

Environment Protection Licence

Licence - 6092

Licence Details	
Number:	6092
Anniversary Date:	01-July
Licensee	
BLUESCOPE STEEL (AIS) PTY. LTD.	
PO BOX 1854	
WOLLONGONG NSW 2500	
Premises	
PORT KEMBLA STEELWORKS	
FIVE ISLANDS ROAD	
PORT KEMBLA NSW 2505	
Scheduled Activity	
Cement or lime works	
Chemical production	
Chemical storage	
Coal works	
Coke production	
Crushing, grinding or separating	
Electricity generation	
Metallurgical activities	
Mineral processing	
Railway systems activities	
Resource recovery	
Shipping in bulk	
Waste storage	

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<u>Fee Based Activity</u>	<u>Scale</u>
Agricultural fertiliser (inorganic) production	0-50000 T annual production capacity
Cement or lime handling	> 100000-500000 T annual handling capacity
Cement or lime production	> 250000-500000 T annual production capacity
Coal works	> 2000000-5000000 T annual handling capacity
Coke production	> 100000 T annual handling capacity
Crushing, grinding or separating	> 2000000 T annual processing capacity
Dangerous goods production	> 25000 T annual production capacity
General chemicals storage	> 100000 kL storage capacity
Generation of electrical power from gas	> 250-450 GWh annual generating capacity
Iron or steel production (iron ore)	> 0 T annual processing capacity
Mineral processing	> 2000000 T annual processing capacity
Railway systems activities	Any capacity
Recovery of general waste	Any general waste recovered
Recovery of waste tyres	Any waste tyres recovered
Scrap metal processing	> 500000 T annual production capacity
Shipping in bulk	> 500000 T of annual capacity to load and unload
Waste storage - other types of waste	Any other types of waste stored
Waste storage - waste tyres	> Any tyres stored

<u>Region</u>
Metropolitan - Illawarra
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Information about this licence

Dictionary

A definition of terms used in the licence can be found in the dictionary at the end of this licence.

Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- ensure persons associated with you comply with this licence, as set out in section 64 of the Act;
- control the pollution of waters and the pollution of air (see for example sections 120 - 132 of the Act);
- report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

Variation of licence conditions

The licence holder can apply to vary the conditions of this licence. An application form for this purpose is available from the EPA.

The EPA may also vary the conditions of the licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

Licence review

The Act requires that the EPA review your licence at least every 5 years after the issue of the licence, as set out in Part 3.6 and Schedule 5 of the Act. You will receive advance notice of the licence review.

Fees and annual return to be sent to the EPA

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).

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The EPA publication “A Guide to Licensing” contains information about how to calculate your licence fees. The licence requires that an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints), be submitted to the EPA. The Annual Return must be submitted within 60 days after the end of each reporting period. See condition R1 regarding the Annual Return reporting requirements.

Usually the licence fee period is the same as the reporting period.

Transfer of licence

The licence holder can apply to transfer the licence to another person. An application form for this purpose is available from the EPA.

Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications;
- licence conditions and variations;
- statements of compliance;
- load based licensing information; and
- load reduction agreements.

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

This licence is issued to:

BLUESCOPE STEEL (AIS) PTY. LTD.
PO BOX 1854
WOLLONGONG NSW 2500

subject to the conditions which follow.

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1 Administrative Conditions

A1 What the licence authorises and regulates

A1.1 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity	Fee Based Activity	Scale
Chemical production	Agricultural fertiliser (inorganic) production	0 - 50000 T annual production capacity
Cement or lime works	Cement or lime handling	> 100000 - 500000 T annual handling capacity
Cement or lime works	Cement or lime production	> 250000 - 500000 T annual production capacity
Coal works	Coal works	> 2000000 - 5000000 T annual handling capacity
Coke production	Coke production	> 100000 T annual handling capacity
Crushing, grinding or separating	Crushing, grinding or separating	> 2000000 T annual processing capacity
Chemical production	Dangerous goods production	> 25000 T annual production capacity
Chemical storage	General chemicals storage	> 100000 kL storage capacity
Electricity generation	Generation of electrical power from gas	> 250 - 450 GWh annual generating capacity
Metallurgical activities	Iron or steel production (iron ore)	> 0 T annual processing capacity
Mineral processing	Mineral processing	> 2000000 T annual processing capacity
Railway systems activities	Railway systems activities	Any capacity
Resource recovery	Recovery of general waste	Any general waste recovered
Resource recovery	Recovery of waste tyres	Any waste tyres recovered
Metallurgical activities	Scrap metal processing	> 500000 T annual production capacity
Shipping in bulk	Shipping in bulk	> 500000 T of annual capacity to load and unload
Waste storage	Waste storage - other types of waste	Any other types of waste stored
Waste storage	Waste storage - waste tyres	> tyres stored

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A2 Premises or plant to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
PORT KEMBLA STEELWORKS
FIVE ISLANDS ROAD
PORT KEMBLA
NSW 2505
SEE LOCALITY MAP TITLED "GENERAL WORKS PORT KEMBLA STEELWORKS ENVIRONMENTAL PROTECTION LICENSE AREAS" DRAWING NUMBER 445310, DATE REV NO.3, DATE DRAWN 17/10/2019, SUBMITTED TO EPA ON 18/10/2019 AS DOC19/911540.

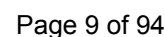
Note: This premises includes four sections of oil pipelines:

- The oil pipeline running north-east from EPA licensed premises number 654 to the intersection of Flinders Street with Stockpile Road, then north, running parallel with Stockpile Road to the Overhead Shipping Bridge, then north-west, continuing parallel with Stockpile Road along the Product Berth and Discharge Berth (see Figures entitled "BHP Transport Limited Port Kembla Bunkering Pipeline Proposed Extension Options", DOC06/60564, contained in File No 282203A2).
- The oil pipeline running east from Old Port Road, then north along the Outer Harbour, north-east under the harbour and then east along the Northern Breakwater to the Oil Berth (see Figure A, DOC06/56336, contained in File No 282203A2).
- The oil pipeline running from the "Timber Watch House" at the Port Kembla Coal Terminal along the Inner Harbour to the Old Coal Berth (see Figure B, DOC06/56336, contained in File No 282203A2).
- The oil pipeline running north-north-west in the Inner Harbour along from the Old Coal Berth to the Pig Launching Station at the Port Kembla Coal Terminal.

The licensee for EPA licensed premises number 654 is responsible for these pipelines and their associated infrastructure. They are also liable for any oil spills or leaks that occur from these pipelines or infrastructure.

A2.2 The premises location is shown on the map below.

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Ancillary Activity
Ceramic Works
Maintenance Service Shop
Material Recycling Facility
Ozrock Plant
Petroleum and fuel production
Pulverised Coal Injection Facility
Sewage Treatment Systems

A4 Information supplied to the EPA

- A4.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:

- a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and
- b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

2 Discharges to Air and Water and Applications to Land

P1 Location of monitoring/discharge points and areas

- P1.1 The following points referred to in the table below are identified in this licence for the purposes of monitoring and/or the setting of limits for the emission of pollutants to the air from the point.

<i>Air</i>			
EPA identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
2	Discharge from pollutant stack	Discharge from pollutant stack	Sinter machine room dedusting stack
3	Discharge from pollutant stack	Discharge from pollutant stack	No 6 Blast furnace stove heating stack - Not in operation
4	Discharge from pollutant stack	Discharge from pollutant stack	No 6 Blast furnace cast house dedusting stack - Not in operation
5	Discharge from pollutant stack	Discharge from pollutant stack	No 6 Blast furnace stock house dedusting stack - Not in operation
6	Discharge from pollutant stack	Discharge from pollutant stack	No 6 Blast furnace highline dedusting stack

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7	Discharge from pollutant stack	Discharge from pollutant stack	No 5 Blast furnace stoves heating stack
8	Discharge from pollutant stack	Discharge from pollutant stack	No 5 Blast Furnace cast house dedusting stack No.1
9	Discharge from pollutant stack	Discharge from pollutant stack	No 5 Blast furnace stockhouse dedusting stack
10	Discharge from pollutant stack	Discharge from pollutant stack	No 5 Blast furnace - No 2 Slag granulator stack
11	Discharge from pollutant stack	Discharge from pollutant stack	No 5 Blast furnace - No 1 Slag granulator stack (Note: Emissions and monitoring from Point 10 are considered representative of this point).
13	Discharge from pollutant stack	Discharge from pollutant stack	No 4 Coke oven battery heating stack - Not in operation
14	Discharge from pollutant stack	Discharge from pollutant stack	No 5 Coke oven battery heating stack
15	Discharge from pollutant stack	Discharge from pollutant stack	No 6 Coke oven battery heating stack
16	Discharge from pollutant stack	Discharge from pollutant stack	No 7a Coke oven battery heating stack
18	Discharge from pollutant stack	Discharge from pollutant stack	No 4/5 Coke oven battery quench tower stack
19	Discharge from pollutant stack	Discharge from pollutant stack	No 6 Coke oven battery quench tower stack. (Note: Emissions and monitoring from Point 18 are considered representative of this point).
20	Discharge from pollutant stack	Discharge from pollutant stack	No 7a Coke oven battery quench tower stack
21	Discharge from pollutant stack	Discharge from pollutant stack	No 7a Battery fume suppression plant No 1 stack
22	Discharge from pollutant stack	Discharge from pollutant stack	No 7a Battery fume suppression plant No 2 stack
23	Discharge from pollutant stack	Discharge from pollutant stack	Coke screen house dedusting stack
24	Discharge from pollutant stack	Discharge from pollutant stack	BOS No 1 vessel flare stack
25	Discharge from pollutant stack	Discharge from pollutant stack	BOS No 2 vessel flare stack
26	Discharge from pollutant stack	Discharge from pollutant stack	BOS No 3 vessel flare stack - Not in operation
27	Discharge from pollutant stack	Discharge from pollutant stack	BOS No 2 secondary dedusting stack 1
28	Discharge from pollutant stack	Discharge from pollutant stack	BOS No 3 secondary dedusting stack A - Not in operation
29	Discharge from pollutant stack	Discharge from pollutant stack	BOS Hot metal treatment station stack
30	Discharge from pollutant stack	Discharge from pollutant stack	Lime kiln waste heat stack
31	Discharge from pollutant stack	Discharge from pollutant stack	Lime kiln storage bins - Enacon B/H stack
32	Discharge from pollutant stack	Discharge from pollutant stack	Lime kiln storage bins - Bahco B/H stack
33	Discharge from pollutant stack	Discharge from pollutant stack	Lime kiln transfer house stack
34	Discharge from pollutant stack	Discharge from pollutant stack	Slab handling - Slab scarfing machine stack - Not in operation
35	Discharge from pollutant stack	Discharge from pollutant stack	Raw material road rail dump station stack

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38	Discharge from pollutant stack	Discharge from pollutant stack	No 2 Blower station 23 boiler stack
39	Discharge from pollutant stack	Discharge from pollutant stack	No 2 Blower station 24 boiler stack
40	Discharge from pollutant stack	Discharge from pollutant stack	No 2 Blower station 25 boiler stack
42	Discharge from pollutant stack	Discharge from pollutant stack	No 5 Blast furnace BFG excess gas bleeder stack
43	Discharge from pollutant stack	Discharge from pollutant stack	No 6 Blast furnace BFG excess gas bleeder stack
44	Discharge from pollutant stack	Discharge from pollutant stack	No 1 COG (30") excess bleeder stack
45	Discharge from pollutant stack	Discharge from pollutant stack	No 2 COG (42") excess bleeder stack
46	Discharge from pollutant stack	Discharge from pollutant stack	Hydrogen reformer furnace stack
47	Discharge from pollutant stack	Discharge from pollutant stack	No. 1 walking beam furnace stack
48	Discharge from pollutant stack	Discharge from pollutant stack	3500mm Furnace No 1 stack
49	Discharge from pollutant stack	Discharge from pollutant stack	3500mm Furnace No 2 stack
51	Discharge from pollutant stack	Discharge from pollutant stack	Abrasive Blasting and Painting Line stack - Not in operation
52	Discharge from pollutant stack	Discharge from pollutant stack	GECA M/C Cut to length stack
76	Discharge from pollutant stack	Discharge from pollutant stack	No 4/5 Battery fume suppression stack
77	Discharge from pollutant stack	Discharge from pollutant stack	No 6 Battery fume suppression stack
90	Discharge from pollutant stack	Discharge from pollutant stack	No 5 & 6 Hammer Mills dedusting stack
91	Discharge from pollutant stack	Discharge from pollutant stack	BOS Roof vents
92	Discharge from pollutant stack	Discharge from pollutant stack	CAS Baghouse stack
93	Discharge from pollutant stack	Discharge from pollutant stack	Lime Kiln Discharge Building Baghouse stack
100	Discharge from pollutant stack	Discharge from pollutant stack	Gas Processing Sulphate Plant stack
104	Discharge from pollutant stack	Discharge from pollutant stack	No 6 Blast Furnace Slag Granulator Stack - Not in operation
105	Discharge from pollutant stack	Discharge from pollutant stack	PCI Hot Gas Exhaust Stack
106	Discharge from pollutant stack	Discharge from pollutant stack	PCI Facility - Stacks serving the depressurising bag filters
107	Discharge from pollutant stack	Discharge from pollutant stack	Sinter Plant Waste Gas Cleaning Plant Stack
108	Discharge from Pollutant Stack	Discharge from Pollutant Stack	Cold Ferrous Processing Plant Scrap Cutting Dust Collector Baghouse Stack - Not in operation
113	Discharge from pollutant stack	Discharge from pollutant stack	Ecocem Slag Dryer Dust Collector (Dries slag - natural gas)
115	Discharge from pollutant stack	Discharge from pollutant stack	Iron Dumping/Cutting Shed Baghouse Stack (dedust oxy/LPG scrap cutting)
117	Discharge from pollutant stack	Discharge from pollutant stack	No 2, & 3 Slab Caster Stacks (4 stacks)

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118	Discharge from pollutant stack	Discharge from pollutant stack	No 5 Blast Furnace Casthouse Dedusting Stack 2
119	Discharge from pollutant stack	Discharge from pollutant stack	Gas Processing No.2 Ammonia Absorbers Stack
120	Discharge from pollutant stack	Discharge from pollutant stack	No. 2 walking beam furnace stack
127	Discharge from pollutant stack	Discharge from pollutant stack	BOS No.2 Secondary Dedusting Stack 2
128	Discharge from pollutant stack	Discharge from pollutant stack	BOS No.3 Secondary Dedusting Stack B - Not in operation
129	Discharge from pollutant stack	Discharge from pollutant stack	No 5 Blast Furnace - No 3 Slag Granulator Stack (Note: Emissions and monitoring from Point 10 are considered representative of this point).
130	Discharge from pollutant stack	Discharge from pollutant stack	Swire BOS Coolant Baghouse Stack
131	Discharge from pollutant stack	Discharge from pollutant stack	Swire Refractory Crushing Baghouse Stack
132	Discharge from pollutant stack	Discharge from pollutant stack	OzRock Rotary Kiln Drier Stack
133	Discharge from pollutant stack	Discharge from pollutant stack	Klondy Heat Treatment
134	Discharge from pollutant stack	Discharge from pollutant stack	Foundry baghouse stack
138	Discharge from pollutant stack	Discharge from pollutant stack	Number 2 blower station - 11 boiler stack (Note: Emissions and monitoring from Points 138 or 139 are considered representative of this point).
139	Discharge from pollutant stack	Discharge from pollutant stack	Number 2 blower station - 12 boiler stack (Note: Emissions and monitoring from Points 138 or 139 are considered representative of this point).
140	Ambient Air Monitoring - HVAS, Dust Deposition, Benzene, PAH		Printing Services Building - Cnr Wattle and Flagstaff Roads, Warrawong - Not in Operation
141	Ambient Air Monitoring - HVAS, Dust Deposition, Benzene, PAH		Old Scout Hall - Flagstaff Road, Warrawong
142	Ambient Air Monitoring - HVAS		AQMS - Boundary of premises adjacent to Fitzgerald St, Cringila - not in operation
143	Ambient Air Monitoring - HVAS, Dust Deposition		Vikings Oval, Swan St, Wollongong - not in operation
144	Ambient Air Monitoring - Dust Deposition		19 Bridge St, Coniston - not in operation
145	Ambient Air Monitoring - Dust Deposition		28 Monteith St, Cringila - not in operation
146	Ambient Air Monitoring - Dust Deposition		25 Mount St, Mount St Thomas - not in operation
147	Ambient Air Monitoring - Dust Deposition		Port Kembla Marine Fuels - Flinders St, Port Kembla - not in operation
148	Ambient Air Monitoring - Dust Deposition		18 Holman St, Warrawong - not in operation
149	Ambient Air Monitoring - Dust Deposition		41 Grandview Parade, Lake Heights - not in operation
150	Ambient Air Monitoring - PAH		No.6 Jetty - Port Kembla Harbour, Port Kembla - not in operation
151	Number 3 Sinter Machine Stack	Number 3 Sinter Machine Stack	Discharge point during Sinter Plant Waste Gas Cleaning Plant Bypass

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152	Ambient Air Monitoring - HVAS, Dust Deposition	Near North Gate Visitors Centre
153	Ambient Air Monitoring - HVAS	Bluescope Stainless premises, Unanderra

P1.2 The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.

P1.3 The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.

Water and land

EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
78	Water quality discharge from drain	Water quality discharge from drain	Recycling Area overflow drain (001)
79	Water quality discharge from drain	Water quality discharge from drain	No 2 Blower station drain (002) - 2 pipes discharging to Allans Creek adjacent to sign marked No 2 Blower Station Drain
80	Water quality discharge from drain	Water quality discharge from drain	Slab mill drain (003) - pipe discharging to waters adjacent to sign marked "Slab Mill Drain"
81	Water quality discharge from drain	Water quality discharge from drain	Plate mill cooling tower drain (004) - adjacent to sign clearly marked "Plate Mill Cooling Tower Drain"
82	Water quality discharge from drain	Water quality discharge from drain	Flat Products East No 1 drain (005) - adjacent to sign clearly marked "FP East No 1 Drain"
83	Water quality discharge from drain	Water quality discharge from drain	Flat Products East No 2 drain (006) - pipe adjacent to sign marked "FP East No 2 Drain"
84	Water quality discharge from drain	Water quality discharge from drain	Slab caster drain (007) - 2 pipes adjacent to sign marked "Slab Caster Drain"
85	Water quality discharge from drain	Water quality discharge from drain	3500mm plate mill drain (008) - pipe adjacent to sign marked "Plate Mill Drain"
86	Water quality discharge from drain	Water quality discharge from drain	North gate drain (009) - Beyond weir in GPT upstream of 3x1.5M pipes and adjacent to sign clearly marked "North Gate Drain"
87	Water quality discharge from drain	Water quality discharge from drain	No 5 Blast Furnace drain (010) - pipe adjacent to sign marked "No 5 Blast Furnace Drain"
88	Water quality discharge from drain	Water quality discharge from drain	Main drain (011) - channel adjacent to sign marked "Main Drain"

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89	Water quality discharge from drain	Water quality discharge from drain	Ironmaking east drain (012) - overflow of weir adjacent to sign marked "Ironmaking East Drain"
103	Wet weather discharge	Wet weather discharge	Steelhaven West drain
135	Groundwater Quality	Groundwater Quality	Allans Creek SS4: Seep on northern side of Allans Creek opposite observation well OW3 (SS4) as shown on drawing PRP129LP001 located in file 281967A5.

