxides
NP	Net percolation
NPI	Non-Processing Infrastructure
NVCP	Native Vegetation Clearing Permit
OEPA	Office of the Environmental Protection Authority (now EPA)
OHP	Ore Handling Plant
OSA	Overburden Storage Area
OWW	Oily Waste Water
OWWTP	Oily Waste Water Treatment Plant
PACE	Products and Capacity Expansion
PAF	Potentially Acid Forming
PAH	Polycyclic Aromatic Hydrocarbons
Pb	Lead
PEC	Priority Ecological Community
PEMS	Predictive Emissions Monitoring System
PEOF	Pilbara Environmental Offset Fund
PERSP	State Public Environment Review Strategic Proposal
PFAS	Per- and polyfluoroalkyl substances
pH	Potential of Hydrogen (degree of acidity or basicity of a substance)
PM ₁₀	Particulate Matter with diameter <10 microns
ppm	Parts per million
QAP	Quality Assurance Plan
QXRD	quantitative X-ray diffraction
R&D	Research and Development
RATA	Relative Accuracy Test Audit
RCSP	Revegetated Cover Systems Program
Redox	Reduction–oxidation reaction
RiWI Act	Rights in Water and Irrigation Act 1914 (WA)
RL	Relative Level
RO	Reverse Osmosis
RSA	Residue Storage Area
RSI	Residue Storage Impoundment
RSS	Rising Stage Sampler
RTO	Regenerative Thermal Oxidiser
S46	Section 46, EP Act

Abbreviation	Definition
SASB	Sustainability Accounting Standards Board
SD	Standard Deviation
SDM	Species Distribution Modelling
Se	Selenium
SO ₄	Sulphate
SPR	Source Pathway Receptor
SSMP	Significant Species Management Plan
SSTV	Site Specific Trigger Values
t	Tonne
TDS	Total Dissolved Solids
TEC	Threatened Ecological Community
TFEMP	Troglofauna Environmental Management Plan
TN	Total Nitrogen
TP	Total Phosphorus
tpa	Tonnes per annum
tph	Tonnes per hour
TRH	Total Recoverable Hydrocarbons
TSF	Tailings Storage Facility
TSP	Total Suspended Particulates
TSS	Total Suspended Solids
USEPA	United States Environmental Protection Authority
VHF	Very High Frequency
VOC	Volatile organic compounds
WEMP	Water Efficiency Management Plan
WRMP	Water Resources Management Plan

3 Ministerial Statements

3.3 MS728 (as amended by MS1069 and MS1157) – Wagerup Alumina Refinery

This Compliance Assessment Report summarises environmental performance and meets the annual reporting requirements for the 1 January 2025 to 31 December 2025 reporting period against the requirements of Ministerial Statement 728 granted for the Wagerup Alumina Refinery and Associated Bauxite Mining (and as amended by Ministerial Statements 1069 and 1157).

Where technical reports have already been communicated to regulatory agencies, provided separately, or made available for publication, they are referenced, not repeated, in this review.

This report is submitted to the Department of Water and Environmental Regulation (DWER) and the Department of Department of Energy and Economic Diversification (DEED, formerly JTSI) in accordance with the conditions of the *Alumina Refinery (Wagerup) Agreement and Acts Amendment Act 1978* and Ministerial Statement 728 (MS728) as amended by Ministerial Statement 1069 (MS1069) and Ministerial Statement 1157 (MS1157). The report is also submitted to the Shire of Waroona.

During the reporting period 1 January 2025 to 31 December 2025, Wagerup Refinery operated under *Environmental Protection Act 1986* Part V License L6217/1983/15, last amended 10 November 2020 (License). A report detailing analysis of environmental compliance in accordance with the License is included in Section 2.3 of the full Annual Environmental Report.

Willowdale Mine supplies bauxite to the Wagerup refinery to facilitate alumina production. Mining operations are undertaken in accordance with the Mining and Management Program approved by the Minister for State Development, together with associated ministerial approvals, approved management plans, and applicable environmental licences.

Further information is available from:

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3.3.1 Introduction

Wagerup Refinery and associated bauxite residue storage facilities are located 120km south of Perth, 2km north of Yarloop and 7.5km south of Waroona (Figure 3.3–1). Wagerup is located close to the foot of the Darling Scarp and is separated from the RSAs by the South West Highway and the Perth-Bunbury rail line (Figure 2-2). Bauxite is supplied to Wagerup by overland conveyor from Alcoa’s Willowdale Bauxite Mine located 15km to the east. Alumina produced at Wagerup is transported by rail to the Alcoa shipping terminal at Bunbury.