P1.4 This licence permits:

- The discharge of rainwater from the premises.
- The discharge of liquid waste to groundwater via rubble drains from septic tanks and sealpots on the premises and from washing operations of roads and equipment within the premises.
- Discharges into artificial or internal drainage systems within the premises at locations upstream of the licensed discharge points.

Note: A new monitoring point, *No 4 Blast Furnace Thickener Discharge*, will be added to this licence prior to the completion of Spent Pickle Liquor Plant commissioning.

3 Limit Conditions

L1 Pollution of waters

- L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.

L2 Load limits

- L2.1 The actual load of an assessable pollutant discharged from the premises during the reporting period must not exceed the load limit specified for the assessable pollutant in the table below.

Note: An assessable pollutant is a pollutant which affects the licence fee payable for the licence.

- L2.2 The actual load of an assessable pollutant must be calculated in accordance with the relevant load calculation protocol.

Assessable Pollutant	Load limit (kg)
Arsenic (Air)	
Arsenic (Estuarine Water)	
Benzene (Air)	
Benzo(a)pyrene (equivalent) (Air)	
Cadmium (Estuarine Water)	

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Chromium (Estuarine Water)	
Coarse Particulates (Air)	
Copper (Estuarine Water)	
Fine Particulates (Air)	
Hydrogen Sulfide (Air)	
Lead (Air)	
Lead (Estuarine Water)	
Mercury (Air)	
Mercury (Estuarine Water)	
Nitrogen Oxides (Air)	8085000.00
Oil and Grease (Estuarine Water)	
Salt (Estuarine Water)	
Selenium (Estuarine Water)	
Sulfur Oxides (Air)	
Total PAHs (Estuarine Water)	
Total Phenolics (Estuarine Water)	
Total suspended solids (Estuarine Water)	
Volatile organic compounds (Air)	
Zinc (Estuarine Water)	

Note: Where any monitoring data indicates Load Based Licensing approved Site Specific Emission Factors (SSEFs) would vary by 25%, the licensee must recalculate and resubmit the relevant SSEFs to the EPA for approval.

L2.3 SPECIFIC MASS LOAD LIMITS FOR THE SINTER PLANT WASTE GAS CLEANING PLANT STACK (POINT 107)

L2.4 For the discharge point specified in the table below, the annual mass load of pollutant discharged at that point must not exceed the total mass limits specified for that pollutant.

Discharge Point	Pollutant	Units of Measure	Total Mass Limit	Method
107	Solid Particles	Tonnes per annum	240	Load Calculation Protocol for use by holders of NSW EPL

L3 Concentration limits

L3.1 For each monitoring/discharge point or utilisation area specified in the table\ below (by a point number),

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the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.

L3.2 Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.

L3.3 To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table's.

L3.4 Air Concentration Limits

POINT 2

Pollutant	Units of measure	100 percentile concentration limit	Reference conditions	Oxygen correction	Averaging period
Solid Particles	milligrams per cubic metre	50	Dry, 273, 101.3 kPa	not applicable	1 hour minimum

POINT 8,9

Pollutant	Units of measure	100 percentile concentration limit	Reference conditions	Oxygen correction	Averaging period
Solid Particles	milligrams per cubic metre	50	Dry, 273, 101.3 kPa	not applicable	1 hour minimum

POINT 30

Pollutant	Units of measure	100 percentile concentration limit	Reference conditions	Oxygen correction	Averaging period
Solid Particles	milligrams per cubic metre	50	Dry, 273, 101.3 kPa	Not Applicable	1 hour minimum

POINT 40

Pollutant	Units of measure	100 percentile concentration limit	Reference conditions	Oxygen correction	Averaging period
Nitrogen Oxides	milligrams per cubic metre	600	Dry, 273, 101.3 kPa	7%	1 hour block minimum
Cadmium	milligrams per cubic metre	0.1	Dry, 273, 101.3 kPa	7%	1 hour minimum
Sulphur dioxide	milligrams per cubic metre	1250	Dry, 273, 101.3 kPa	7%	1 hour block minimum
Volatile organic compounds	milligrams per cubic metre	25	Dry, 273, 101.3 kPa	7%	1 hour block minimum
Solid Particles	milligrams per cubic metre	30	Dry, 273, 101.3 kPa	7%	1 hour minimum
Mercury	milligrams per cubic metre	0.1	Dry, 273, 101.3 kPa	7%	1 hour minimum

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Carbon monoxide	milligrams per cubic metre	400	Dry, 273, 101.3 kPa	7%	1 hour block minimum
Type 1 and Type 2 substances in aggregate	milligrams per cubic metre	1	Dry, 273, 101.3 kPa	7%	1 hour minimum

POINT 47

Pollutant	Units of measure	100 percentile concentration limit	Reference conditions	Oxygen correction	Averaging period
Solid Particles	milligrams per cubic metre	30	Dry, 273, 101.3 kPa	7%	1 hour minimum
Carbon monoxide	milligrams per cubic metre	400	Dry, 273, 101.3 kPa	7%	1 hour block minimum
Volatile organic compounds	milligrams per cubic metre	25	Dry, 273, 101.3 kPa	7%	2 hours minimum
Cadmium	milligrams per cubic metre	0.1	Dry, 273, 101.3 kPa	7%	1 hour minimum
Mercury	milligrams per cubic metre	0.1	Dry, 273, 101.3 kPa	7%	1 hour minimum
Type 1 and Type 2 substances in aggregate	milligrams per cubic metre	1	Dry, 273, 101.3 kPa	7%	1 hour minimum
Nitrogen Oxides	milligrams per cubic metre	600	Dry, 273, 101.3 kPa	7%	1 hour minimum
Sulphur dioxide	milligrams per cubic metre	1250	Dry, 273, 101.3 kPa	7%	1 hour block minimum

POINT 105

Pollutant	Units of measure	100 percentile concentration limit	Reference conditions	Oxygen correction	Averaging period
Nitrogen Oxides	milligrams per cubic metre	200	Dry, 273, 101.3 kPa	3%	1 hour minimum
Solid Particles	milligrams per cubic metre	20	Dry, 273, 101.3 kPa	3%	1 hour minimum

POINT 106

Pollutant	Units of measure	100 percentile concentration limit	Reference conditions	Oxygen correction	Averaging period
Solid Particles	milligrams per cubic metre	20	Dry, 273, 101.3 kPa	not applicable	1 hour minimum

POINT 107

Pollutant	Units of measure	100 percentile concentration limit	Reference conditions	Oxygen correction	Averaging period
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Fine Particulates	milligrams per cubic metre	See Note 2	Dry, 273, 101.3 kPa	not applicable	1 hour minimum
Nitrogen Oxides	milligrams per cubic metre	2000	Dry, 273, 101.3 kPa	not applicable	1 hour block minimum
Dioxins & Furans	nanograms per cubic metre	0.3	Dry, 273, 101.3 kPa	15.7%	6 hours minimum
Sulphur dioxide	milligrams per cubic metre	1000	Dry, 273, 101.3 kPa	not applicable	1 hour block minimum
Solid Particles	milligrams per cubic metre	20	Dry, 273, 101.3 kPa	not applicable	1 hour minimum
Sulfuric acid mist and sulfur trioxide (as SO ₃)	milligrams per cubic metre	100	Dry, 273, 101.3 kPa	not applicable	1 hour minimum

POINT 108

Pollutant	Units of measure	100 percentile concentration limit	Reference conditions	Oxygen correction	Averaging period
Solid Particles	milligrams per cubic metre	20	Dry, 273, 101.3 kPa	not applicable	1 hour minimum
Cadmium	milligrams per cubic metre	1	Dry, 273, 101.3 kPa	not applicable	1 hour minimum
Mercury	milligrams per cubic metre	1	Dry, 273, 101.3 kPa	not applicable	1 hour minimum
Type 1 and Type 2 substances in aggregate	milligrams per cubic metre	5	Dry, 273, 101.3 kPa	not applicable	1 hour minimum

POINT 113

Pollutant	Units of measure	100 percentile concentration limit	Reference conditions	Oxygen correction	Averaging period
Nitrogen Oxides	milligrams per cubic metre	80	Dry, 273, 101.3 kPa	18%	1 hour block minimum

POINT 118

Pollutant	Units of measure	100 percentile concentration limit	Reference conditions	Oxygen correction	Averaging period
Solid Particles	milligrams per cubic metre	50	Dry, 273, 101.3 kPa	not applicable	1 hour minimum

POINT 120

Pollutant	Units of measure	100 percentile concentration limit	Reference conditions	Oxygen correction	Averaging period
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Type 1 and Type 2 substances in aggregate	milligrams per cubic metre	1.0	Dry, 273, 101.3 kPa	7%	1 hour minimum
Nitrogen Oxides	milligrams per cubic metre	650	Dry, 273, 101.3 kPa	7%	1 hour block minimum
Volatile organic compounds	milligrams per cubic metre	20	Dry, 273, 101.3 kPa	7%	2 hours minimum
Solid Particles	milligrams per cubic metre	30	Dry, 273, 101.3 kPa	7%	1 hour minimum
Sulphur dioxide	milligrams per cubic metre	1250	Dry, 273, 101.3 kPa	7%	1 hour block minimum
Carbon monoxide	milligrams per cubic metre	400	Dry, 273, 101.3 kPa	7%	1 hour block minimum
Mercury	milligrams per cubic metre	0.1	Dry, 273, 101.3 kPa	7%	1 hour block minimum
Cadmium	milligrams per cubic metre	0.1	Dry, 273, 101.3 kPa	7%	1 hour block minimum

POINT 138,139

Pollutant	Units of measure	100 percentile concentration limit	Reference conditions	Oxygen correction	Averaging period
Nitrogen Oxides	milligrams per cubic metre	200	Dry, 273, 101.3 kPa	3%	1 hour block minimum

L3.5 Water and/or Land Concentration Limits

POINT 79

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Ammonia (Dry)	milligrams per litre	n/a	1.5		5
Ammonia (Wet)	milligrams per litre	n/a	n/a		5
BOD (Dry)	milligrams per litre	5	10		20
BOD (Wet)	milligrams per litre	n/a	n/a		20
Cadmium (Dry)	milligrams per litre	0.01	0.02		0.06

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Cadmium (Wet)	milligrams per litre	n/a	n/a	0.06
Cyanide (Dry)	milligrams per litre	n/a	0.05	0.3
Cyanide (Wet)	milligrams per litre	n/a	n/a	0.3
Filtrable iron (Dry)	milligrams per litre	n/a	0.1	0.3
Filtrable iron (Wet)	milligrams per litre	n/a	n/a	0.3
Lead (Dry)	milligrams per litre	n/a	0.05	0.1
Lead (Wet)	milligrams per litre	n/a	n/a	0.1
Oil and grease (Dry)	milligrams per litre	n/a	10	20
Oil and grease (Wet)	milligrams per litre	n/a	n/a	50
pH (Dry)	pH	n/a	n/a	6.5-9.0
pH (Wet)	pH	n/a	n/a	6.5-9.0
Temperature (Dry)	degrees Celsius	n/a	35	40
Temperature (Wet)	degrees Celsius	n/a	n/a	40
Total iron (Dry)	milligrams per litre	n/a	1.0	3
Total iron (Wet)	milligrams per litre	n/a	n/a	50
Total zinc (Dry)	milligrams per litre	n/a	1.0	3
Total zinc (Wet)	milligrams per litre	n/a	n/a	3
TSS (Dry)	milligrams per litre	n/a	30	50
TSS (Wet)	milligrams per litre	n/a	n/a	500

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POINT 80

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
BOD	milligrams per litre	n/a	n/a		20
Cadmium	milligrams per litre	n/a	n/a		0.05
Cadmium (Wet)	milligrams per litre	n/a	n/a		0.06
Cyanide	milligrams per litre	n/a	n/a		0.2
Lead	milligrams per litre	n/a	n/a		0.1
Oil and Grease	milligrams per litre	n/a	n/a		20
Oil and grease (Wet)	milligrams per litre	n/a	n/a		50
pH	pH	n/a	n/a		6.5-9.0
Temperature	degrees Celsius	n/a	n/a		40
TSS (Dry)	milligrams per litre	n/a	n/a		50
TSS (Wet)	milligrams per litre	n/a	n/a		1000

POINT 81

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Oil and Grease	milligrams per litre	n/a	10		20
pH	pH	n/a	n/a		6.5-9.0
Temperature	degrees Celsius	n/a	30		35
Total suspended solids	milligrams per litre	n/a	30		50

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POINT 82

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Ammonia	milligrams per litre	n/a	n/a		5
BOD	milligrams per litre	n/a	n/a		30
Cadmium	milligrams per litre	n/a	n/a		0.06
Cyanide	milligrams per litre	n/a	n/a		0.3
Filterable iron	milligrams per litre	n/a	n/a		0.5
Fluoride	milligrams per litre	n/a	n/a		25
Hexavalent chromium (Dry)	milligrams per litre	n/a	n/a		0.05
Hexavalent chromium (Wet)	milligrams per litre	n/a	n/a		0.05
Lead	milligrams per litre	n/a	n/a		0.2
Lead (Wet)	milligrams per litre	n/a	n/a		1
Mercury	micrograms per litre	n/a	n/a		1.5
Oil and Grease	milligrams per litre	n/a	n/a		20
Oil and grease (Wet)	milligrams per litre	n/a	n/a		50
pH	pH	n/a	n/a		6.5-9.0
Temperature	degrees Celsius	n/a	n/a		45
Tin	milligrams per litre	n/a	n/a		10
Total Iron	milligrams per litre	n/a	n/a		10

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Total iron (Wet)	milligrams per litre	n/a	n/a	20
TSS (Dry)	milligrams per litre	n/a	n/a	70
TSS (Wet)	milligrams per litre	n/a	n/a	200

POINT 83

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Cadmium	milligrams per litre	n/a	n/a		0.05
Cyanide	milligrams per litre	n/a	n/a		0.15
Filterable iron	milligrams per litre	n/a	n/a		0.3
Hexavalent chromium (Dry)	milligrams per litre	n/a	n/a		0.05
Hexavalent chromium (Wet)	milligrams per litre	n/a	n/a		0.5
Lead	milligrams per litre	n/a	n/a		0.1
Lead (Wet)	milligrams per litre	n/a	n/a		0.5
Oil and Grease	milligrams per litre	n/a	n/a		20
Oil and grease (Wet)	milligrams per litre	n/a	n/a		50
pH	pH	n/a	n/a		6.5-9.0
Total Iron	milligrams per litre	n/a	n/a		3
Total iron (Wet)	milligrams per litre	n/a	n/a		10
TSS (Dry)	milligrams per litre	n/a	n/a		50
TSS (Wet)	milligrams per litre	n/a	n/a		200

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POINT 84

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
pH	pH	n/a	n/a		6.5-9.0
Total suspended solids	milligrams per litre	n/a	n/a		50

POINT 85

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Cadmium	milligrams per litre	0.01	0.02		0.05
Cyanide	milligrams per litre	n/a	0.05		0.1
Lead	milligrams per litre	n/a	0.05		0.1
Oil and Grease	milligrams per litre	n/a	10		20
pH	pH	n/a	n/a		6.5-9.0
Temperature	degrees Celsius	n/a	30		35
Total suspended solids	milligrams per litre	n/a	30		50

POINT 86

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
BOD (Dry)	milligrams per litre	n/a	n/a		20
BOD (Wet)	milligrams per litre	n/a	n/a		20
Cadmium (Dry)	milligrams per litre	0.01	0.02		0.1
Cadmium (Wet)	milligrams per litre	n/a	n/a		0.1

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Cyanide (Dry)	milligrams per litre	n/a	0.05	0.1
Cyanide (Wet)	milligrams per litre	n/a	n/a	0.1
Filtrable iron (Dry)	milligrams per litre	n/a	0.3	1
Filtrable iron (Wet)	milligrams per litre	n/a	n/a	1
Lead (Dry)	milligrams per litre	0.05	0.1	0.5
Lead (Wet)	milligrams per litre	n/a	n/a	0.5
Oil and grease (Dry)	milligrams per litre	n/a	10	20
Oil and grease (Wet)	milligrams per litre	n/a	n/a	50
pH (Dry)	pH	n/a	n/a	6.5-8.5
pH (Wet)	pH	n/a	n/a	6.5-9.5
Temperature (Dry)	degrees Celsius	n/a	30	35
Temperature (Wet)	degrees Celsius	n/a	n/a	35
Total iron (Dry)	milligrams per litre	n/a	3	5
Total iron (Wet)	milligrams per litre	n/a	n/a	5
TSS (Dry)	milligrams per litre	n/a	30	50
TSS (Wet)	milligrams per litre	n/a	n/a	200

POINT 87

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Ammonia (Dry)	milligrams per litre	n/a	7.5		10
Ammonia (Wet)	milligrams per litre	n/a	n/a		10

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Cadmium (Dry)	milligrams per litre	n/a	0.1	0.15
Cadmium (Wet)	milligrams per litre	n/a	n/a	0.15
Cyanide (Dry)	milligrams per litre	n/a	0.2	0.3
Cyanide (Wet)	milligrams per litre	n/a	n/a	0.3
Filtrable iron (Dry)	milligrams per litre	n/a	0.7	1.5
Filtrable iron (Wet)	milligrams per litre	n/a	n/a	1.5
Lead (Dry)	milligrams per litre	0.05	0.3	0.5
Lead (Wet)	milligrams per litre	n/a	n/a	0.5
Mercury (Dry)	micrograms per litre	n/a	n/a	1.5
Mercury (Wet)	micrograms per litre	n/a	n/a	1.5
Oil and grease (Dry)	milligrams per litre	n/a	10	20
Oil and grease (Wet)	milligrams per litre	n/a	n/a	20
pH (Dry)	pH	n/a	n/a	6.5-11.0
pH (Wet)	pH	n/a	n/a	6.5-11.0
Temperature (Dry)	degrees Celsius	n/a	35	40
Temperature (Wet)	degrees Celsius	n/a	n/a	40
Total chromium (Dry)	milligrams per litre	n/a	0.2	0.6
Total chromium (Wet)	milligrams per litre	n/a	n/a	0.6
Total iron (Dry)	milligrams per litre	n/a	3	7

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Total iron (Wet)	milligrams per litre	n/a	n/a	100
TSS (Dry)	milligrams per litre	n/a	30	70
TSS (Wet)	milligrams per litre	n/a	n/a	500

POINT 88

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Ammonia (Dry)	milligrams per litre	n/a	4.0		7.5
Ammonia (Wet)	milligrams per litre	n/a	n/a		7.5
Cadmium (Dry)	milligrams per litre	0.01	0.02		0.06
Cadmium (Wet)	milligrams per litre	n/a	n/a		0.06
Cyanide (Dry)	milligrams per litre	n/a	0.1		0.3
Cyanide (Wet)	milligrams per litre	n/a	n/a		0.3
Lead (Dry)	milligrams per litre	n/a	0.05		0.1
Lead (Wet)	milligrams per litre	n/a	n/a		0.1
Oil and grease (Dry)	milligrams per litre	n/a	10		20
Oil and grease (Wet)	milligrams per litre	n/a	n/a		50
pH (Dry)	pH	n/a	n/a		6.5-9.0
pH (Wet)	pH	n/a	n/a		6.5-9.0
Phenols (Dry)	milligrams per litre	n/a	0.15		0.45
Phenols (Wet)	milligrams per litre	n/a	n/a		0.45
Temperature (Dry)	degrees Celsius	n/a	35		40

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Temperature (Wet)	degrees Celsius	n/a	n/a	40
Total zinc (Dry)	milligrams per litre	n/a	1	3
Total zinc (Wet)	milligrams per litre	n/a	n/a	3
TSS (Dry)	milligrams per litre	45	70	100
TSS (Wet)	milligrams per litre	n/a	n/a	200

POINT 89

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Ammonia (Dry)	milligrams per litre	3	5		7
Ammonia (Wet)	milligrams per litre	n/a	n/a		7
Arsenic	micrograms per litre				50
Cadmium (Dry)	milligrams per litre	0.01	0.02		0.05
Cadmium (Wet)	milligrams per litre	n/a	n/a		0.05
Chromium (total)	micrograms per litre				350
Copper	milligrams per litre				1
Cyanide (Dry)	milligrams per litre	0.08	0.15		0.2
Cyanide (Wet)	milligrams per litre	n/a	n/a		0.2
Filtrable iron (Dry)	milligrams per litre	n/a	0.1		0.5
Filtrable iron (Wet)	milligrams per litre	n/a	n/a		0.5
Fluoride (Dry)	milligrams per litre				50
Fluoride (Wet)	milligrams per litre				50

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Lead (Dry)	milligrams per litre	0.05	0.1	0.2
Lead (Wet)	milligrams per litre	n/a	n/a	0.2
Mercury (Dry)	micrograms per litre			3
Mercury (Wet)	micrograms per litre			3
Oil and grease (Dry)	milligrams per litre	n/a	10	20
Oil and grease (Wet)	milligrams per litre	n/a	n/a	20
pH (Dry)	pH	n/a	n/a	6.5-9.0
pH (Wet)	pH	n/a	n/a	6.5-9.0
Selenium	micrograms per litre			20
Temperature (Dry)	degrees Celsius	n/a	40	45
Temperature (Wet)	degrees Celsius	n/a	n/a	45
Total iron (Dry)	milligrams per litre	n/a	3	7
Total iron (Wet)	milligrams per litre	n/a	n/a	20
Total zinc (Dry)	milligrams per litre	n/a	1	3
Total zinc (Wet)	milligrams per litre	n/a	n/a	3
TSS (Dry)	milligrams per litre	n/a	n/a	100
TSS (Wet)	milligrams per litre	n/a	n/a	200

POINT 103

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Oil and Grease	milligrams per litre	n/a	n/a		20

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pH	pH	n/a	n/a	6.5-9.5
Total suspended solids	milligrams per litre	n/a	n/a	200

Note: The Cyanide limit at Point 80 has been temporarily increased from 0.1mg/L to 0.2mg/L for the duration of the monitoring program defined in PRP 178 - Investigation of Cyanide in the Slab Mill Drain. Following review of the final program report an appropriate Cyanide limit for Point 80 will be determined.

Note: 1. The discharge limits for Point 89 (Iron Making East Drain) are based on monitoring data available in 2001 for this Point and the estimated contribution of pollutants from the Sinter Plant Waste Gas Cleaning Plant. It is proposed that these limits will be reviewed by the EPA taking into account monitoring undertaken as part of the effluent characterisation program required by PRP 112 - SPWGCP Effluent Characterisation Program.

Note: 2. Notes relating to Discharge Point 107 – Sinter Plant Waste Gas Cleaning Plant Stack

a) In relation to particulate emissions at Point 107, the evolution of fine particulate standards may require a better characterisation and health risk assessment of the significance of its fine particulate component. A program may be developed through the licensing process to address this issue.

b) The Sinter Plant Waste Gas Cleaning Plant (WGCP) should be designed to meet a concentration of 0.1 ng/m³ of gaseous and particulate phase polychlorinated dibenzo-p-dioxins (PCDD) and polychlorinated dibenzofurans (PCDF) as tetrachloro-dibenzo-dioxin (TCDD) equivalent, WHO 2005 TEF, dry 101.3 kPa, 273 K, 15.7% O₂ in waste gases at Point 107.

c) In relation to the dioxin limit at Point 107, testing conducted for PRPs 108 and 111 showed an average reduction in dioxins emitted to the atmosphere of 96 percent as a result of the Sinter Plant WGCP. The EPA in a letter dated 9 June 2005 (Ref: WOF 12470, WOF12466) has proposed to the licensee that upon completion of investigations aimed at reducing levels of dioxins in Sinter Plant WGCP dust that negotiations will commence with a view to reducing the dioxin limit for Point 107.

L4 Volume and mass limits

L4.1 POINT 78 – RECYCLING AREA OVERFLOW DRAIN

A discharge from Point 78 is permitted if the discharge occurs solely as a result of rainfall at the premises exceeding a total of 15 millimetres over any consecutive five day period.

L5 Waste

L5.1 The licensee must not cause, permit or allow any waste to be received at the premises, except the wastes expressly referred to in the column titled “Waste” and meeting the definition, if any, in the column titled “Description” in the table below.

Any waste received at the premises must only be used for the activities referred to in relation to that waste in the column titled “Activity” in the table below.

Any waste received at the premises is subject to those limits or conditions, if any, referred to in relation to that waste contained in the column titled “Other Limits” in the table below.

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This condition does not limit any other conditions in this licence.

Code	Waste	Description	Activity	Other Limits
Z990	Not characterised	Dry recyclables generated at other BSL sites. Brought on to site for sorting and recycling.	Resource recovery	
C100	Basic solutions or bases in solid form	Neutralisation - Acetylene gas lime slurry for Spent Pickle Liquor plant diverted to A&R lime pits.	Resource recovery Waste storage	Reporting as per Condition R4.1(g)
Z990	Not characterised	Drill mud for consolidation and storage.	Waste storage	45 cubic metres stored on site
C100	Basic solutions or bases in solid form	Neutralisation - Acetylene gas lime slurry for Spent Pickle Liquor plant.	Resource recovery Waste storage	Maximum volume stored 250,000 litres
J120	Waste oil/hydrocarbons mixtures/emulsions in water	Oily water stored overnight at A&R Worth Recycling compound.	Waste storage	Storage in dedicated storage tanks at Alliance and Recycling.
N100	Containers & drums containing controlled waste residues	Consolidation of waste drums containing oil residue	Waste storage	Drums from BSL Unanderra facilities only.
B100	Acidic solutions or acids in solid form	Spent lead acid battery acid wastes	Resource recovery	For ammonium sulphate fertiliser only.
NA	General or Specific exempted waste	Waste that meets all the conditions of a resource recovery exemption under Clause 92 of the Protection of the Environment Operations (Waste) Regulation 2014.	As specified in each particular resource recovery exemption	
Z990	Not characterised	Hoffman filter waste generated at BSL Springhill Works. Brought onto site for consolidation and storage.	Waste storage	Less than 5 cubic metres stored at any time.
Z990	Not characterised	Rice hull ash, solid residue from destructive distillation of rice hulls. Used as a tundish lining insulator.	Resource recovery Waste storage	
Z990	Not characterised	Slag materials that do	Waste storage	

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		Waste storage not meet specification, solid. Returned to site for reprocessing and sale	
Z990	Not characterised	Paper, pulp, solid paper production residue. Used to produce briquettes for deoxidising slag in the BOS furnace.	Resource recovery Waste storage
Z990	Not characterised	CPCM baghouse dust, solid iron bearing dust from air emission control facilities. Used to add iron units to Sinter Plant blend.	Resource recovery Waste storage
D300	Non toxic salts	Aluminium dross, solid metallic aluminium powder. Used in the desulphurisation of liquid iron.	Resource recovery
Z990	Not characterised	Steel shot blast, solid steel fines. Used to add iron units to Sinter Plant blend.	Resource recovery Waste storage
J100	Waste mineral oils unfit for their original intended use	Waste hydrocarbons, liquid recycled oil. Used to increase coal bulk density prior to coking.	Resource recovery
J120	Waste oil/hydrocarbons mixtures/emulsions in water	Aqueous solution of 1%-5% ethylene glycol and 1%-5% mineral oil, used as a dust suppressant.	Resource recovery
Z990	Not characterised	Steel scrap, solid iron and steel. Used in the conversion of iron to steel.	Resource recovery Waste storage
Z990	Not characterised	Waste timber packaging generated at other BSL sites. Brought onto site for recycling.	Resource recovery
K130	Sewage sludge & residues	Sewage treatment plant waste, liquid. Used for reactivation of biological processes in sewage treatment plant.	Resource recovery
J160	Waste tarry residues	Tar sludge material that settles out of tar (coke breeze and tar). Returned to site for reprocessing.	Resource recovery

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B100	Pickle Liquor	Spent Pickle Liquor.	Resource recovery Waste storage	No more than 600,000 L stored at any one time.
Z990	Not characterised	Millscale, solid steel fines. Used to add iron units to Sinter Plant blend	Resource recovery	
J160	Waste tarry residues	Petcoke, solid produced in the petroleum refinement process. Coal substitute added to the coal blend prior to coking, low ash content.	Resource recovery	
Z130	Inert sludges or slurries	Iron bearing sludge from waste water treatment, solid. Used to add iron units to Sinter Plant blend.	Resource recovery Waste storage	
Z990	Not characterised	Co-mingled wastes generated at other BSL sites. Brought onto site for sorting and recycling.	Resource recovery	
Z990	Not characterised	Non-ferrous metal wastes generated at other BSL site. Brought on to site for sorting and recycling.	Resource recovery	
Z990	Not characterised	Spent lead acid battery acid wastes	Resource recovery	For ammonium sulphate fertiliser only.

Note: Waste from the adjacent Springhill Works (EPL 571) is considered to be onsite for the purposes of waste tracking and the liquid waste levy (non trackable).

L6 Noise limits

L6.1 CONSTRUCTION ACTIVITY NOISE LIMITS

- L6.2 All construction activities for new works (ie, excluding routine maintenance works), including pile driving, jack hammering, warning sirens and similar high intensity noise sources, undertaken at the premises, and which are audible at residential premises, must be restricted to the following times:
- 7:00 am to 6:00 pm Mondays to Fridays;
 - 8:00 am to 1:00 pm on Saturdays; and
 - At no time on Sundays and Public Holidays.

L6.3 The hours of construction specified above may be varied by written consent of the EPA.

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L6.4 OPERATIONAL NOISE LIMITS

L6.5 For the activities specified in the table below, the noise level emitted from that activity must not exceed the noise level specified in the table:

Activity	Noise Limit LAeq(15 minute)	Noise Limit LA1 (1 minute)	Compliance Location
PCI	75		EPA approved monitoring site is nominated in plan titled "PCI Plant Noise Monitoring Locations"
Scrap Cutting	35	55 (2200 - 0700 hrs)	Most potentially affected residence
Hot Strip Mill Upgrade	35		Most potentially affected residence
Sinter Plant Waste Gas Cleaning Plant	70		EPA approved monitoring site is nominated in plan titled "Figure 4 – Layout of Proposed Sinter Plant Waste Gas Cleaning Plant" 281963A6
Number 5 Blast Furnace	35		Most potentially affected residence
Steam Assets Upgrade Project	35	55 (2200 - 0700 hrs)	Most potentially affected residence

L6.6 For the purpose of the noise measurements referred to in condition L6.5, 5dB(A) must be added to the measured level if the noise is substantially tonal and impulsive in character.

Noise monitoring must use the "FAST" response on the sound level meter.

Note: Noise impacts that may be enhanced by temperature inversions shall be addressed by:

- documenting noise complaints received to identify any higher level of impacts or patterns of temperature inversions; and
- where levels of noise complaints indicate a higher level of impact then actions to quantify and ameliorate any enhanced impacts under temperature inversions conditions should be developed and implemented.

4 Operating Conditions

O1 Activities must be carried out in a competent manner

O1.1 Licensed activities must be carried out in a competent manner.

This includes:

- the processing, handling, movement and storage of materials and substances used to carry out the activity; and
- the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

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O2 Maintenance of plant and equipment

- O2.1 All plant and equipment installed at the premises or used in connection with the licensed activity:
- a) must be maintained in a proper and efficient condition; and
 - b) must be operated in a proper and efficient manner.

O3 Dust

- O3.1 Activities occurring at the premises must be carried out in such a manner that fugitive dust emissions from the activities are minimised.

- O3.2 a) The licensee must develop and comply with the licensee's Environmental Management Manual "Fugitive Dust Management System" (FDMS), procedure MA-ENV-02-02 (dated 5 November 2019) or as varied with the prior written approval of the EPA). (EPA file EF13/2639). The specifics within the FDMS are to be applied in accordance with this condition.

b) For the purpose of this condition, "fugitive dust emissions" means dust emissions from a non-point source from or within any of the numbered areas detailed in the Bluescope Steel Port Kembla drawing 443942, provided by the licensee to the EPA on 7 March 2018 and filed on EPA file DOC18/144556.

c) The licensee must conduct monitoring at all sites and complete a regular survey of the nominated sites in accordance with the FDMS.

d) For the purposes of the FDMS:

i) Dust Emission Ranking (DER) is obtained by using the descriptions shown at table 7.2 and numbered photograph plates detailed in the FDMS.

Follow-up Actions

e) In the event that a DER 3 or greater, as set out in the FDMS, is observed then:

i) Each such event must be reported in the licensee's incident reporting system, and

ii) If the EPA requests, the licensee must demonstrate that measures were taken which complied with the FDMS to minimise those emissions.

f) Nothing in this condition affects the responsibility of the licensee to comply with condition O1.1 and condition O2.1.

O3.3 TRANSPORT OF MATERIAL

- O3.4 All trucks carrying dry bulk material that are loaded on the premises must be loaded and operated so as to prevent spillage of any material from the load which generates dust.

For the purposes of this Condition "load is defined as material contained within the body/trailer/bin of the truck and on the gunnels of the truck.)

O3.5 MATERIAL STOCKPILES – DUST AND STORMWATER CONTROLS

1. Development of any new stockpiles (permanent, temporary or emergency) must be in accordance with

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the BSL Risk Assessment Process (MA-ENV-03-08). Note i. and ii.

Note:

- i. All materials stockpiles must have appropriate stormwater and dust controls in place and this condition does not negate the requirements of condition O3.1.
- ii. Permanent material stockpiles approved for use by the EPA are identified on the map titled BlueScope Steel Titled Number 2 Works Permanent Stockpiles Drawing Number 398702 ("the Map").

2. The EPA must be consulted prior to the establishment of any new permanent or temporary stockpiles:

- a) to be located outside of the No 2 Works Permanent Stockpile Areas designated on the Map
- b) if materials other than those specified on the Map are to be stored in that area

Definitions – Stockpiles

- i. Permanent – areas dedicated to the ongoing storage of materials
- ii. Temporary – areas dedicated to the storage of materials when permanent stockpile areas reach capacity or materials require temporary storage due to delivery / shipment requirements and/or unforeseen circumstances.
- iii. Emergency – areas used to stockpile materials during plant breakdown or maintenance to ensure the continuation of supply for plant processes (e.g. conveyor outages) these stockpiles only remain until normal operations resume.

O3.6 Stockpiles in the Alliance and Recycling Area must not exceed the height, AHD, of the North Wall.

O4 Processes and management

O4.1 COKEMAKING

O4.2 Tables 1 and 2 below set out in relation to each Coke Oven Battery the maximum number of valveboxes or goosenecks (taken together), doors, lids and leveller doors from which visible emissions of raw coke ovens gas can be emitted at any one time. These limits must not be exceeded at any time.

O4.3 Table 1 - Limits for Cokemaking Valveboxes/Goosenecks and Oven Lids

Coke Ovens Battery	Valveboxes/Goosenecks Limit	Valveboxes/Goosenecks %	Oven Lids Limit	Oven Lids %
5	5	7.6	5	2.5
6	6	5.9	9	3.0
7A	3	6.0	5	2.5

O4.4 Table 2 - Limits for Cokemaking Main Doors and Leveller Doors

Coke Ovens Battery	Main Doors Total	Main Doors %	Leveller Doors Total	Leveller Doors %
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5	5	3.8	3	4.5
6	7	3.5	4	4.0
7A	6	6.0	3	6.0

- O4.5 The Licensee must once daily complete a survey of visible emissions from the main doors, leveller doors, lids and valve boxes/goosenecks, on all operating Coke Oven Batteries on the premises. The survey is to be carried out according to Standard Procedure SP-CB-2BATINS-105 a copy of which has been made available to the Authority from the Licensee. The daily results must be kept on a computer system and made available to any authorised officer of the Authority on request and must be included in the 'Annual Monitoring Report' required to be submitted to the Authority.
- O4.6 Any open Coke Ovens standpipe must be ignited within 30 seconds unless there is insufficient gas evolved to sustain combustion.
- O4.7 Visible emissions from charging cars installed on Nos 5 and 6 Coke Ovens Batteries must not last more than 60 seconds for any single charge for greater than 5 per cent of total charges for each battery on a weekly basis. For this purpose the charging cycle time for each oven shall be taken as starting from the first operation of the charger in preparing to charge the oven till the last operation by the charger sealing the oven after charging the oven. For the purpose of this condition "weekly" shall mean the period from any Friday to the following Thursday.
- O4.8 New arisings of Coke Ovens Gas Mains Solids must be stored internally in sealed and bunded areas.
- O4.9 No more than 50 tonnes of dewatered COG solids may be stored on the premises at any time.
- O4.10 ENERGY SERVICES PACKAGE BOILERS
Natural gas is the only fuel that is approved to be combusted in the No 2 Blower Station, 11 and 12 Boiler Stacks (ID 138 and 139).
- O4.11 BASIC OXYGEN STEELMAKING (BOS)
- O4.12 There must be no more than four significant emissions of dust from the roof of the BOS building per month and no more than 15 significant emissions of dust from the roof of the BOS building during the licence reporting period.
- (For the purposes of this condition "significant emission" is defined as a large, opaque red-brown emission from the BOS building which extends greater than 50m above the roof of the building).
- O4.13 There must be no more than four significant emissions of dust per month from the tipping of kish at the BOS and, there must be no more than thirty significant emissions of dust during the licence reporting period from the tipping of kish at the BOS.
- (For the purposes of this condition "significant emissions" is defined as an emission of kish, visible above the BOS building or outside the BOS Slag Handling Area, which has been rated as Dust Emission Ranking (DER) 5 as prescribed in ASMS's DER Furnace Group.
- O4.14 HOT METAL POURING AT THE RECYCLING AREA
There must be no more than one significant emission per month of dust from hot metal pouring from the

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torpedo ladle into the refractory lined launder box.

("Significant emission" is defined as being an emission with a ASMS rating of greater than four throughout the pour of a ladle according to Standard Procedures PP-0302 copies of which have been made available to the Authority from the Licensee.)

O4.15 SINTER PLANT INCLUDING WASTE GAS CLEANING PLANT

O4.16 The WGCP must be operated so that there are no visible emissions from the exhaust stack (Discharge Point 107) under normal operations. Compliance with this requirement is to be assessed against compliance with the EPL limit condition for Discharge Point 107 of 20 mg/Nm³ for particulate matter.

Note: Normal operation excludes the first two hours of operation following start up.

O4.17 The WGCP must be operated with the objective of ensuring the maximum practicable recovery of sulphur rich gas (SRG) for treatment and reuse.

O4.18 The Licensee must notify the EPA of any venting of sulfur rich gas (SRG) to atmosphere that exceeds 24 continuous hours.

O4.19 ENERGY SERVICES

O4.20 Dosing with the biocide, *Biosperse 485 Biocide* must:

- i) be undertaken in accordance with the conditions specified in the APVMA registration number – 86926
- ii) not exceed a maximum discharge concentration of 0.2 mg/L from Blower Station Drain (EPA identification number 79) or the Main Drain (EPA identification number 88);
- iii) be no longer than 24 hours and occur at a minimum frequency of 4 weeks.

If *Biosperse 485 Biocide* 750/L concentrations in the Blower Station Drain or the Main Drain exceed 0.2 mg/L, treatment must be immediately stopped with no further discharge unless 24 hours has elapsed.