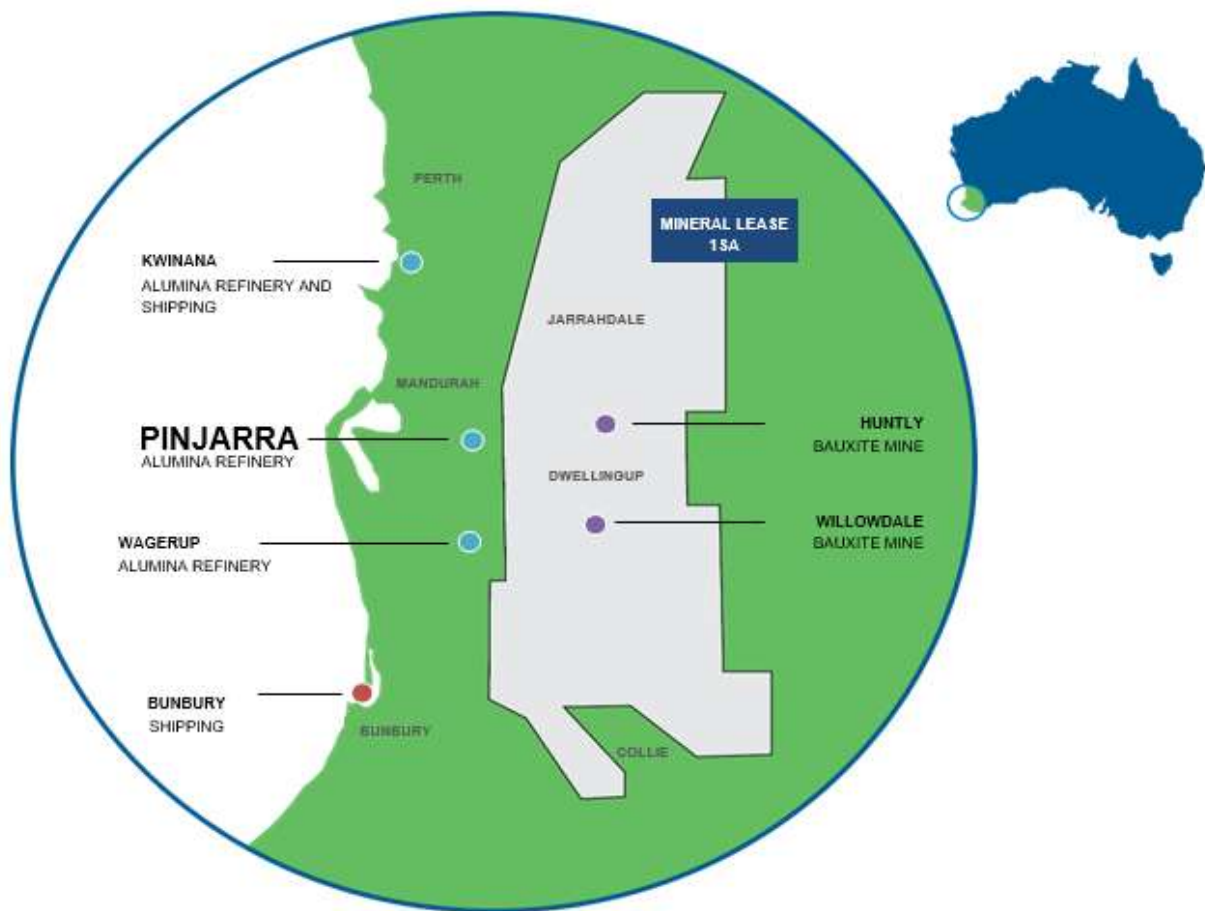


Figure 3.3–1 Locations of Alcoa Operations in Western Australia

The refinery and residue operations are contained within freehold land owned by Alcoa. Land use on adjacent properties is primarily agricultural.