Note: The *Biosperse 485 Biocide* 750/L target discharge concentration is 0.1 mg/L.

O4.21 SCRAP CUTTING COLD FERROUS PROCESSING PLANT (CFPP) AND RECYCLING AREA SCRAP CUTTING BUILDING

O4.22 The Scrap Cutting Facilities at the Cold Ferrous Processing Plant (CFPP) and the Recycling Area Scrap Cutting Building, must be operated to prevent visible emissions of solid particles.

O5 Other operating conditions

O5.1 DREDGING OF BERTHING BOXES

O5.2 Silt curtains must be operated and maintained at the dredging sites to minimise the egress of sediment and pollutants beyond the silt curtain, including under the lower edge unless otherwise approved by the EPA.

O5.3 There must be no spillages from the dredging operation into waters outside of the silt curtains.

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O5.4 Dredge spoil may only be stockpiled at the “Alliance and Recycling Area” (21 Area) subject to the dredge spoil being stockpiled on an impervious sealed pad with a water collection and treatment facility to the satisfaction of the EPA.

5 Monitoring and Recording Conditions

M1 Monitoring records

- M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.
- M1.2 All records required to be kept by this licence must be:
- a) in a legible form, or in a form that can readily be reduced to a legible form;
 - b) kept for at least 4 years after the monitoring or event to which they relate took place; and
 - c) produced in a legible form to any authorised officer of the EPA who asks to see them.
- M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence:
- a) the date(s) on which the sample was taken;
 - b) the time(s) at which the sample was collected;
 - c) the point at which the sample was taken; and
 - d) the name of the person who collected the sample.

M2 Requirement to monitor concentration of pollutants discharged

- M2.1 For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:
- M2.2 Air Monitoring Requirements

POINT 2

Pollutant	Units of measure	Frequency	Sampling Method
Opacity	percent Opacity	Continuous	Method approved in writing by the Authority
Solid Particles	milligrams per normalised cubic metre	Quarterly	TM-15

POINT 8,9

Pollutant	Units of measure	Frequency	Sampling Method
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Solid Particles	milligrams per normalised cubic metre	Yearly	TM-15
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POINT 18

Pollutant	Units of measure	Frequency	Sampling Method
Hydrogen Sulfide	milligrams per cubic metre	Yearly	TM-5

POINT 30

Pollutant	Units of measure	Frequency	Sampling Method
Solid Particles	milligrams per cubic metre	Yearly	TM-15

POINT 40

Pollutant	Units of measure	Frequency	Sampling Method
Cadmium	milligrams per cubic metre	Yearly	TM-12, TM-13 & TM-14
Carbon dioxide	percent	Yearly	TM-24
Carbon monoxide	milligrams per cubic metre	Yearly	TM-32
Dry gas density	kilograms per cubic metre	Yearly	TM-23
Mercury	milligrams per normalised cubic metre	Yearly	TM-12, TM-13 & TM-14
Moisture	percent	Yearly	TM-22
Molecular weight of stack gases	grams per gram mole	Yearly	TM-23
Nitrogen Oxides	milligrams per cubic metre	Yearly	TM-11
Oxygen (O ₂)	percent	Yearly	TM-25
Solid Particles	milligrams per cubic metre	Yearly	TM-15
Sulphur dioxide	milligrams per cubic metre	Yearly	TM-4
Temperature	degrees Celsius	Yearly	TM-2
Type 1 and Type 2 substances in aggregate	milligrams per cubic metre	Yearly	TM-12, TM-13 & TM-14
Velocity	metres per second	Yearly	TM-2
Volumetric flowrate	cubic metres per second	Yearly	TM-2

POINT 105

Pollutant	Units of measure	Frequency	Sampling Method
Nitrogen Oxides	milligrams per cubic metre	Yearly	TM-11
Solid Particles	milligrams per cubic metre	Yearly	TM-15

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POINT 106

Pollutant	Units of measure	Frequency	Sampling Method
Solid Particles	milligrams per cubic metre	Yearly	TM-15

POINT 107

Pollutant	Units of measure	Frequency	Sampling Method
Arsenic	milligrams per cubic metre	Special Frequency 1	TM-12, TM-13 & TM-14
Cadmium	milligrams per cubic metre	Special Frequency 1	TM-12, TM-13 & TM-14
Carbon dioxide	percent	Special Frequency 1	TM-24
Chromium (hexavalent)	milligrams per cubic metre	Special Frequency 2	OM-4
Dioxins & Furans	nanograms per cubic metre	Special Frequency 1	TM-18
Dry gas density	kilograms per cubic metre	Special Frequency 1	TM-23
Fine Particulates	milligrams per cubic metre	Special Frequency 1	OM-5
Flow	cubic metres per second	Quarterly	TM-2
Hydrogen chloride	milligrams per cubic metre	Special Frequency 1	TM-8
Hydrogen fluoride	milligrams per cubic metre	Special Frequency 1	TM-8
Lead	milligrams per cubic metre	Special Frequency 1	TM-12, TM-13 & TM-14
Manganese	milligrams per cubic metre	Special Frequency 1	TM-12, TM-13 & TM-14
Moisture content	percent	Special Frequency 1	TM-22
Molecular weight of stack gases	grams per gram mole	Special Frequency 1	TM-23
Nickel	milligrams per cubic metre	Special Frequency 1	TM-12, TM-13 & TM-14
Nitrogen Oxides	milligrams per cubic metre	Quarterly	TM-11
Oxygen (O2)	percent	Special Frequency 1	TM-25
Solid Particles	milligrams per cubic metre	Special Frequency 1	TM-15
Sulfuric acid mist and sulfur trioxide (as SO3)	milligrams per cubic metre	Special Frequency 1	TM-3
Sulphur dioxide	milligrams per cubic metre	Quarterly	TM-4
Temperature	degrees Celsius	Special Frequency 1	TM-2
Total Solid Particles	milligrams per cubic metre	Continuous	Method approved in writing by the Authority
Velocity	metres per second	Special Frequency 1	TM-2
Volumetric flowrate	cubic metres per second	Special Frequency 1	TM-2

POINT 113

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Pollutant	Units of measure	Frequency	Sampling Method
Nitrogen Oxides	milligrams per cubic metre	Yearly	TM-11

POINT 118

Pollutant	Units of measure	Frequency	Sampling Method
Solid Particles	milligrams per normalised cubic metre	Yearly	TM-15

POINT 120

Pollutant	Units of measure	Frequency	Sampling Method
Cadmium	milligrams per cubic metre	Yearly	TM-12, TM-13 & TM-14
Carbon dioxide	percent	Yearly	TM-24
Carbon monoxide	milligrams per cubic metre	Yearly	TM-32
Dry gas density	kilograms per cubic metre	Yearly	TM-23
Mercury	milligrams per cubic metre	Yearly	TM-12, TM-13 & TM-14
Moisture	percent	Yearly	TM-22
Molecular weight of stack gases	grams per gram mole	Yearly	TM-23
Nitrogen Oxides	milligrams per cubic metre	Yearly	TM-11
Oxygen (O ₂)	percent	Yearly	TM-25
Solid Particles	milligrams per cubic metre	Yearly	TM-15
Sulphur dioxide	milligrams per cubic metre	Yearly	TM-4
Temperature	degrees Celsius	Yearly	TM-2
Type 1 and Type 2 substances in aggregate	milligrams per cubic metre	Yearly	TM-12, TM-13 & TM-14
Velocity	metres per second	Yearly	TM-2
Volumetric flowrate	cubic metres per second	Yearly	TM-2

POINT 138,139

Pollutant	Units of measure	Frequency	Sampling Method
Dry gas density	kilograms per cubic metre	Every 2 years	TM-23
Moisture content	percent	Every 2 years	TM-22
Molecular weight of stack gases	grams per gram mole	Every 2 years	TM-23
Nitrogen Oxides	milligrams per cubic metre	Every 2 years	TM-11
Oxygen (O ₂)	percent	Every 2 years	TM-25

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Temperature	degrees Celsius	Every 2 years	TM-2
Velocity	metres per second	Every 2 years	TM-2
Volumetric flowrate	cubic metres per second	Every 2 years	TM-2

POINT 141,152

Pollutant	Units of measure	Frequency	Sampling Method
Benzene	parts per billion	Special Frequency 3	Method approved in writing by the Authority
Fine Particulates	milligrams per cubic metre	Continuous	Other Approved Method 1
Particulates - Deposited Matter	grams per square metre per month	Monthly	AM-19
Polycyclic aromatic hydrocarbons	nanograms per cubic metre	Special Frequency 3	Method approved in writing by the Authority

POINT 141,152,153

Pollutant	Units of measure	Frequency	Sampling Method
Iron	micrograms per cubic metre	Special Frequency 3	AM-15
Lead	micrograms per cubic metre	Special Frequency 3	AM-15
Total suspended particles	micrograms per cubic metre	Special Frequency 3	AM-15
Type 1 and Type 2 substances in aggregate	micrograms per cubic metre	Quarterly	TM-12, TM-13 & TM-14
Zinc	micrograms per cubic metre	Special Frequency 3	AM-15

Note: All methods are as specified in the "Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales" and all monitoring must be conducted strictly in accordance with the requirements outlined in this document.

M2.3 For the purposes of the table(s) above;

- Special Frequency 1 means "Quarterly in duplicate".
- Special Frequency 2 means "Yearly in duplicate".
- Special Frequency 3 means for a 24 hour period each six days.
- Points 40, 47 and 120 - emissions must be reported under the reference conditions Dry, 273K, 101.3 kPa and 7 per cent oxygen.
- Point 18 - Sample collection using TM 5 must be per BSL procedure "MA-LABS-AQ-01 Section 217: Sampling For Hydrogen Sulphide From Stationary Sources Impingement Method". This procedure has been approved by the EPA.
- Point 18 - The EPA proposes to review the H₂S monitoring data set and consider ongoing limit and monitoring conditions by June 2017. This review will be undertaken in consultation with BSL.
- Point 107 – The averaging period for SO₂ and NO_x for testing purposes is one hour.
- Other Approved Method 1 means AM-22 or other method approved in writing by the Authority.

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- i) Point 138, 139 should be read as "Point 138 or Point 139" as per the notes listed in table P1.1.
- j) Point 141 and Point 152 weather monitoring must record wind speed, wind direction, and the standard deviation of wind directions.

Note: In situations where routine ambient air monitoring falls on a Public Holiday, the sampling event may be undertaken on the next regular business day.

M2.4 Transition to the Revised Ambient Air Monitoring Network

Aim

The transitional arrangements described in this condition;

- a) provide a period of adjustment to enable a smooth transition from the existing ambient monitoring requirements to the revised ambient air monitoring requirements and;
- b) ensure the licensee can change from the existing air monitoring network to the revised ambient air monitoring, and not be in non-compliance with EPL requirements

Requirements

The transitional arrangements for implementation of the revised ambient air monitoring network approved by notice 1535425 are as follows:

- a) The licensee must construct, commission and operate the revised ambient air monitoring network as soon as practicable after the issue date of this notice;
- b) The licensee is not taken to be in non-compliance with the ambient air monitoring requirements of this license during a defined change over period from the existing air monitoring program to the revised air monitoring program. The defined change over period is from the date of this notice for a period of 4 weeks unless otherwise agreed in writing by the EPA;
- c) During the defined change over period, the licensee must carry out ambient air monitoring, as far as practicable, to maximise the obtaining of monitoring data required by this licence;
- d) The licensee must confirm in writing to the EPA when the revised air monitoring network is constructed, commissioned and operating per the requirements of this licence.

M2.5 Water and/ or Land Monitoring Requirements

POINT 78

Pollutant	Units of measure	Frequency	Sampling Method
pH (Wet)	pH	Special Frequency 6	Grab sample
TSS (Wet)	milligrams per litre	Special Frequency 6	Grab sample

POINT 79

Pollutant	Units of measure	Frequency	Sampling Method
Ammonia	milligrams per litre	Every 8 days	Grab sample
Cyanide	milligrams per litre	Every 8 days	Grab sample
Filterable iron	milligrams per litre	Every 8 days	Grab sample
Oil and Grease	milligrams per litre	Every 8 days	Grab sample
pH	pH	Every 8 days	Grab sample
Temperature	degrees Celsius	Every 8 days	Grab sample

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Total Iron	milligrams per litre	Every 8 days	Grab sample
Total suspended solids	milligrams per litre	Every 8 days	Grab sample
Total Zinc	milligrams per litre	Every 8 days	Grab sample

POINT 80

Pollutant	Units of measure	Frequency	Sampling Method
Cyanide	milligrams per litre	Special Frequency 10	Grab sample
pH	pH	Special Frequency 10	Grab sample

POINT 82,83

Pollutant	Units of measure	Frequency	Sampling Method
Cyanide	milligrams per litre	Special Frequency 9	Grab sample

POINT 85

Pollutant	Units of measure	Frequency	Sampling Method
Oil and Grease	milligrams per litre	Special Frequency 7	Grab sample
pH	pH	Special Frequency 7	Grab sample
Temperature	degrees Celsius	Special Frequency 7	Grab sample
Total suspended solids	milligrams per litre	Special Frequency 7	Grab sample

POINT 87

Pollutant	Units of measure	Frequency	Sampling Method
Ammonia	milligrams per litre	Every 8 days	Grab sample
Cyanide	milligrams per litre	Every 8 days	Grab sample
Filterable iron	milligrams per litre	Every 8 days	Grab sample
Lead	milligrams per litre	Every 8 days	Grab sample
Mercury	micrograms per litre	Every 8 days	Grab sample
pH	pH	Every 8 days	Grab sample
Temperature	degrees Celsius	Every 8 days	Grab sample
Total Iron	milligrams per litre	Every 8 days	Grab sample
Total suspended solids	milligrams per litre	Every 8 days	Grab sample

POINT 88

Pollutant	Units of measure	Frequency	Sampling Method
Ammonia	milligrams per litre	Special Frequency 7	Grab sample
Cyanide	milligrams per litre	Special Frequency 7	Grab sample
Oil and Grease	milligrams per litre	Special Frequency 7	Grab sample
pH	pH	Special Frequency 7	Grab sample

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Temperature	degrees Celsius	Special Frequency 7	Grab sample
Total suspended solids	milligrams per litre	Special Frequency 7	Grab sample
Total Zinc	milligrams per litre	Special Frequency 7	Grab sample

POINT 89

Pollutant	Units of measure	Frequency	Sampling Method
Ammonia	milligrams per litre	Special Frequency 11	Grab sample
Copper	milligrams per litre	Special Frequency 11	Grab sample
Cyanide	milligrams per litre	Special Frequency 11	Grab sample
Filterable iron	milligrams per litre	Special Frequency 11	Grab sample
Fluoride	milligrams per litre	Special Frequency 11	Grab sample
pH	pH	Special Frequency 11	Grab sample
Temperature	degrees Celsius	Special Frequency 11	Grab sample
Total Iron	milligrams per litre	Special Frequency 11	Grab sample
Total suspended solids	milligrams per litre	Special Frequency 11	Grab sample
Total Zinc	milligrams per litre	Special Frequency 11	Grab sample

POINT 135

Pollutant	Units of measure	Frequency	Sampling Method
Ammonia	milligrams per litre	Special Frequency 8	Grab sample
pH	pH	Special Frequency 8	Grab sample
Temperature	degrees Celsius	Special Frequency 8	Grab sample

M2.6 For the purposes of the table(s) above:

- Special Frequency 6 means daily during any non-permitted discharge as defined in condition L4.1. In the event monitoring does not occur, the licensee must advise the Environment Protection Authority and provide justification of why monitoring was not undertaken.
- Special Frequency 7 means 24 representative grab samples per year. Samples must be taken a minimum of 15 days apart.
- Special Frequency 8 means three samples are to be taken annually as follows:
 - 1 sample in Licence Quarter 1
 - 1 sample in Licence Quarter 3
 - 1 sample following a rainfall event of more than 10mm in a 24 hour period (if this condition is met). This sample may be taken at any other time during the Licence Period
 - All samples are to be taken within 2 hours either side of a low tide.
- Special Frequency 9 means quarterly grab samples. Samples must be taken a minimum of 80 days apart.
- Special Frequency 10 means 6 representative grab samples per year. Samples must be taken a minimum of 50 days apart.
- Special Frequency 11 means daily during a dry weather discharge. In the event monitoring does not occur, the licensee must advise the EPA and provide justification of why monitoring was not undertaken.

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Note: In situations where routine water sampling falls on a Public Holiday, the sampling event may be undertaken on the next regular business day.

Note: Prior to the end of commissioning of the Spent Pickle Liquor Project, EPA will add lead, nitrates, nitrites, phosphates, total nitrogen, and total phosphorous monitoring to the Iron Making East Drain discharge (Point 89). Point 89 monitoring requirements will also apply to the new monitoring point, *No 4 Blast Furnace Thickener discharge*, to be added prior to the completion of commissioning.

M3 Testing methods - concentration limits

- M3.1 Monitoring for the concentration of a pollutant emitted to the air required to be conducted by this licence must be done in accordance with:
- a) any methodology which is required by or under the Act to be used for the testing of the concentration of the pollutant; or
 - b) if no such requirement is imposed by or under the Act, any methodology which a condition of this licence requires to be used for that testing; or
 - c) if no such requirement is imposed by or under the Act or by a condition of this licence, any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place.

Note: The *Protection of the Environment Operations (Clean Air) Regulation 2010* requires testing for certain purposes to be conducted in accordance with test methods contained in the publication "Approved Methods for the Sampling and Analysis of Air Pollutants in NSW".

- M3.2 Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.

M4 Testing methods - load limits

Note: Division 3 of the *Protection of the Environment Operations (General) Regulation 2009* requires that monitoring of actual loads of assessable pollutants listed in L2.2 must be carried out in accordance with the relevant load calculation protocol set out for the fee-based activity classification listed in the Administrative Conditions of this licence.

M5 Environmental monitoring

- M5.1 The licensee is required to install and maintain a rainfall depth measuring device.
- M5.2 Rainfall at the premises must be measured and recorded in millimetres per 24 hour period, at the same time each day.

Note: The rainfall monitoring data collected in compliance with M4 can be used to determine compliance with L3.5.

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M6 Recording of pollution complaints

- M6.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.
- M6.2 The record must include details of the following:
- a) the date and time of the complaint;
 - b) the method by which the complaint was made;
 - c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
 - d) the nature of the complaint;
 - e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
 - f) if no action was taken by the licensee, the reasons why no action was taken.
- M6.3 The record of a complaint must be kept for at least 4 years after the complaint was made.
- M6.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M7 Telephone complaints line

- M7.1 The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.
- M7.2 The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.
- M7.3 The preceding two conditions do not apply until 3 months after: the date of the issue of this licence.

M8 Requirement to monitor volume or mass

- M8.1 For each discharge point or utilisation area specified below, the licensee must monitor:
- a) the volume of liquids discharged to water or applied to the area;
 - b) the mass of solids applied to the area;
 - c) the mass of pollutants emitted to the air;
- at the frequency and using the method and units of measure, specified below.

POINT 78

Frequency	Unit of Measure	Sampling Method
Daily	kilolitres per day	Weir structure and level sensor

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POINT 79

Frequency	Unit of Measure	Sampling Method
Daily	kilolitres per day	Ultrasonic flow meter

POINT 80

Frequency	Unit of Measure	Sampling Method
Daily	kilolitres per day	Weir structure and level sensor

POINT 82

Frequency	Unit of Measure	Sampling Method
Daily	kilolitres per day	Level sensor and continuous logger

POINT 83

Frequency	Unit of Measure	Sampling Method
Daily	kilolitres per day	Weir structure and level sensor

POINT 85

Frequency	Unit of Measure	Sampling Method
Daily	kilolitres per day	Ultrasonic flow meter

POINT 87

Frequency	Unit of Measure	Sampling Method
Daily	kilolitres per day	Weir structure and level sensor

POINT 88

Frequency	Unit of Measure	Sampling Method
Daily	kilolitres per day	Level sensor and continuous logger

POINT 89

Frequency	Unit of Measure	Sampling Method
Daily	kilolitres per day	Weir structure and level sensor

M8.2 *POINT 107 – Sinter Plant Waste Gas Cleaning Plant Stack Mass Load Monitoring*
The following pollutants shall have their mass load determined at Point 107:

Pollutant	Unit of Measure
Fine Particulates	Tonnes/annum
Coarse Particulates	Tonnes/annum
Sulphur oxides	Tonnes/annum

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Volatile organic compounds	Tonnes/annum
Nitrogen oxides	Tonnes/annum
Benzo(a)pyrene	Tonnes/annum
Benzene	Tonnes/annum

M8.3 POINT 89 – Ironmaking East Drain Mass Load Monitoring

The following pollutants shall have their mass load determined at Point 89:

Pollutant	Unit of Measure
Total suspended solids	Tonnes/annum
Total zinc	Tonnes/annum

Note: The above conditions relating to mass load monitoring of emissions from Point 107 and 89 originated from the SMERP.

M9 Other monitoring and recording conditions

M9.1 AVAILABILITY OF EQUIPMENT FOR ALL MONITORING REQUIRED BY THIS LICENCE

All continuous monitoring equipment must be operated and maintained with the aim of achieving 100% availability in each licence year. Where a monitoring device does not achieve 95% availability, the licensee will report reasons and corrective actions taken to the EPA annually.

Coke Ovens Daily Emission Survey required by Operating Conditions of this Licence:

For the Coke Ovens daily visible emissions survey, results shall be obtained in accordance with O4 at all times, apart from times when the surveys can not be carried out due to circumstances beyond the licensee's control.

M9.2 VIDEO RECORDING OF SITE AIR EMISSIONS

The licensee must operate and maintain video surveillance cameras capable of continuously monitoring and recording emissions from the licensed premises as detailed in the table below.

Operating Area	Location	View	Date Storage Capacity
Cokemaking	No.4 Coke Ovens Battery bunker	No.5 Coke Ovens Battery oven tops	Three months
Cokemaking	No.6 Coke Ovens Battery West bunker	No.6 Coke Ovens Battery oven tops	Three months
Cokemaking	No.7 Coke Ovens Battery bunker	No.7 Coke Ovens Battery oven tops	Three months
Cokemaking	No.4 Coke Ovens Battery bunker	All waste heat stacks and quencher stacks	Three months
Slabmaking	B-02 Switch Room	Looking east over BOS slag pits and access road	Three months
Slabmaking	B-02 Switch Room	Looking north over Rubble Pit	Three months

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Slabmaking	East of BOS Control Rooms	Looking north over kish pots	Three months
Slabmaking	Woodpecker Platform	Looking north over Torpedo Slag Raking and Neck Dressing Station	Three months
Ironmaking - No.5 Blast Furnace	Coke Ovens Gas pipeline	No.5 Blast Furnaces cast house rooves	Three months
Sitewide	Administration Building	Cokemaking, Ironmaking, Sinter Plant and Slabmaking	Three months
Steelmaking	Allans Creek adjacent to the junction of Allans Creek Road and Iron Ore Road	BOS waste gas flare stacks	Three months
Slabmaking	#1 BOS waste gas flare stacks	BOS Roof Emission	Three months of infra-red still pictures from each alarm event.
Recycling Area	Recycling Area Roundabout	ASMS Crushing & Screening	Three months
Recycling Area	Recycling Area Roundabout	ASMS Metal Recovery	Three months
Recycling Area	ASMS Maintenance Building	Crushing & Screening	Three months
Recycling Area	ASMS Maintenance Building	Metal Recovery	Three months
Recycling Area	North Wall	Southwest over BPA2 & MRP	Three months
Recycling Area	North Wall	Southeast over BPA1 & BPA3	Three months
Recycling Area	Recycling Area Roundabout	North over 21A & 21B (program tour)	Three months

M9.3 AMBIENT DUST MONITORING

The licensee must operate and maintain ambient dust monitors capable of continuously monitoring and recording particulate emissions from the licensed premises as detailed in the table below.

Operating Area	Location	Equipment	Install Date
Alliance and Recycling Area	North-eastern end of area near north end of SCE Road	TES 7200F Fixed Dust Monitoring System	2017
Alliance and Recycling Area	Near roundabout on Recycling Road	TES 7200F Fixed Dust Monitoring System	2017
Alliance and Recycling Area	Southern end of area on south side of Allans Creek	TES 7200F Fixed Dust Monitoring System	2019

Note: The number and locations of air monitors is likely to change over time based on operational and environmental factors.

6 Reporting Conditions

R1 Annual return documents

R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:

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1. a Statement of Compliance,
2. a Monitoring and Complaints Summary,
3. a Statement of Compliance - Licence Conditions,
4. a Statement of Compliance - Load based Fee,
5. a Statement of Compliance - Requirement to Prepare Pollution Incident Response Management Plan,
6. a Statement of Compliance - Requirement to Publish Pollution Monitoring Data; and
7. a Statement of Compliance - Environmental Management Systems and Practices.

At the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.

R1.2 An Annual Return must be prepared in respect of each reporting period, except as provided below.

Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.

- R1.3 Where this licence is transferred from the licensee to a new licensee:
- a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and
 - b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

Note: An application to transfer a licence must be made in the approved form for this purpose.

- R1.4 Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on:
- a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or
 - b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.

R1.5 The Annual Return for the reporting period must be supplied to the EPA via eConnect *EPA* or by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').

- R1.6 Where the licensee is unable to complete a part of the Annual Return by the due date because the licensee was unable to calculate the actual load of a pollutant due to circumstances beyond the licensee's control, the licensee must notify the EPA in writing as soon as practicable, and in any event not later than the due date. The notification must specify:
- a) the assessable pollutants for which the actual load could not be calculated; and
 - b) the relevant circumstances that were beyond the control of the licensee.

R1.7 The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.

- R1.8 Within the Annual Return, the Statements of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:
- a) the licence holder; or

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b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

R2 Notification of environmental harm

Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.

R2.1 Notifications must be made by telephoning the Environment Line service on 131 555.

R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

R3 Written report

R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:

- a) where this licence applies to premises, an event has occurred at the premises; or
- b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence, and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.

R3.2 The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.

R3.3 The request may require a report which includes any or all of the following information:

- a) the cause, time and duration of the event;
- b) the type, volume and concentration of every pollutant discharged as a result of the event;
- c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;
- d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
- e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
- f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and
- g) any other relevant matters.

R3.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

R4 Other reporting conditions

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R4.1 When the Annual Return is provided to the EPA, the licensee must also provide an *'Annual Monitoring Report'*.

Note: This report must provide the information that was previously provided quarterly under conditions R4, R4.1, R4.2 and R4.3.

The *'Annual Monitoring Report'* must be presented in a format agreed with the EPA and comprise:

a) data from any monitoring required by the conditions of this licence, grouped under the headings M2 *'Requirement to monitor concentration of pollutants discharged'*, M4 *'Environmental Monitoring'*, M5 *'Weather Monitoring'*, M8 *'Requirement to monitor volume or mass'*, M9 *'Other Monitoring and Recording Condition'*, and Special Condition E1 *'Approval for Alternative Standard of concentration for Hydrogen Sulphide Emissions'*.

b) data from any monitoring required by Conditions: *'O4.5 - Coke Ovens'*, *'O4.10 -BOS Roof Emissions'*, *'O4.13 BOS Kish Tipping'*, *'O4.14 Hot Metal Pouring'*, *'O4.17 - SRG Venting'*, and *'O4.19 Biosperse 485 Biocide'*.

c) other monitoring data required by this licence as requested by the EPA

d) any additional data as requested by the EPA

e) reasons for any non-compliance/s and omitted results, together with actions taken to prevent a recurrence of any non-compliance or omitted results.

f) data from any new source coal(s) used in the Pulverised Coal Injection (PCI) facility over the previous reporting year. This data must include laboratory analysis of primary physical and chemical characteristics of the new source coal(s) to show they are consistent with other approved PCI coals. That is, moisture content, ash, volatile matter, fixed carbon, total sulphur, phosphorous, calorific value and trace metal concentrations (POEO Clean Air Regulation, Type I and Type II substances).

g) For Acetylene gas Lime Slurry Diverted to Alliance and Recycling Lime Pits:

i) The licensee must report to EPA in the Annual Return the total volume of lime slurry diverted to the Alliance and Recycling Lime Pits.

ii) The information must include a graph showing a comparison of the previous years.

R4.2 Publication of Fine Particle and Weather Monitoring Data

By 1 June 2016 monitoring data from ambient fine particle monitoring (TEOMs (PM10)) and weather stations must be available in real time on a publically accessible web site in a format approved by the EPA.

Note: In establishing the web site, the licensee should consider the publishing requirements listed in EPA Requirements For Publishing Pollution Monitoring Data

R4.3 Ambient Air Monitoring Network Report

When the Annual Return is provided to the EPA, the licensee must also provide an *'Ambient Air Monitoring Network Report'*. The report must include the following information for the relevant reporting period:

a) summarised or graphically presented ambient air quality monitoring results assessed against relevant air quality standards and criteria;

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- b) comparison of licensee air quality data against other air quality data (e.g. OEH stations / ANSTO monitoring);
- c) presentation of long term trends;
- d) a narrative of a-c above, and
- e) a quality assurance statement.

R4.4 Ambient Air Monitoring Network Reviews

- a) By 1 December 2016 the licensee must submit a review of the Ambient Air Monitoring Network.
 - i) The review must assess all elements of the program including the number of monitors, locations, adequacy of the instrumentation to undertake the monitoring, the availability of more contemporary monitoring / analytical methods, monitoring frequency, pollutants monitored, and also propose a review frequency.
 - ii) In reviewing the pollutants monitored the process must include but may not be limited to:
 - a. the inclusion of PM_{2.5} and sulphur oxides into the network;
 - b. the premises contribution to the total pollutant load to the local air shed using contemporary emissions inventories (e.g. the NSW EPA emissions inventory database and the National Pollutant Inventory); and
 - c. other monitoring undertaken in the Port Kembla area (including e.g. ANSTO, Dustrak, OEH monitoring station).
- b) By 1 December 2018, the licensee must submit an Independent Peer Review of the Ambient Air Monitoring Network. The review must be undertaken by an independent, suitably qualified & experienced third party approved by the EPA. The scope of the peer review and the reviewer must be approved by the EPA in advance. The peer review must assess the items listed in (i) and (ii) above and include comments, recommendations, and a statement on the adequacy of the review.

Submitted 30 November 2018 (DOC18/925169-1)

R4.5 Reporting Colour of Water Discharge

A change of colour in any waters does not need to be reported as a non-compliance. Whenever the licensee detects an abnormal colour change, a sample should be taken and analysed for the parameters applying at the discharge point to determine if there has been a licence breach. If a licence breach is not revealed by the analysis of the sample then there is no need to report it in the Statement of Compliance.

7 General Conditions

G1 Copy of licence kept at the premises or plant

- G1.1 A copy of this licence must be kept at the premises to which the licence applies.
- G1.2 The licence must be produced to any authorised officer of the EPA who asks to see it.
- G1.3 The licence must be available for inspection by any employee or agent of the licensee working at the premises.

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G2 Other general conditions

G2.1 Completed pollution studies and reduction programs

PRP Number	Title	Completion Date	Completed
1a	Coke ovens wastewater treatment plant	Dec-91	Yes
2a	Install de-kish facility	Sep-91	Yes
3a	Wastewater collection system for No1 and 2 ET lines	Jun-91	Yes
4a	Installation of truckwash facilities	Dec-91	Yes
5a	Install Hoogovens charging machines	Dec-93	Yes
6a	No 5 cast house dedusting facility	Jun-91	Yes
7a	Coke stockpile water spray system	Dec-91	Yes
8a	21 area fume collection and filtration system	May-91	Yes
1	Coal washeries water treatment plant	Jun-92	Yes
2	Investigation of coke ovens by products vapour recovery system	Jun-92	Yes
3	Automatically controlled spray system at no 4 coal stockpile area	Dec-92	Yes
4	Investigation of control of coke pushing and quenching emissions	Dec-93	Yes
5	Control system for No4, 5, 6 coke ovens battery	Dec-98	Yes
6	Install stormwater pollution control at coal storage areas	Dec-95	Yes
7	Install spillage controls at coke ovens by-products area	Jun-96	Yes
8	Hoogovens charging machines installation at 3, 4, 6 batteries	Jun-94	Yes
9	Automatically operated dust controls at F50, F51, F55, F24, and F27 conveyors	Jun-92	Yes
10	Install lime slaking and hosing system at No 4 blast furnace	Dec-92	Yes
11	Install recirculated closed water system at No 5 slag granulator	Jun-92	Yes

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12	Install stormwater pollution controls at raw materials handling yards	Jun-94	Yes
13	No 2 and 4 blast furnace air and water pollution programs	Dec-92	Yes
14	Lime kiln bag filtration system	Jun-93	Yes
15	Dust collection and filtration system installation at No 5 blast furnace stockhouse	Jun-96	Yes
16	Hot strip mill oil / water separators	Jun-92	Yes
17	Continuous pH monitoring at Continuous annealing / electrofinning lines	Jun-92	Yes
18	Monitoring equipment upgrade at electrofinning lines	Dec-92	Yes
19	Installation of bunding, pumping and drainage works in Tin Mill area	Dec-93	Yes
20	Installation of 21 area truck wash	Dec-91	Yes
21	Comprehensive hydrological and groundwater study at 21 area	Dec-92	Yes
22	Comprehensive hydrological and groundwater study proposal at 21 area	Dec-91	Yes
23	Proposal to prevent iron dumping	Dec-92	Yes
24	Sealing and landscaping of unsealed plant areas	Dec-96	Yes
25	Completion of a proposal for sealing and landscaping of unsealed plant areas	Dec-92	Yes
26	Installation of an oil spill and collection system at North Gate Drain	Jun-92	Yes
27	Requirement to cease land disposal of oily waste	Dec-92	Yes
28	Connection of all sewage to water board sewage system	Dec-93	Yes
29	Wastewater treatment of all waste acids, alkalis, chromium bearing wastewaters and waste oils.	Dec-93	Yes
30	Investigation of offensive noise sources from premises	Dec-93	Yes
31	Proposal for a system to minimise slag odours during transport to 21 Area	Jun-93	Yes

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32	Investigations for future treatment and reuse of the discharge from 21 Area	Jun-93	Yes
33	Investigation of improved denitrification from the Coke Ovens wastewater treatment plant	Dec-93	Yes
34	Review of PAH monitoring to establish criteria for future monitoring program	Jun-93	Yes
35	Investigation of sources and treatment options of cyanide, ammonia, and phenol containing wastewater to Main Drain	Jun-93	Yes
36	Investigations to control chromium discharges into the Slab Caster Drain	May-93	Yes
37	Report of achievable emissions reductions from coke ovens monitoring program	Jun-93	Yes
38	Investigation of operational measures to obtain 32% opacity from sinter plant stack	Feb-93	Yes
39	Investigations to decommission halon fire fighting systems	Jun-93	Yes
40	Submission of a report to ensure compliance with condition 67	Jun-93	Yes
41	Investigate and submit a report on methods to desilt Main Drain so NFR levels do not exceed 50 mg/L	Jun-93	Yes
42	Installation of flow equalisation tanks for COG compression plant effluent prior to treatment in the coke ovens wastewater treatment plant.	Jun-93	Yes
43	Installation of 4th and 5th kish pot spraying position.	Sep-93	Yes
44	Investigation of sources and implementation of methods to achieve 80 mg/L NFR in Ironmaking east drain	Feb-94	Yes
45	Proposal of a study to investigate levels of NFR, oil and grease, and flow from all licensed discharge points	Mar-94	Yes

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46	Investigation of technologies to contain treat, or otherwise dispose of hydrogen cyanide from the ammonia absorber circulating tanks other than venting to atmosphere.	Apr-95	Yes
47	Installation of water reuse tanks to prevent discharges to Main Drain	Jan-95	Yes
48	Investigate installation of savealls for No 3 ore loader to prevent spillage.	Feb-95	Yes
49	Investigate and report of all effluent streams that could be diverted to Water Reuse Tanks at the industrial water system	Jan-95	Yes
50	Report on conversion to salt water granulation at No 2 blast furnace	Feb-96	Yes
51	Conduct an indicative health risk assessment of coke ovens batteries and associated by-product operations.	Sep-96	Yes
52	Investigate quality of slab caster water treatment plant sludges and assess their suitability for reuse.	Dec-96	Yes
53	Upgrade of Sinter Plant	Dec-02	Yes
54	Gas Cleaning System at No 5 Blast Furnace	Dec-01	Yes
55	Hydrogen Sulfide Emissions from No 5 Blast Furnace	Dec-98	Yes
56	Jet Condenser Water Cooling System	Dec-99	Yes
57	Emission Reductions Program for Gas Processing	Dec-98	Yes
58	Upgrade Basic Oxygen Steelmaking (BOS) Off Gas (OG) System	Dec-01	Yes
59	No PRP allocated	Not Applicable	Not Applicable
60	Water Cooling System at Temper Mill, Tin Mill, ET Lines	Jun-00	Yes
61	Eliminate Discharge of Untreated Rinse Waters	Dec-01	Yes
62	Coke Ovens Charger Car Coal Hoppers	Aug-99	Yes
63	Hot Metal Pouring Pits monitoring and reporting system	Not available	Yes
64	Initial Dilution Zone for each licensed drain discharge	Not available	Yes

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65	Monitoring program for licensed drain discharges	Not available	Yes
66	Liquid wastes passing to groundwater via rubble drains	Not available	Yes
67	Coke Oven Batteries charger cars monitoring and reporting system	Aug-00	Yes
68	Trial alternative charging philosophy	Apr-00	Yes
69	Investigation of improved hole alignment	Nov-00	Yes
70	Carbon Growth, Oven filling and charger emissions relationships	Mar-01	Yes
71	Coal Properties, Charging process and Charger emissions relationships	Sep-00	Yes
72	Analyse coal hopper sealing mechanisms	Sep-00	Yes
73	Fugitive dust control Mechanisms	Jun-00	Yes
73	Fugitive dust control Mechanisms	Jun-00	Yes
74	Baghouse Dedusting System at No 5 Blast Furnace	Jun-00	Yes
75	Boiler Light-up Process Upgrade – No 1 Power House Stacks	Dec-00	Yes
76	Install replacement to Jet Condensers at Gas Processing Plant	Mar-02	Yes
77	Liquid wastes passing to groundwater via rubble drains – Monitoring Program	Jul-01	Yes
78	Blank off No 2 Electrolytic Tinning Line Sump	Dec-01	Yes
79	Dust Issues – Haulage of Coal on the Kemira Valley Line	Nov-01	Yes
80	Install Stage 2A Emission Reduction Program at Gas Processing	Not available	Yes
80	Install Stage 2A Emission Reduction Program at Gas Processing	Not available	Yes
81	Install Stage 2B Emission Reduction Program at Gas Processing	Not available	Yes
82	Monitoring and Reporting of Emissions from Gas Processing	Dec-01	Yes