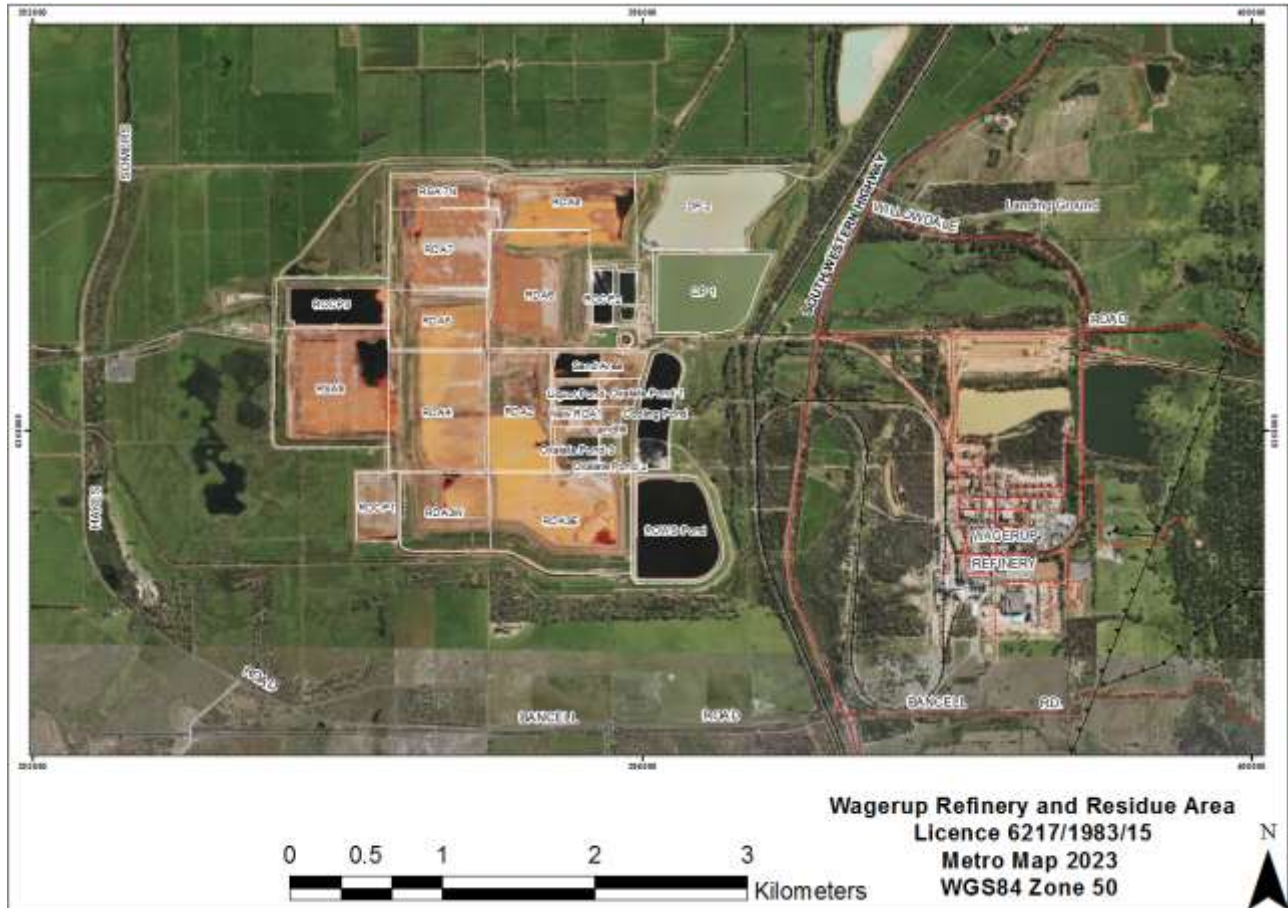


Figure 3.3–2 Aerial view of Wagerup Refinery and Residue Storage Area

3.3.2 History of Approvals and Amendments

The table below outlines the history of the Ministerial Statements and associated amendments for the Wagerup site.

Table 3.3–1 Wagerup History of Approvals and Amendments

Year / Date	Ministerial Statement / Action	Summary of Approval or Change
March 1990	MS95	Original approval of the Wagerup Alumina Refinery Expansion.
August 1995	MS390	Approved increase in alumina production to 3.3 Mtpa and associated mining activities.
February 2001	MS564 (amending MS390)	Amended: <ul style="list-style-type: none"> • Condition 6 – Community consultation • Procedure 5 – Buffer distances for community impact management.
May 2005	ERMP submitted	Alcoa submitted Environmental Review and Management Programme seeking an increase to 4.7 Mtpa.
September 2006	MS728	Approved expansion to 4.7 Mtpa. Superseded MS95, MS390, MS564.
2011	Extension request	Alcoa sought an extension to commence the Wagerup Unit Three Project (MS728).
May 2012	MS897	Amended Condition 4 of MS728, extending deadline to September 2016.
November 2015	Amendment request	Alcoa requested a further 5-year extension to Condition 4.
December 2017	MS1069	Extended deadline to September 2022 for the third production unit. Clarified Part B conditions apply only to the third production unit.