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83	Requirements for liquid wastes passing to groundwater via rubble drains	Not available	Yes
84	Characterise Emissions from Coke Ovens and Gas Processing	Sep-05	Yes
85	Reduction in Point Source Benzene Emission	Oct-12	Yes
86	Fugitive Emission Reduction: Light Oil Plant	Dec-04	Yes
87	Fugitive Emission reduction: Rest of Gas Processing	Dec-06	Deleted
88	Coke Ovens Fugitive Emission Standards - Reduction in limits	Jan-06	Yes
89	Coke Ovens Waste Heat Stack Emission Assessment and Reduction	Jan-05	Yes
90	Prepare a Report on Air Emission Points and Stack Testing Facilities	June-03	Yes
91	Prepare and Implement a Stack Testing Program	Dec-03	Yes
92	Management of Hot Metal Dumping to Minimize Kish Emissions	Dec-03	Yes
93	Performance Audit of Dust Generation	Jun-04	Yes
94	Dust Control for Area 21	Jun-04	Yes
95	Video Surveillance Monitoring Program installed at Coke Making	Sep-03	Yes
96	Toxicity Testing of No. 2 Blower station Drain	Dec-06	Yes
97	Investigate Contaminants in Main Drain	-	-
98	Stormwater Pollution Control – Licensed Discharge Points	Jun-05	Yes
99	Stormwater Pollution Control Plan	Jul-05	Yes
100	Noise Investigation and Abatement	Jul-11	Yes
101	Scrap Cutting – manufacturer's Performance Guarantees	Aug-03	Yes
102	Scrap Cutting Plant and Equipment Design Parameters	Aug-03	Yes
103	Scrap Cutting Contingency Management Planning	Prior to Operation	Yes

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104	SMERP Investigations for the Provision of instantaneous monitoring of Dioxin and solid particulates	Mar-04	Yes
105	SMERP Noise Monitoring of Sinter Machine Emission Reduction Plant (SMERP)	Apr-04	Yes
106	SMERP – Mass Emission Monitoring Program	Dec-07	Yes
107	SMERP – Blowdown Water Reuse Strategy	Dec-09	Yes
108	SMERP Sinter Plant Electrostatic Precipitator (ESP) Outlet Dust Load Monitoring Program	Dec-04	Yes
109	SMERP – Dioxin Pathway Monitoring Program	Dec-09	Yes
110	SMERP Sulphur Rich Gas Management Integrity Program	Oct-04	Yes
111	SMERP Compliance Monitoring Program	Dec-04	Yes
112	SMERP Effluent Characterisation Program	Jul-11	Yes
113	SMERP – Radionuclide Monitoring Program	Dec-09	Yes
114	SMERP – Waste Management Program	Jun-07	Yes
115	Investigate: Installation of flow straightening devices in the No 5 Blast Furnace Granulator Stack(s) to allow H ₂ S stack monitoring to be carried out in accordance with standard methods	Jun-04	Yes
116	Installation of flow straightening devices in No 5 Blast Furnace Granulator Stack(s) to allow Hydrogen Sulphide Monitoring to be carried out in accordance with the “Approved Methods for the sampling and Analysis of Air Pollutants in NSW”	Dec-04	Yes
117	Coke Making Risk assessment Study – to reduce the frequency of environmental incidents	Dec-05	Yes
118	Hot Strip Mill Transfer of the blowdown discharge point from the North Gate Drain to the Slab Mill Drain	Oct-04	Yes
119	Hot Strip Mill Blowdown Water Quality Improvement and Monitoring Program	May-05	Yes

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120	Hot Strip Mill Blowdown Water Treatment Assessment	May-05	Yes
121	33 kV Electrical Protection Upgrade	Dec-05	Yes
122	Investigation into the storage and reuse of dredge spoil	Jul-05	Yes
123	Briquetting BOS Filter Cake Bleed Waste	Plant not commissioned	Deleted
124	No 25 Boiler (No 2 Blower Station) and Walking Beam Furnace Post Commissioning Air Emissions Report	Nov-07	Yes
125	33 kV Protection Upgrade	-	-
126	Air pollution control upgrade to the neck dressing area	Oct-05	Yes
127	Coal Driers – Noise Compliance monitoring	Coal driers not commissioned	Deleted
127	Feasibility Study of Treating Sinter Cooler waste Gas in the Sinter Room Dedusting System	Nov-10	Yes
128	Coal Driers – Investigations into Instantaneous Monitoring of Solid Particulates from Stacks	Coal driers not commissioned	Deleted
128	Assessment of Sinter Room Dedusting System Performance as an Outcome of the Sinter Plant Upgrade.	Sep-10	Yes
129	Ground Water Remediation Plan for the south-eastern part of the Recycling Area (21 Area)	June-09	Yes
130	Noise Assessment of the Ore Preparation Plant Upgrade including the Sinter Plant Upgrade	Dec-09	Yes
131	Site Air Emissions Modelling	March - 15	Yes
132	Improved Dust Controls Area North of BOS	Jun - 13	Yes
133	Transport Related Dust and Runoff	-	-
134	Stockpile Related Dust and Runoff	Feb - 13	Yes
135	Recycling Area Revegetation	Sept-11	Yes
136	Minimise Drag Out of Sediments onto Springhill Road	Sep-10	Yes
137	Video Surveillance	May-15	Yes
138	Chemical Characterisation of Quencher Towers	-	-

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139	Coke Ovens Batteries Fugitive Emission Limit reductions	Feb-08	Yes
140	BaP Levels	-	-
141	Slag Granulation Improvements at the No.5 Blast Furnace to Reduce Hydrogen Sulphide Emissions	Dec-09	Yes
142	Investigation of site NOx emission and reduction options.	Aug-09	Yes
143	Investigations into Reuse and/or treatment of CORB	-	-
144	Investigate Main Drain Dam Installation	Jun-09	Yes
145	Review and Upgrade Site Liquid Chemical Storage	Jul-10	Yes
146	Harbour Flora and Fauna	Jun-12	Yes
147	Stormwater First Flush	Jul-11	Yes
148	Improve SW Controls to Reduce Suspended Solids Loads to Harbour	Sep-13	Yes
149	Coke Ovens Gas Mains Solids Management Plan	Mar-14	Yes
150	Elimination of Existing Septic Soak Away Treatment Systems that Present an Unacceptable Environmental Risk	Sep-09	Yes
151	Elimination of Gas Main Seal Pot Discharges that Present an Unacceptable Environmental Risk	Jun-11	Yes
152	Green and Gold Bell Frog Management Plan	Nov-11	Yes
153	Assess Air Emissions	Aug-11	Yes
154	Number Five Blast Furnace Noise Verification	Dec-09	Yes
155	Air Emissions Performance Verification	Sep-11	Yes
156	Number 6 Blast Furnace Granulator	Cancelled	Cancelled
157	Iron Pouring Pit Emissions	Dec-11	Yes
158	Flaring Emission Factors and Best Available Techniques		
159	BOS Emissions Monitoring	Jun-13	Yes
160	Priority Site Contamination Actions	Sept-12	Yes

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161	Installation of Improved Drainage in Iron Pouring Pit(s) in the Recycling Area	Oct-12	Yes
162	Installation of fixed discharge pipe at dust ponds.	Aug-12	Yes
163	Verification of BOS Roof Monitoring Method	May-14	Yes
164	Steel Furnace Slag Dust Suppression Works	Oct-13	Yes
165	Dust Monitoring and Adaptive Management Plans	May-19	Yes
166	Particulate Matter Control - Best Practice		
167	Re-profile Steel making Slag Stockpile (0-20 mm SFS)	Dec-15	Yes
168	Implement Improved Dust Controls at Granulated Blast Furnace Slag Stockpile	Oct-14	Yes
169	Stockpiled Material Environmental Risk Assessment		
170	Prioritised Stockpile Management Plan		
171	Clean Machine Program	July - 14	Yes
172	Evaluation of continuous monitoring at the Sinter Plant		
173	Changes to Coke Ovens Gas Seal Pot Configuration	March -15	Yes
175	(Pollution Study) Diversion of Iron Ore Road Drain	Feb - 15	Yes
176	(EIP) IMED Drainage Diversion Project	Aug - 17	Yes
177	Review of COG Isolation Procedures	Aug - 17	Yes
178	Investigation of Cyanide in the Slab Mill Drain	Oct - 18	Yes

Note: PRPs 1a to 8a were completed in the first Five Year PRP Program.

Note: The Licensee may at any time apply to the Authority for an alteration to the undertakings or works or omission of any of the same and/or an extension of any relevant completion date.

The Authority will notify the Licensee in writing of its decision.

"Completed" means work completed.

8 Pollution Studies and Reduction Programs

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U1 PRP 166 - Particulate Matter Control - Best Practice

U1.1 Background

The licensee undertakes large scale material handling and stockpiling activities in the Alliance and Recycling (A&R) Area. These activities generate windborne dust. The licensee has a history of activities to improve elements of these activities.

Dust emissions from stockpiles can be heavy during strong winds which are common in late winter and early spring. The licensee implements a series of measure to reduce the generation of visible dust emissions including water carts and fixed sprinklers. Based on incidents in 2013 when dust emissions were heavy, and the increasing volumes of materials stored at A&R, the EPA believes the current control and monitoring measures are not adequate to achieve contemporary environmental standards. The EPA requires that dust emissions be quantified and current operations and environmental controls assessed against best practice measures for dust control.

The mining sector in NSW recently implemented a sector wide Pollution Reduction Program (PRP). This PRP draws directly from the EPA Coal Mine Particulate Matter Control Best Practice - Assessment and Report, November 2011 document but includes some modifications to account for the licensees activities. The document can be found at

<http://www.epa.nsw.gov.au/resources/air/20110813coalmineparticulate.pdf>

Requirements

Part A – Dust Emissions from Stockpiles and Stockpile Areas

1. By 15 December 2014 the licensee must submit a draft Particulate Matter Control Best Practice methodology developed in accordance with the above guideline. This baseline assessment methodology must also include, but not be limited to the following:

- a. every stockpile or every material storage area in the A&R Area;
- b. draw upon other relevant information including materials density and the storage location; and
- c. be approved in writing by the EPA.

The ranking process must also present a ranking for each stockpile or stockpile area.

Complete: 30 June 2015 (EPA document DOC14/312964-05)

Report

2. By 31 December 2015 the licensee must submit the assessment report.

Note: The draft assessment methodology and the assessment report must include peer reviews by a suitably qualified & experienced air quality consultant or specialist. Both the assessment methodology and assessment report must include comments, recommendations, and a statement from the reviewer on the adequacy of the methodology / report.

Complete: 25 October 2017 (EPA Document Number DOC17/538396).

3. By 31 January 2019 the licensee must submit an assessment report for the controls listed in the reported titled "PRP 166 Part A Assessment Report (Amended)", dated 25 October 2017.

Due Date: 31 January 2019

Complete 31 January 2019 (DOC19/75982 and DOC19/75982-2)

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U1.2 Part B – Dust Inventory

1. By 31 March 2016, the licensee must present a draft dust inventory methodology (TSP, PM10, (PM2.5 where available)). The methodology must:

- a. incorporate dust emission quantities determined in part A of this PRP with other sources at the A&R area;
- b. include, but may not be limited to the combined stockpile emission value, vehicle movements on/off paved roads, operational areas without stockpiles and heavy equipment activities (eg. bulldozer, front end loader).
- c. the vehicle movement metrics will be defined as paved and unpaved roads in the 3 key areas; Crushing & Screening Plant, Metal Recovery Process/Hot Metal Pouring Pits and BlueScope Stockpile Areas;
- d. provide a summary of previous continuous improvement assessments and activities undertaken in the area; and
- d. account for uncontrolled emissions (with no particulate control) as well as controlled emissions (with current controls in place).

By 3 months following EPA approval of the methodology the licensee must submit a report with the compiled inventory and a ranking of emission sources.

Complete: 31 August 2017 (EPA document number DOC16/113892-05).

Due Date: 1 March 2018

Note: EPA will discuss the outcomes of this PRP and possible future investigations or works with the licensee. This may include a best practice assessment of ranked emission sources, feasibility assessments of best management practices, or dust mitigation works.

U2 PRP 170 - Prioritised Stockpile Management Plan

U2.1 Background

A wide range of materials are stockpiled in the A&R area including raw materials, process and waste products. Quarterly volumetric surveys carried out by the licensee show that stockpiled quantities of some materials have increased significantly over the last 12 months.

The EPA is concerned about the environmental and legacy issues presented by the increasing volumes of materials stored at A&R. The licensee has undertaken a *Stockpiled Material Environmental Risk Assessment* which has ranked stockpiled materials, based on their environmental risk.

Aim

The aim of this PRP is to establish a management plan for all stockpiled materials based on their risk. The management options may include but not be limited to: covering individual stockpiles, moving stockpiles to internal storage, re-profiling, vegetating, removing stockpiles from A&R, relocating stockpiles within A&R, introducing more fixed sprays or water carts, implementation of specific stockpile management options, or status quo arrangements.

Requirements

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By 07 July 2020 the licensee must present a written Prioritised Management Plan for A&R Stockpiles to the EPA.

The Prioritised Management Plan must address all A&R materials. The plan must present the management option/s and the timeline to achieve the identified management options for all A&R stockpiles.

Completion Date: 07 July 2020

Note: EPA may add further conditions for the implementation of the plan and the future management of these materials to EPL via PRP or Special Condition.

U3 PRP 179 - Implement COG Water Seal Improvements

U3.1 Background

On 25 September 2016 an incident occurred, which resulted in a discharge of Coke Ovens Gas (COG) condensate from the Hot Stip Mill (HSM) to the Slab Mill Drain.

The EPA's regulatory response to this incident included the addition of 'PRP 177 - Review of COG Isolation Procedures' to EPL 6092. PRP 177 directed the licensee to provide a written report to EPA by 30 April 2017 reviewing the COG isolation procedures.

The licensee provided this report to EPA DOC17/249665.

The Risk Assessment in PRP 177 identified 6 high risk seal pots, and recommended mitigation works including secondary capture - bunding, and redirection of overflow be installed.

Aim

The aim of this PRP is to reduce the risk of identified COG Water seals across the Port Kembla Steelworks from 'High' to 'Medium'.

Stage 1

Requirements

The licensee must implement the mitigation works identified in PRP 177 at the following COG Seal Pots, which will include the following:

- | | | |
|-----|---|--|
| 17C | - | Bunding (including secondary capture) |
| 18C | - | Bunding (including secondary capture) |
| 3C | - | Bunding and redirection of overflow |
| 47C | - | Bunding or redirection of overflow to CORB |
| 48C | - | Bunding or redirection of overflow to CORB |
| 1C | - | Redirection of overflow |

COMPLETION DATE:

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1 August 2018

COMPLETE (DOC18/541590 and DOC18/541590-01)

Stage 2

Requirements

a) The licensee must recalculate the overall COG Water Seal risk ranking for all seal pots identified as 'Medium' and 'Low' risk in the 28 April 2017 PRP 177 report (DOC17/249665) and provided a written report to the EPA. This report must clearly identify if any overall risk rankings have moved from 'Medium' or 'Low' to 'High'. If any sealpots are rated as 'High' risk, a mitigation strategy must be presented, including proposed works and timeline for the proposed works.

b) The licensee must review the effectiveness of the mitigation improvements installed on COG Sealpots 17C, 18C, 3C, 47C, 48C, and 1C as part of Stage 1 of this PRP. The licensee must provide a written report re-assessing the mitigation improvement works and reassessing the risk ranking.

COMPLETION DATE:

1 December 2020

U4 PRP 180 - Expanded Dust Suppression System at the Crushing and Screening Plant

U4.1 Background

The southern area of the Alliance and Recycling (A&R) Area manages blast furnace slag. The material is prone to dust emissions during strong winds. The contracted party working on the licensed premises, Australian Steel Mill Services, has committed to upgrade the dust suppression system in the area.

Aim

To improve the coverage and effectiveness of the existing dust suppression system at the Crushing and Screening plant.

Requirements

1. By 31 March 2020 the licensee must submit a report to the EPA incorporating the project scope, engineering designs and specifications, coverage configuration, and estimated costs for an expanded dust suppression system.
2. The designs / specifications must include the relevant parameters to ensure coverage of the area (e.g. for water sprays: water pressure, nozzle selections, gun height, and water supply pipework).
3. The areas of coverage must include the northern end of Crushing and Screening Plant.
4. The system must incorporate links between real-time weather data and the dust suppression system.

By 31 December 2020 the licensee must have installed the system.

Due Date: 31 December 2020

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U5 PRP 181 - Seal Pot System Risk Assessment

U5.1 Background

As part of a response to 2 seal pot incidents near the Number 5 Blast Furnace (#5BF) in June 2019, the licensee must undertake a risk assessment for potential seal pot system discharges of condensate and assess the feasibility of addressing risks through works or other improvements.

In 2017 the licensee completed a premises-wide risk assessment for coke ovens gas water seals. Water seals are used to isolate Blast Furnace Gas (BFG) and Coke Ovens Gas (COG). Seal pots are used to manage gas condensate and facilitate periodic collection from the seal pot or from an associated collection tank.

Aim

The aim of this PRP is to assess both the environmental risk and the feasibility of mitigation works for seal pots across the Steelworks.

Requirements

By 06 March 2020, the licensee will provide a written report to the EPA that describes an assessment of the COG and BFG seal pots across Port Kembla Steelworks. The review will include but will not be limited to the following:

1. Identify all seal pots currently in use across the premises. A map must be provided showing the drain catchments and the location of the seal pots in these catchments;
2. Rank the seal pots in terms of their environmental risk. The risk ranking could be informed by factors such as:
 - Condensate type and flow
 - Location and catchment (e.g. #5BF and #2BS Drains).
 - Existing controls / protection measures (such as seal pot type, condensate tanks, inspection regime, pump out strategy, bunds, alarms, pumps etc)
 - Details of any history of uncontrolled release
3. Investigate and report on the feasibility of the alternate devices / systems / procedures that could be used at the premises to reduce this risk by considering
 - Safety
 - Environmental risk and regulatory requirements
 - Implementation costs
 - Compatibility with current and future operations
4. Generate a prioritised feasibility ranking of the improvement options for all seal pots based on 2 and 3 above.

Note: Following submission of the above report EPA proposes to meet with the licensee to discuss a works implementation schedule.

Due Date: 06 March 2020

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9 Special Conditions

E1 Approval for Alternative Standard of Concentration for Hydrogen Sulphide Emissions

E1.1 The EPA grants the occupier an approval under clause 7A of the Clean Air (Plant and Equipment) Regulation 1997 to use an alternative standard of concentration for hydrogen sulphide emissions from the processes carried out at the slag granulators located at the Number Five Blast Furnace and the Number Six Blast Furnace at the premises. This approval is subject to the following conditions:

1) This approval applies from 27 September 2001.

Provided that the occupier complies with the conditions of this approval, the occupier is exempt from the hydrogen sulphide emissions limit prescribed by clause 7 of the Clean Air (Plant and Equipment) Regulation 1997 in relation to the processes.

Failure to comply with the terms of this approval may constitute an offence, including against section 128 of the Protection of the Environment Operations Act 1997. Maximum penalty for an offence against section 128:

- a) in the case of a corporation - \$250,000 with, in the case of a continuing offence, a further penalty not exceeding \$120,000 for each day the offence continues; or
- b) in the case of an individual - \$120,000 with, in the case of a continuing offence, a further penalty not exceeding \$60,000 for each day the offence continues.

Note: This approval may be amended or revoked by the EPA by means of a written notice given to the occupier.

Note: Conditions E1.2 - E1.5 only apply while the respective blast furnace is operational.

E1.2 LIMIT CONDITIONS

For each monitoring/discharge point or utilisation area specified in the tables below (by point number), the mass rate of a pollutant discharged at that point, must not exceed the mass rate limits specified for that pollutant in the table.