Year / Date	Ministerial Statement / Action	Summary of Approval or Change
2018	Discussions with EPA	Shift from single-stage 4.7 Mtpa expansion to incremental increases (initially up to 3.3 Mtpa). Alcoa requested EPA initiate a Section 46 inquiry to amend MS728.
October 2018	Minister request	Minister for Environment directed EPA to commence a Section 46 inquiry into revising conditions.
September 2019	Section 46 application	Alcoa lodged a formal application for review of conditions.
January 2021	MS1157	Outcome of Section 46 inquiry; updated and clarified conditions.
September 2022	Notification to EPA	Alcoa advised it would not substantially commence the third production unit under MS1157 by the deadline (27 Sept 2022).
Post-2022	Ongoing status	Refinery continues operations under MS728, as amended by MS1069 and MS1157. Annual Compliance Reports continue as required under MS728.

3.3.3 Summary of Proposal's Implementation Status

MS728 – Wagerup Alumina Refinery – Production to a Maximum Capacity of 4.7 Mtpa and Associated Bauxite Mining is in Operation phase.

No changes or updates occurred during 2025.

3.3.4 Statement of Compliance

1) Proposal and Proponent Details

Proposal Title	Wagerup Alumina Refinery – Production to a Maximum Capacity of 4.7 Mtpa and Associated Bauxite Mining
Statement Numbers	728 (as amended by MS1069 and MS1157)
Proponent Name	Alcoa of Australia Limited
Proponent's Australian Company Number (where relevant)	ACN 004 879 298

2) Statement of Compliance Details

Reporting Period	1 January 2025 to 31 December 2025		
Implementation phase(s) during reporting period (please tick ✓ relevant phase(s))			
<input type="checkbox"/> Pre-construction	<input type="checkbox"/> Construction	<input checked="" type="checkbox"/> Operation	<input type="checkbox"/> Decommissioning
Audit Table for Statement addressed in this Statement of Compliance is provided at Attachment:			
Please refer to the Ministerial Statement 728 (as amended by MS1069 and MS1157) audit table inserted below.			
Were all implementation conditions and/or procedures of the Statement complied with within the reporting period? (please tick ✓ the appropriate box)			
<input type="checkbox"/> No (please proceed to Section 3)		<input checked="" type="checkbox"/> Yes (please proceed to Section 4)	

3) Details of Non-compliance(s) and/or Potential Non-compliance(s)

There were no non-compliances or potential non-compliances identified against MS728 (as amended by MS1069 and MS1157) during the 2025 reporting period.

4) Proponent Declaration

I, Elsabe Muller, Vice President - Operations, declare that I am authorised on behalf of Alcoa of Australia Limited (being the person responsible for the proposal) to submit this form and that the information contained in this form is true and not misleading.

Signature: .. Signature
redacted ... Date: 30/03/2026

Please note that:

- it is an offence under Section 112 of the *Environmental Protection Act 1986* for a person to give or cause to be given information that to his knowledge is false or misleading in a material particular;
- the Chief Executive Officer of the Department of Water and Environmental Regulation has powers under Section 47(3)(a) of the *Environmental Protection Act 1986* to require reports and information about implementation of the proposal to which the statement relates and compliance with the implementation conditions.

3.3.5 Details of Declared Compliance Status

Condition 5 Compliance Reporting requires Alcoa to submit an annual CAR for the previous 12-month period. The CAR provides a summary of conditions, procedures and commitments outlined within the Ministerial Statement and is submitted by the end of March.

This section includes details of the declared compliance status of each implementation condition and/or procedure of Ministerial Statements 728 and covers:

- MS728 Key proposal characteristics (Table 3.3–2)
- MS728 Audit Table (Table 3.3–3)

Table 3.3–2 MS728 – Key Proposal Characteristics Table

Element	Units	Column One Current Refinery (As at 2005)	Column Two Authorised Extent 4.7Mtpa Expansion	Column Three Current Status
Physical Elements				
Refinery footprint	ha	183	183	183
Production				
Alumina Production	Mtpa	Approximately 2.4	Authorised to 4.7 under MS728 subject to submission of Detailed Design Report as specified by 4.7 Mtpa Expansion. Limited to 2.9 under the EP Act Licence L6217/1983/15 last amended 10/11/2020.	2025 Total:2.58
Raw Materials				
Bauxite mining rate	Mtpa	9	16	2025 Total: 9.89
Caustic Soda (dry)	tpa	141,000	282,000	2025 Total: 264,260

Element	Units	Column One Current Refinery (As at 2005)	Column Two Authorised Extent 4.7Mtpa Expansion	Column Three Current Status
Lime	tpa	110,000	200,000	2025 Total: 128,401
Water	MLpa	4,800	9,600	2025 Total: 3,618
Residue Disposal				
Bauxite residue	Mtpa	4.8	9.6	2025 Total: 6.245
Main Equipment Components				
Milling		3 SAG Mills	Increased milling capacity	No change from Column One
Ore Stockpiles		Stockpile reclaimer and conveyor 2 stockpiles plus one emergency	New reclaimer and conveyors New dust suppression and cleaning system for conveyor	No change from Column One
Slurry Storage		4 slurry tanks	New slurry tanks	No change from Column One
Digestion		Digester banks and flash vessels Vapour Condenser	Increased digestion capacity New and upgraded pumps	No change from Column One
Evaporation		Evaporation units Heat interchange units	New evaporation units New heat interchanger	No change from Column One
Lime		1 lime silo	Upgrade lime storage and associated equipment	No change from Column One
Clarification		Sand removal units Washers, thickeners Filter tanks and presses	New filter presses New and upgraded washer facilities New cyclone system	No change from Column One
Residue Disposal Area (RDA)	ha	Approx. 180 hectares required for drying and storing residue	Dry stacking area not to exceed 275 hectare drying area New sand separation Sand Lake wet sand area not to be increased by more than 50% No wet stacking area Oxalate pond not to increase by more than 1 hectare Upgrade RDA sprinkler system	Dry stacking area 193.88ha Sand lake wet sand area 4.54ha Oxalate pond 6.59ha RDA sprinkler system upgrade completed in 2019 with approximately 2ha of additional sprinklers and laterals added to the RSA 1-3 corridor.
Precipitation		Precipitation and seed filters Thickeners and liquor tanks Cooling towers and cyclone clusters	New precipitators and seed filters New thickeners and liquor tanks Additional cooling capacity New cyclone clusters	No change from Column One
Oxalate removal		Decommissioned oxalate kiln	Oxalate kilns with regenerative thermal oxidiser (RTO)	Oxalate kiln with RTO recommissioned in 2013 under Part V EP Act Works Approval W4587/2009/1. Oxalate Bioremoval Facility commissioned in 2020 under EP Act

Element	Units	Column One Current Refinery (As at 2005)	Column Two Authorised Extent 4.7Mtpa Expansion	Column Three Current Status
				Works Approval W6104/2017/1.
Liquor Burning		Liquor Burning	Install an RTO	RTO installed 2006
Calciners		4 calciner units 100 metre multiflue for calciners 1, 2 and 3	2 new calciners with multiflue No. 4 calciner connection to multiflue	No change from Column One
Alumina Storage		2 alumina storage bins and alumina conveyors	Additional alumina storage Upgrade or additional conveyor	No change from Column One
Powerhouse (optional) ¹		Turbo alternators and boilers Gas turbine with steam generator	2 new 270 tph boilers 2 new turbo alternators	No change from Column One
Port Facilities		Alumina storage and handling facilities	Upgraded alumina handling facilities	No change from Column One
Water Supply		Licensed surface water sources	Increased surface water supply	No change from Column One
Abbreviations:			tph: tonnes per hour	
Mtpa: million tonnes per annum			MLpa: million litres per annum	
tpa: tonnes per annum			MW: megawatts	

¹ An option for 2 new 270tph boilers providing electricity and steam for the Refinery. This option has now ceased due to the implementation of the Wagerup Cogeneration Plant, referred to in EPA Bulletin 1215, Appendix 5.

Refer to the Audit Table below for details on the declared compliance status of each implementation condition and/or procedure of Ministerial Statement 728 (as amended by MS1069 and MS1157).

Table 3.3–3 Ministerial Statement 728 Audit Table

Insert 22 pages