Discharge Point	Pollutant	Unit of Measure	100% Limit	Averaging Period
Discharge Point 10, No.5 Blast Furnace, No.2 Slag Granulator	Hydrogen sulphide	g/s	1.2	Block average (Minimum of 15 minutes).
Discharge Point 11, No.5 Blast Furnace, No.1 Slag Granulator	Hydrogen sulphide	g/s	1.2	Block average (Minimum of 15 minutes).
Discharge Point 104, No.6 Blast Furnace Slag Granulator	Hydrogen sulphide	g/s	0.75	Block average (Minimum of 15 minutes).

E1.3 NO.6 BLAST FURNACE SLAG GRANULATOR HOURS OF OPERATION

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The occupier must not granulate slag in the Number Six Blast Furnace Slag Granulator for more than 2,628 hours in any 12 month period. This restriction in operating time relates directly to the hydrogen sulphide mass rate limit of 0.75 g/s. Should the occupier wish to be able to granulate slag in the Number Six Blast Furnace Slag Granulator in excess of 2,628 hours in any 12 month period, a new application for a new mass rate limit for hydrogen sulphide must be submitted.

E1.4 REQUIREMENT TO MONITOR MASS RATE OF POLLUTANT DISCHARGE

For each monitoring/discharge point specified below (by point number), the occupier must monitor (by sampling and obtaining results by analysis) the mass rate of discharge of each pollutant and parameter specified. The occupier must use the sampling method, units of measure and sample at the frequency, specified opposite in the other columns:

Discharge Point	Pollutant	Unit of Measure	Method	Frequency
10	Hydrogen sulphide	g/s	TM-5	Quarterly
10	Velocity	m/s	TM-2	Quarterly
10	Volumetric flow rate	m ³ /s	TM-2	Quarterly
10	Temperature	K	TM-2	Quarterly
10	Moisture	%	TM-22	Quarterly
10	Dry gas density of stack gases	kg/m ³	TM-23	Quarterly
10	Molecular weight of stack gases	g/g.mole	TM-23	Quarterly
11	Hydrogen sulphide	g/s	TM-5	Quarterly
11	Velocity	m/s	TM-2	Quarterly
11	Volumetric flow rate	m ³ /s	TM-2	Quarterly
11	Temperature	K	TM-2	Quarterly
11	Moisture	%	TM-22	Quarterly
11	Dry gas density of stack gases	kg/m ³	TM-23	Quarterly
11	Molecular weight of stack gases	g/g.mole	TM-23	Quarterly
104	Hydrogen sulphide	g/s	TM-5	Quarterly
104	Velocity	m/s	TM-2	Quarterly
104	Volumetric flow rate	m ³ /s	TM-2	Quarterly
104	Temperature	K	TM-2	Quarterly
104	Moisture	%	TM-22	Quarterly
104	Dry gas density of stack gases	kg/m ³	TM-23	Quarterly
104	Molecular weight of stack gases	g/g.mole	TM-23	Quarterly
10	Selection of sampling positions	-	TM-1	-

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11	Selection of sampling positions	-	TM-1	-
104	Selection of sampling positions	-	TM-1	-

E1.5 REQUIREMENT TO MONITOR HOURS OF OPERATION OF SLAG GRANULATORS

The occupier must monitor the total number of hours during which slag is granulated in Number Five Blast Furnace Slag Granulators.

The occupier must monitor the number of hours during which slag is granulated in Number Six Blast Furnace Slag Granulator

E2 Other Monitoring Conditions

E2.1 Review of Coke Screenhouse Dedusting Stack Emissions Performance

Background

The licence does not currently require routine monitoring at the Coke Screenhouse Dedusting Stack (Point 23). The licensee does undertake routine monitoring for Load Based Licensing reporting. Historically Point 23 has ranked highly for particulate matter emissions versus other emissions sources at the premises. A stack test undertaken following a wet scrubber modification in April 2018 showed a significant reduction in these emissions. To confirm the ongoing emissions performance of Point 23, EPA has drafted a program requiring a period of routine stack testing, a review of the collected data, and a submission from the licensee on future licensing on Point 23.

Requirements

1. The licensee must undertake stack testing for total solid particles and particulate matter less than 10 microns in size, twice a year for 3 years (6 stack tests).
2. Following the completion of the stack testing program the licensee must submit the monitoring data to EPA along with a discussion of the results and a recommendation for ongoing licensing at Point 23. On the basis of the emissions data set and the recommendation, EPA will discuss future licensing requirements at Point 23 with BSL.

Due Date: 31 December 2021

E3 Contaminated Lands Conditions

E3.1 Contamination Monitoring and Assessment Program

Background

The licensee has undertaken a number of land contamination assessment programs in the past incorporating groundwater and soil monitoring. These programs include investigations associated with EPL special condition E2 (resulting in the E2 Report submitted in 2015) and a more recent major voluntary investigation across multiple premises owned by the licensee in 2013 - 2014. Identified areas of contamination include 4 areas identified in the E2 Report and an area at the southern end of the Alliance and Recycling Area.

An extensive soil and groundwater monitoring network has been established within the premises and

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across other premises owned by the licensee (see note 1).

The aim of this condition is to:

- undertake routine monitoring and assessment across the existing monitoring network including areas of identified contamination;
- identify opportunities for improving / expanding the coverage of the existing monitoring network across the premises;

Note 1: It is intended that the licensee implement monitoring programs consistent with this condition for the Springhill Works (EPL 571) and CRM (EPL 397) licensed premises.

Requirements

Unless otherwise agreed to in writing by the EPA, the licensee must address the following requirements:

1. Ongoing Monitoring and Assessment Program.

The licensee must develop a monitoring program based on the existing monitoring network. The program will specify the analytes to be sampled and the monitoring frequency, taking into account, amongst other things, the nature and degree of risk at various locations across the premises.

The licensee must assess the monitoring results against relevant criteria and for change against historical results.

Note 2: The analytes considered must include Poly-Fluoroalkyl Substance (PFAS).

Slab Mill Drain - Cyanide sampling must also be undertaken for rainfall events of 30 mm or more in a 24 hour period (note). Samples are to be collected at the Lower Slab Mill Drain sampling point, previously utilised in PRP 178. The sampling frequency during each rainfall event will be variable with the intention of identifying the link between heavy rainfall events and cyanide in the Slab Mill Drain.

The licensee must assess the monitoring results against relevant criteria, licence limits, and historical results recorded from adjacent groundwater monitoring bores.

2. Maintenance of Network

Implement an inspection and maintenance program for monitoring wells and pits.

3. Installation of New Monitoring Locations

The licensee must, on an annual basis, evaluate the installation of additional wells or pits to improve the coverage of the existing monitoring network for assessment of both soil and groundwater contamination. The evaluation will be risk-based and must be discussed with the EPA as part of the consultation required by condition 4.

Note 3: The evaluation must consider the BSL berth boxes.

4. Remediation Feasibility Assessment

Where warranted based on the nature and degree of the risk and the operational status of the premises, the licensee must evaluate whether there are feasible opportunities to carry out remediation works to reduce the risk of identified contamination.

Note 4: The licensee should engage suitably qualified contamination professional to provide independent advice where appropriate.

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Due Date

The licensee and EPA will meet annually to discuss a summary of results from the previous year and proposed actions for the next year. The outcomes of this meeting will be summarised in the document titled, "*Contamination Assessment – Bluescope Sites at Port Kembla and Other Sites Notified in NSW*" which is kept on EPA file DOC18/103853.

E3.2 Contamination Assessment Program – Alliance and Recycling Area

Background

During a voluntary investigation carried out in 2013, the licensee identified elevated concentrations of benzene in a localised area of the Alliance and Recycling Area, near the intersection of ASMS Road and the Springhill Overpass Road. Active remediation of the benzene contamination was undertaken at the site between 3 June 2015 and 1 December 2016 in accordance with a Remediation Action Plan (RAP). Given that elevated concentrations of benzene remained at the completion of active remediation, further groundwater monitoring will be undertaken in accordance with this condition. Additional remediation works may be required, subject to the results of the monitoring required by this condition.

Requirements

Groundwater Monitoring

Unless otherwise agreed to in writing by the EPA, the licensee will carry out monitoring and sampling as set out in this condition and will submit the results to the EPA by 31 December each year until 2020.

- 1) Annual groundwater monitoring of 11 monitoring wells (OW12S, OW1S, OW9S, OW13S, OW11S, OW10S, OW14S, OW8S, OW15S, OW17S and OW1D).
- 2) Annual pore water sampling at 5 pore water sample locations (PW07, PW07A, PW07/B, PW05 and PW08).
- 3) Annual sampling at two surface water sample locations (SW06/L and SW07/L).
- 4) All samples (groundwater, pore water and surface water) to be analysed for benzene, toluene, ethylbenzene, xylenes (BTEX).

Review

By 31 December 2020, a Groundwater Monitoring Program Review Report must be submitted to the EPA. The report must include but may not be limited to:

- 5) All monitoring data and program findings to date
- 6) A discussion regarding any further delineation or data gaps that exist in the monitoring network
- 7) The adequacy of the existing monitoring procedures
- 8) A detailed summary on the extent of the plumes monitored by the Program through text and figures
- 9) Summarising relevant hydro-geological parameters (e.g. groundwater flow direction, gradient, estimated plume boundaries)

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10) Recommendations for any modification to the monitoring program

Due Date: 31 December 2020

E4 Special Dictionary

E4.1 In this licence, unless the contrary is indicated, the terms below have the following meanings:

Term	Meaning
Approval	means approved in writing by the EPA or as specified in a condition in a licence.
Dry weather conditions	means weather conditions in which less than ten millimetres of rain falls within a 24 hour period.
g/m3	means grams per cubic metre
LA10(15 minutes)	means the sound pressure level that is exceeded for ten per cent of the time when measured over a 15-minute period.
Noisy activities	means those activities which may exceed the construction noise goals including pile driving, jack hammering, explosive blasting, warning sirens and similar high intensity sources.
NOx	means Nitrogen Oxide.
PRP	means Pollution Reduction Program detailed in EPL.
PCI	means Pulverised Coal Injection
Quarterly report	means: 1st quarter – July, August, September 2nd quarter – October, November, December 3rd quarter – January, February, March 4th quarter – April, May, June
Rainwater	is defined as water originating as moisture falling in drops from clouds.
Recycling Area	is the area of the premises formerly known as “21 Area” or “Area 21”
SO2	means Sulfur Dioxide.
Wet weather conditions	means weather conditions in which ten or more millimetres of rain falls within a 24 hour period.

E5 Sinter Machine Short Term Bypass Arrangements

E5.1 Background

To facilitate the ongoing safe and effective operation of the Waste Gas Cleaning Plant (WGCP) serving the Sinter Plant, the following conditions permit emissions from the Sinter Plant to bypass the WGCP following treatment in the electrostatic precipitators. The bypass would occur for limited periods of time in the following circumstances:

- (a) for a proactive response to plant control data/indicators or emergency shutdown; or
- (b) for preventative maintenance.

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E5.2 Requirements

Unless otherwise agreed in writing by the EPA, the licensee must comply with the following conditions whenever the bypass occurs.

E5.3 Notification and Approval

1. Immediately after the licensee becomes aware of any WGCP bypass, which is not approved for preventative maintenance, the licensee must notify the EPA and provide all relevant information about it.
2. The licensee must provide written details of the notification to the EPA within 7 days of the date on which the WGCP bypass occurred.
3. The licensee must obtain approval in writing from the EPA prior to any preventative maintenance activities that require WGCP bypass.

Location of monitoring/discharge points and areas

- E5.4 The following points referred to in the table below are identified in this licence for the purposes of monitoring and/or the setting of limits for the emission of pollutants to the air from the point.

EPA Identification Number	Type of Monitoring Point	Type of Discharge Point	Location Description
151	Discharge from pollution stack	Discharge from pollution stack	#3 Sinter Machine Stack

Concentration limits

- E5.5 For each monitoring/discharge point or utilisation area specified in the table below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.

POINT 151

Pollutant	Unit of measures	100 percentile concentration limit	Reference conditions & Oxygen correction	Averaging period
Nitrogen Oxides	milligrams per cubic metre	2000	Dry, 273K, 101.3kPa	1 hour block minimum
Dioxins and Furans	nanograms per cubic metre	0.3	Dry, 273K, 101.3kPa, 15.7% O ₂	6 hours minimum
Sulphur Dioxide	milligrams per cubic metre	1000	Dry, 273K, 101.3kPa	1 hour block minimum
Solid Particles	milligrams per cubic metre	20	Dry, 273K, 101.3kPa	1 hour block minimum
Sulfuric acid mist and sulfur trioxide (as SO ₃)	milligrams per cubic metre	100	Dry, 273K, 101.3kPa	1 hour block minimum

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Requirement to monitor concentration of pollutants discharged

- E5.6 For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:

POINT 151

Pollutant	Unit of measure	Frequency	Sampling method
Carbon Dioxide	Percent	Weekly	TM-24
Dioxins and Furans	nanograms per cubic metre	Weekly	TM-18
Dry Gas Density	kilograms per cubic metre	Daily during testing	TM-23
Flow	cubic metres per second	Daily during testing	TM-2
Hydrogen Chloride	milligrams per cubic metre	Weekly	TM-8
Hydrogen Fluoride	milligrams per cubic metre	Weekly	TM-8
Moisture content	Percent	Daily during testing	TM-22
Molecular weight of stack gases	grams per gram mole	Daily during testing	TM-23
Nitrogen Oxides	milligrams per cubic metre	Weekly	TM-11
Oxygen (O ₂)	Percent	Daily during testing	TM-25
Solid Particles	milligrams per cubic metre	Weekly	TM-15
Sulfuric acid mist and sulphur trioxide (as SO ₃)	milligrams per cubic metre	Weekly	TM-3
Sulphur dioxide	milligrams per cubic metre	Weekly	TM-4
Temperature	degrees Celsius	Daily during testing	TM-2
Velocity	metres per second	Daily during testing	TM-2
Volumetric flowrate	cubic metres per second	Daily during testing	TM-2
Solid Particles	milligrams per cubic metre	Continuous	See Note
Type 1 substances	milligrams per cubic metre	Weekly	TM-12, TM-13 & TM-14
Type 2 substances	milligrams per cubic metre	Weekly	TM-12, TM-13 & TM-14

Note: Continuous monitoring of Solid Particles is required under this licence as listed in the table above. The results of this monitoring are not required for compliance assessment purposes. The results of this monitoring are used by the licensee for operational control purposes.

Note: **Type 1 substance** means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements.

Type 2 substance means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or

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vanadium or any compound containing one or more of those elements.

Limits for Type 1 and Type 2 substances are specified in the *Protection of the Environment Operations (Clean Air) Regulation 2010*.

E5.7 Operation

1. The duration of the WGCP bypass must be minimised as far as practicable.
2. The licensee must notify the EPA in writing as soon as practicable if the duration of the bypass is likely to exceed:
 - a) 28 days for a proactive response or emergency shutdown; and
 - b) 10 weeks for any preventative maintenance.

E5.8 Duty to Minimise or Prevent Air Pollution

During any bypass the licensee must carry on any activity or operate any plant by such practicable means as may be necessary to prevent or minimise air pollution. These practicable means may include, but not necessarily be limited to:

- a) Dealing with materials in a proper and efficient manner at all times.
- b) Maintaining and operating plant and equipment in a proper and efficient manner.
- c) Reductions in the nature and quantity of materials processed that could result in the discharge of substances likely to cause harm to the environment.
- d) Restrictions on the throughput (tonnes/per hour) of materials processed by the Sinter Plant.

E5.9 Timely Public Access to Air Quality Data

The licensee must operate a web based service to ensure the community has access to timely, relevant and meaningful continuous emission monitoring data for the Sinter Machine Short Term Operational Arrangements. This must include but not be limited to continuous particle monitoring at the following locations:

- (a) In stack at point 151.
- (b) Ambient air quality.

This service must be developed in consultation with the EPA.

E5.10 Requirement to record bypasses of the WGCP

The licensee must record the following details in relation to each bypass of the WGCP and provide the information to the EPA upon request:

- a) The reason for the bypass;
- b) The start time and date; and
- c) The finish time and date.

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E6 Spent Pickle Liquor Plant Conditions

E6.1 By one month prior to the commencement of operation of the Spent Pickle Liquor (SPL) plant, the Proponent must submit a draft Water Quality Verification Program (Program) to the EPA.

a. The Program must be designed to:

- i. confirm that the pollutants, pollutant concentrations, and pollutant loads in the SPL discharge match those presented to the EPA as part of the Development Assessment process (the predicted discharge);
- ii. assess acute and chronic (sub-lethal) toxicity testing of the discharges from Point 89.

The program must be approved by the EPA prior to implementation.

Note: EPA anticipates the:

Acute toxicity testing would include:

- Fish testing – for example, 96 hour. Species and test duration to be confirmed.
- Crustacean testing – for example, prawn. Species and test duration to be confirmed.

Chronic toxicity testing would include:

- Algal testing – for example, micro or macro algae. 72 hour growth inhibition test with species to be confirmed.
- Bivalve or sea urchin larval development test. Species and test duration to be confirmed.

b. At the conclusion of the monitoring, if the program identifies:

- i. pollutant/s discharges in excess of the predicted discharge quality (concentration or load) then BSL must install plant or implement measures to achieve the predicted discharge quality or
- ii. the wastewater is acutely toxic then BSL must install plant or implement measures to remove the toxicity or
- iii. that the discharge is chronically toxic then BSL must assess what additional practicable measures could be implemented, clearly indicate who could implement these measures, when these measures could be implemented, and how the effectiveness of these measures could be confirmed and reported to the EPA.

Note 1: The above Verification Program may be varied in writing by the EPA.

E7 Sinter Plant Waste Reuse Trials

E7.1 Background

The licensee proposes to undertake trials in relation to the reuse of Sinter Plant Waste Gas Cleaning Plant activated char undersized (ACU) back to the Sinter Plant. The objective of the trials is to collect accurate and reliable information on the reuse of the ACU and demonstrate that the environment and human health are protected at all times.

Requirements

Unless otherwise agreed in writing by the EPA, the licensee must comply with the following conditions.

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- E7.2 The licensee must submit an ACU trial proposal and obtain approval in writing from the EPA prior to commencing the trial.
- E7.3 The licensee must undertake the trial as outlined in the Proposal unless otherwise agreed in writing by the EPA.
- E7.4 The licensee must comply with all conditions of this licence during any ACU trial. This includes, but is not limited to, *Limit Conditions, Maintenance of Plant and Equipment, and Notification of Environmental Harm*.
- E7.5 During any trial the licensee must retain and test / classify the following materials prior to discharge, release, or appropriate management or disposal: all Sulphur Rich Gas Plant reject waste water, filter cake generated at the Springhill waste water treatment plant, ACU generated during the trial, and Sinter Plant electrostatic precipitator dust.
- E7.6 Following the completion of the ACU trial the licensee must submit a written report to the EPA. The report must include but may not be limited to:
- a) confirmation that monitoring results are below licence limits and Health Risk Assessment criteria;
 - b) A comparison / validation of the proposal predictions against the trial monitoring results or findings for the char composition, waste or output stream composition, mass balance / partitioning modelling assessment, and air emissions modelling;
 - c) A mass balance generated from the trial over a defined time period;
 - d) An assessment on the fate of dioxins, radionuclides and metals emissions and discharges. This should include outlining any change in emissions and discharges from typical operations;
 - e) An assessment on the possible “cycling up” of pollutants in emissions and discharges to the environment and in the other output streams generated through trial;
 - f) An assessment of the quantities of: ACU used in the trial, the second generation ACU produced, and the other output streams generated;
 - g) An assessment of the potential changes to waste classifications (i.e. Electrostatic precipitator dust and ACU generated during the trial),
 - h) A discussion on any changes to sinter quality, and
 - i) A summary of the cost/benefit analysis for ACU reuse.
- E7.7 During any ACU trial the licensee must carry on any activity or operate any plant by such practicable means as may be necessary to prevent or minimise air pollution. These practicable means may include, but not necessarily be limited to:
- a) Dealing with materials in a proper and efficient manner at all times.
 - b) Maintaining and operating plant and equipment in a proper and efficient manner.
 - c) Reduction in the nature and quantity of materials processed that could result in the discharge of substances likely to cause harm to the environment.
 - d) Restrictions on the throughput (tonnes per hours) of materials processed by the Sinter Plant.
 - e) Limiting the number of variables which effect the emission characterisation and the composition of the process outputs. Where variables cannot be limited they should be quantified.

E8 Trial of Real Time Monitoring at Alliance and Recycling

E8.1 Background

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During very strong winds Dust Emission Rating (DER) 5 emissions can occur from the Alliance and Recycling (A&R) Area. These winds are often westerlies and emissions associated with these winds can blow across Springhill Road. Following such an event in May 2019 the licensee has proposed to trial real time monitor on the eastern side of Springhill Road to try to capture and record these events.

Aim

The aim of this condition is to trial a real time monitor to record any DER 5 event from A&R crossing Springhill Road and to use this data, along with any other information, to try to identify an emission source.

Requirements

1. By 30 November 2019, the licensee must submit a monitoring proposal to the EPA which describes the:
 - location,
 - type of monitor,
 - monitored parameters,
 - monitoring period (12 month minimum)
 - methodology to be implemented to capture, identify, and quantify (DER) any elevated emissions recorded from A&R area.
 - steps to correlate monitoring data, weather data and other information (e.g. camera footage or audit reports) to attempt to identify the dust source.
2. By 30 December 2019 the monitor must be installed and commissioned.
3. By 30 December 2020 or at the end of the trial period, the licensee must submit a trial report which incorporates the information collected during the monitoring period, the findings from the trial, the success of the trial, any dust sources identified, and recommendations for ongoing monitoring.

Due Date: 30 December 2020

E9 Plastic Material Substitution Trial at the Coke Ovens

E9.1 Background

Coal (carbon source) is “coked” in the coke ovens. Coke is a key ingredient in the iron making process. During the coking cycle, gas driven off the coal (Coke Ovens Gas - COG) is collected in a gas handling system. These gases are cleaned, some components separated, and the remaining gas distributed throughout the works and used as a fuel. Fugitive emissions periodically occur from some parts of the oven and are monitored by the licensee per the requirements of licence condition O3.2.

The licensee submitted a proposal for a material substitution trial involving used plastic (polypropylene), the “Application for Resource Recovery Exemption” dated 19 July 2019 (DOC19/646575). The proposal for Trial 1 states that:

- I. plastic could replace some coal as a carbon source,
- II. the majority of the polypropylene decomposition gases will be captured and reused;
- III. polypropylene does not currently have a recycling market and the proposal represents higher order waste management than the current practice of landfilling.

The licensee proposes to undertake staged trials adding plastic in the coke ovens. This first trial stage, and possible follow up stages will be contingent on stage 1 - 4 results. That is, the outcome of the handle-ability of the plastic in the feed infrastructure and in the oven, any impact on coke quality, and any changes to air emissions. Presently the trial “stages” are proposed as follows.

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Further trials with larger plastic quantities and different types of plastics will require the preparation of another detailed trial plan and additional assessment by the EPA. Future proposed trials involve the addition of a larger amounts of plastic of approximately 250 kg per oven.

The Stage 1 - 4 proposal involves:

- the addition of 8 - 80 kilograms of shredded polypropylene bulker bags to 1 coke oven.
- monitoring the material handling characteristics of the plastic during the transfer to, and once in the oven
- monitoring any changes to coke quality, the oven components and COG generation
- the incorporation of some of the carbon in the plastic into the coke product
- the anticipated separation of plastic into its chemical components at high temperature in the oven
- the collection of some of these components in the gas collection and processing sections of the steelworks. For example, tar, naphthalene, BTX and sulphate of ammonia
- the combustion of the other components in the coke ovens gas, indigenous fuel stream on the Steelworks site.
- monitoring changes to fugitive emissions from the trial oven

Table 1 - Trial 1 Stages and quantities of polypropylene

Stages 1 to 4 – Addition plastic to one oven - one charge hole.

Stage	Number of Ovens	Charge holes per oven	Plastic addition (% by mass)	Plastic addition (kg)
1	1	1	0.1	8
2	1	1	0.2	16
3	1	1	0.5	40
4	1	1	1	80

E9.2 Requirements

EPA approves a trial for stages 1-4 as listed in the table above.

The licensee may conduct each stage of the trial up to 5 times to validate results.

During the trial the licensee must:

- Undertake community consultation in advance of the commencement date
- Adhere to the Trial 1 Detail listed in the “Application for Resource Recovery Exemption” dated 19 July 2019.
- Be limited to the use of polypropylene bulker bags.
- Conduct a comprehensive fugitive emissions survey (per licence condition O3.2 Coke Ovens Emissions Survey Procedure Number SP-CB-2BATINS-105) of all sources from the trial oven at a 1 hour frequency
- Monitor gas pressure during the coking cycle and the refractory condition at the end of the coking cycle
- Comply with licence conditions at all times
- Complete a post-trial report to the EPA within 1 month of the trial completion incorporating the above information as well as a discussion on sampling and assessment of coke produced prior to, during and following a trial with larger quantities of plastic addition.

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For any future trials plans:

- a) Propose a list of compounds to be included in a chemical characterisation program
- b) Propose a plan for monitoring and characterisation of potential gas emissions from larger quantities of plastic addition to understand the full range of pollutants contained in discharges to the environment and all by-product streams
- c) Quantify the amount of coal replaced by plastic during the charge for larger quantities of plastics additions
- d) Include recommendations based on learnings from Trial 1

Note: EPA will consider additional conditions / requirements, in consultation with the licensee, for further trials.

E9.3 Duty to Minimise or Prevent Air Pollution

During any plastic substitution trial the licensee must carry on any activity or operate any plant by such practicable means as may be necessary to prevent or minimise air pollution. These practicable means may include, but not necessarily be limited to:

- a) Dealing with materials in a proper and efficient manner at all times.
- b) Maintaining and operating plant and equipment in a proper and efficient manner.
- c) Reductions in the nature and quantity of materials processed that could result in the discharge of substances likely to cause harm to the environment.

E10 Stockpile Conditions

E10.1 Granulate Stockpile Management

Background:

Granulate stockpile (7715) is presently an inactive stockpile which acts as a berm or wind break in westerly winds. Currently this stockpile is periodically treated with a binding agent (Gluon), however the stockpile generates dust in strong winds.

Based on the PRP 166 calculation methodology, the stockpile was ranked the third largest dust source at A&R, generating controlled emissions of 818 kg of TSP per year.

The licensee has advised that due to limited slag availability, stockpile 7715 is forecast to be consumed by the end of 2020.

Requirements:

Unless otherwise agreed in writing by the EPA:

1. By 31 July 2020 the licensee must:

- a) advise the EPA on the consumption rate and forecast of stockpile number 7715; and

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b) if the stockpile is forecast to have not been consumed by 30 June 2020, submit plans to the EPA which detail the capping and vegetating of the stockpile.

2. By 30 December 2020 stockpile number 7715 must have been completely consumed or capped and vegetated per the presented plan.

Due Date: 30 December 2020

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Dictionary

General Dictionary

3DGM [in relation to a concentration limit]	Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples
Act	Means the Protection of the Environment Operations Act 1997
activity	Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment Operations Act 1997
actual load	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
AM	Together with a number, means an ambient air monitoring method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
AMG	Australian Map Grid
anniversary date	The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
annual return	Is defined in R1.1
Approved Methods Publication	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
assessable pollutants	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
BOD	Means biochemical oxygen demand
CEM	Together with a number, means a continuous emission monitoring method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
COD	Means chemical oxygen demand
composite sample	Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples collected at hourly intervals and each having an equivalent volume.
cond.	Means conductivity
environment	Has the same meaning as in the Protection of the Environment Operations Act 1997
environment protection legislation	Has the same meaning as in the Protection of the Environment Administration Act 1991
EPA	Means Environment Protection Authority of New South Wales.
fee-based activity classification	Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 2009.
general solid waste (non-putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

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flow weighted composite sample	Means a sample whose composites are sized in proportion to the flow at each composites time of collection.
general solid waste (putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
grab sample	Means a single sample taken at a point at a single time
hazardous waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
licensee	Means the licence holder described at the front of this licence
load calculation protocol	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
local authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
material harm	Has the same meaning as in section 147 Protection of the Environment Operations Act 1997
MBAS	Means methylene blue active substances
Minister	Means the Minister administering the Protection of the Environment Operations Act 1997
mobile plant	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
motor vehicle	Has the same meaning as in the Protection of the Environment Operations Act 1997
O&G	Means oil and grease
percentile [in relation to a concentration limit of a sample]	Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.
plant	Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.
pollution of waters [or water pollution]	Has the same meaning as in the Protection of the Environment Operations Act 1997
premises	Means the premises described in condition A2.1
public authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
regional office	Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence
reporting period	For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 months. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
restricted solid waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
scheduled activity	Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997
special waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
TM	Together with a number, means a test method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .

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TSP	Means total suspended particles
TSS	Means total suspended solids
Type 1 substance	Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements
Type 2 substance	Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any compound containing one or more of those elements
utilisation area	Means any area shown as a utilisation area on a map submitted with the application for this licence
waste	Has the same meaning as in the Protection of the Environment Operations Act 1997
waste type	Means liquid, restricted solid waste, general solid waste (putrescible), general solid waste (non - putrescible), special waste or hazardous waste

Ms Debbie Maddison

Environment Protection Authority

(By Delegation)

Date of this edition: 04-August-2000

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End Notes

- 1 Licence varied by notice 1001218, issued on 18-Aug-2000, which came into effect on 08-Sep-2000.
- 2 Licence varied by notice 1002985, issued on 31-Jan-2001, which came into effect on 22-Feb-2001.
- 3 Licence varied by notice 1004533, issued on 23-Feb-2001, which came into effect on 23-Feb-2001.
- 4 Licence varied by notice 1004573, issued on 12-Apr-2001, which came into effect on 07-May-2001.
- 5 Licence varied by notice 1009240, issued on 27-Jun-2001, which came into effect on 22-Jul-2001.
- 6 Licence varied by notice 1010880, issued on 31-Aug-2001, which came into effect on 31-Aug-2001.
- 7 Licence varied by notice 1011167, issued on 10-Sep-2001, which came into effect on 19-Sep-2001.
- 8 Licence varied by notice 1011573, issued on 19-Oct-2001, which came into effect on 24-Oct-2001.
- 9 Licence varied by notice 1014538, issued on 30-Jan-2002, which came into effect on 24-Feb-2002.
- 10 Licence varied by notice 1018925, issued on 03-Sep-2002, which came into effect on 19-Sep-2002.
- 11 Licence varied by notice 1023370, issued on 12-Feb-2003, which came into effect on 12-Feb-2003.
- 12 Licence varied by notice 1024963, issued on 24-Feb-2003, which came into effect on 26-Feb-2003.
- 13 Licence varied by notice 1027082, issued on 08-May-2003, which came into effect on 12-May-2003.
- 14 Licence varied by notice 1028119, issued on 02-Jul-2003, which came into effect on 02-Jul-2003.
- 15 Licence varied by notice 1030269, issued on 22-Sep-2003, which came into effect on 17-Oct-2003.
- 16 Licence varied by notice 1032539, issued on 12-Dec-2003, which came into effect on 18-Dec-2003.
- 17 Licence varied by notice 1035695, issued on 30-Mar-2004, which came into effect on 05-Apr-2004.

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| 18 | Licence varied by notice 1036177, issued on 03-Jun-2004, which came into effect on 10-Jun-2004. |
| 19 | Licence varied by notice 1040598, issued on 14-Oct-2004, which came into effect on 08-Nov-2004. |
| 20 | Licence varied by notice 1042203, issued on 17-Jan-2005, which came into effect on 20-Jan-2005. |
| 21 | Licence varied by notice 1043923, issued on 24-Mar-2005, which came into effect on 01-Apr-2005. |
| 22 | Licence varied by notice 1046181, issued on 11-Aug-2005, which came into effect on 18-Aug-2005. |
| 23 | Licence varied by notice 1051147, issued on 06-Feb-2006, which came into effect on 03-Mar-2006. |
| 24 | Licence varied by notice 1057546, issued on 30-Jun-2006, which came into effect on 30-Jun-2006. |
| 25 | Licence varied by notice 1064132, issued on 27-Jun-2007, which came into effect on 27-Jun-2007. |
| 26 | Licence varied by notice 1075844, issued on 04-Dec-2007, which came into effect on 04-Dec-2007. |
| 27 | Licence varied by notice 1080877, issued on 06-Dec-2007, which came into effect on 06-Dec-2007. |
| 28 | Licence varied by notice 1081089, issued on 20-Dec-2007, which came into effect on 20-Dec-2007. |
| 29 | Licence varied by notice 1082401, issued on 05-Feb-2008, which came into effect on 05-Feb-2008. |
| 30 | Condition A1.3 Not applicable varied by notice issued on <issue date> which came into effect on <effective date> |
| 31 | Licence varied by notice 1084625, issued on 20-Feb-2009, which came into effect on 20-Feb-2009. |
| 32 | Licence varied by notice 1104047, issued on 12-Aug-2009, which came into effect on 12-Aug-2009. |
| 33 | Licence varied by notice 1104986, issued on 28-Aug-2009, which came into effect on 28-Aug-2009. |
| 34 | Licence varied by notice 1106465, issued on 15-Sep-2009, which came into effect on 15-Sep-2009. |
| 35 | Licence varied by notice 1106796, issued on 29-Sep-2009, which came into effect on 29-Sep-2009. |
| 36 | Licence varied by notice 1108359, issued on 23-Nov-2009, which came into effect on 23-Nov-2009. |

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| 37 | Licence varied by notice 1109845, issued on 17-Dec-2009, which came into effect on 17-Dec-2009. |
| 38 | Licence varied by notice 1110309, issued on 19-Mar-2010, which came into effect on 19-Mar-2010. |
| 39 | Licence varied by notice 1112569, issued on 26-Mar-2010, which came into effect on 26-Mar-2010. |
| 40 | Licence varied by notice 1113045, issued on 22-Jun-2010, which came into effect on 22-Jun-2010. |
| 41 | Licence fee period changed by notice 1116120 approved on . |
| 42 | Licence varied by notice 1118039, issued on 24-Aug-2010, which came into effect on 24-Aug-2010. |
| 43 | Licence varied by notice 1119656, issued on 08-Nov-2010, which came into effect on 08-Nov-2010. |
| 44 | Licence varied by notice 1121339, issued on 03-Dec-2010, which came into effect on 03-Dec-2010. |
| 45 | Licence varied by notice 1124776, issued on 18-Mar-2011, which came into effect on 18-Mar-2011. |
| 46 | Licence varied by notice 1126501, issued on 31-Mar-2011, which came into effect on 31-Mar-2011. |
| 47 | Licence varied by notice 1127428, issued on 28-Jun-2011, which came into effect on 28-Jun-2011. |
| 48 | Licence varied by notice 1130393, issued on 12-Jul-2011, which came into effect on 12-Jul-2011. |
| 49 | Licence varied by notice 1501202 issued on 22-Sep-2011 |
| 50 | Licence varied by notice 1502091 issued on 19-Oct-2011 |
| 51 | Licence varied by notice 1503242 issued on 23-Dec-2011 |
| 52 | Licence varied by notice 1503781 issued on 25-Jan-2012 |
| 53 | Licence varied by notice 1504484 issued on 24-Feb-2012 |
| 54 | Licence varied by notice 1504602 issued on 24-Feb-2012 |
| 55 | Licence varied by notice 1504620 issued on 02-Mar-2012 |
| 56 | Licence varied by notice 1504806 issued on 13-Mar-2012 |
| 57 | Licence varied by notice 1504992 issued on 03-Apr-2012 |
| 58 | Licence varied by notice 1505662 issued on 16-May-2012 |
| 59 | Licence varied by notice 1506247 issued on 31-May-2012 |

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60	Licence varied by notice	1506570 issued on 28-Jun-2012
61	Licence varied by notice	1507238 issued on 16-Aug-2012
62	Licence varied by notice	1508380 issued on 27-Sep-2012
63	Licence varied by notice	1509332 issued on 02-Nov-2012
64	Licence varied by notice	1510677 issued on 20-Feb-2013
65	Licence varied by notice	1512478 issued on 18-Jun-2013
66	Licence varied by notice	1515889 issued on 17-Sep-2013
67	Licence varied by notice	1518208 issued on 19-Nov-2013
68	Licence varied by notice	1519339 issued on 15-Jan-2014
69	Licence varied by notice	1519826 issued on 31-Jan-2014
70	Licence varied by notice	1520829 issued on 27-Mar-2014
71	Licence varied by notice	1521480 issued on 30-Jun-2014
72	Licence varied by notice	1523501 issued on 08-Aug-2014
73	Licence varied by notice	1524150 issued on 11-Aug-2014
74	Licence varied by notice	1525198 issued on 16-Oct-2014
75	Licence varied by notice	1525765 issued on 22-Oct-2014
76	Licence varied by notice	1525974 issued on 31-Oct-2014
77	Licence varied by notice	1527272 issued on 15-Dec-2014
78	Licence varied by notice	1527798 issued on 15-Jan-2015
79	Licence varied by notice	1527901 issued on 16-Mar-2015
80	Licence varied by notice	1529609 issued on 06-May-2015
81	Licence varied by notice	1530821 issued on 22-May-2015
82	Licence varied by notice	1531444 issued on 30-Jun-2015
83	Licence varied by notice	1532319 issued on 18-Sep-2015
84	Licence varied by notice	1535425 issued on 13-Nov-2015
85	Licence format updated on	20-Nov-2015
86	Licence varied by notice	1536840 issued on 01-Feb-2016
87	Licence varied by notice	1538753 issued on 18-Mar-2016
88	Licence varied by notice	1541145 issued on 06-Jun-2016

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89	Licence varied by notice	1541649 issued on 17-Jun-2016
90	Licence varied by notice	1543946 issued on 25-Aug-2016
91	Licence varied by notice	1545794 issued on 24-Nov-2016
92	Licence varied by notice	1547444 issued on 12-Jan-2017
93	Licence varied by notice	1549779 issued on 28-Feb-2017
94	Licence varied by notice	1550419 issued on 23-Mar-2017
95	Licence varied by notice	1551875 issued on 09-May-2017
96	Licence varied by notice	1554553 issued on 01-Aug-2017
97	Licence varied by notice	1557497 issued on 09-Nov-2017
98	Licence varied by notice	1558668 issued on 16-Nov-2017
99	Licence varied by notice	1559323 issued on 11-Dec-2017
100	Licence varied by notice	1562263 issued on 01-Mar-2018
101	Licence varied by notice	1563755 issued on 16-Apr-2018
102	Licence varied by notice	1564617 issued on 10-May-2018
103	Licence varied by notice	1569709 issued on 04-Dec-2018
104	Licence varied by notice	1578553 issued on 03-May-2019
105	Licence varied by notice	1585528 issued on 26-Nov-2019
106	Licence varied by notice	1589226 issued on 10-Dec-2019
107	Licence varied by notice	1591782 issued on 21-Feb-2020