

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

<b><u>Region</u></b>
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NSW 2520

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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 produced
Cement or Lime works	Cement or lime handling	> 100000 - 500000 T handled
Cement or Lime works	Cement or lime production	> 250000 - 500000 T produced
Coal Works	Coal works	> 2000000 - 5000000 T handled
Coke Production	Coke production	> 100000 T handled
Crushing, Grinding or Separating	Crushing, grinding or separating	> 2000000 T processed
Chemical Production	Dangerous goods production	> 25000 T produced
Chemical Storage	General chemicals storage	> 100000 kL stored
Electricity Generation	Generation of electrical power from gas	> 250 - 450 Gwh generated
Metallurgical activities	Iron or steel production (iron ore)	> 0 T produced
Mineral Processing	Mineral processing	> 2000000 T processed
Railway Systems Activities	Railway systems activities	Any annual capacity
Resource Recovery	Recovery of general waste	> 0 T recovered
Resource Recovery	Recovery of waste tyres	> 0 T recovered
Metallurgical activities	Scrap metal processing	> 500000 T processed
Shipping in Bulk	Shipping in bulk	> 500000 T loaded and unloaded
Waste Storage	Waste storage - other types of waste	> 0 T stored
Waste Storage	Waste storage - waste tyres	> 0 T stored

### 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

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<b>PORT KEMBLA</b>
<b>NSW 2505</b>
<b>SEE LOCALITY MAP TITLED "GENERAL WORKS PORT KEMBLA STEELWORKS ENVIRONMENTAL PROTECTION LICENSE AREAS" DRAWING NUMBER 445310, DATE REV NO.2, DATE DRAWN 31/05/2011, SUBMITTED TO EPA ON 19/9/11 AS DOC11/43333</b>

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.

## A3 Other activities

A3.1 This licence applies to all other activities carried on at the premises, including:

<b>Ancillary Activity</b>
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.



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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
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

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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 (no longer operational)
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
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
35	Discharge from pollutant stack	Discharge from pollutant stack	Raw material road rail dump station stack
37	Discharge from pollutant stack	Discharge from pollutant stack	No 2 Blower station 21/22 boiler stack - not in operation
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

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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
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
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)
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
126	Discharge from pollutant stack	Discharge from pollutant stack	Gas Processing Carbon Re-generation 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
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

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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 Point 139 are considered representative of this point).
139	Discharge from pollutant stack	Discharge from pollutant stack	Number 2 blower station - 12 boiler stack
140	Ambient Air Monitoring - HVAS, Dust Deposition, Benzene, PAH		Printing Services Building - Cnr Wattle and Flagstaff Roads, Warrawong
141	Ambient Air Monitoring - HVAS, Benzene, PAH		Old Scout Hall - Flagstaff Road, Warrawong
142	Ambient Air Monitoring - HVAS		AQMS - Boundary of premises adjacent to Fitzgerald St, Cringila
143	Ambient Air Monitoring - HVAS, Dust Deposition		Vikings Oval, Swan St, Wollongong
144	Ambient Air Monitoring - Dust Deposition		19 Bridge St, Coniston
145	Ambient Air Monitoring - Dust Deposition		28 Monteith St, Cringila
146	Ambient Air Monitoring - Dust Deposition		25 Mount St, Mount St Thomas
147	Ambient Air Monitoring - Dust Deposition		Port Kembla Marine Fuels - Flinders St, Port Kembla
148	Ambient Air Monitoring - Dust Deposition		18 Holman St, Warrawong
149	Ambient Air Monitoring - Dust Deposition		41 Grandview Parade, Lake Heights
150	Ambient Air Monitoring - PAH		No.6 Jetty - Port Kembla Harbour, Port Kembla

P1.2 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.

P1.3 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.

## 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"

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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"
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.

## 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.

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## 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)	
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

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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), 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\.

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



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## 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
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



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## 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
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 <sub>3</sub> )	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

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## 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
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	450	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

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## 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
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

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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

## 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		0.1
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

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## 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

## 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

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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
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

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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

## 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

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## 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
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



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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
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

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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
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	tonnes per day	n/a	n/a		1.2
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	kilograms per day	n/a	n/a		27
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

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Lead (Wet)	milligrams per litre	n/a	n/a	0.1
Oil and Grease	tonnes per day	n/a	n/a	2.5
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	6.5-9.0
pH (Wet)	pH	n/a	n/a	6.5-9.0
Phenols	kilograms per day	n/a	n/a	35
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
Temperature (Wet)	degrees Celsius	n/a	n/a	40
Total suspended solids	tonnes per day	n/a	n/a	12
Total Zinc	kilograms per day	n/a	n/a	35
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

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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
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

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

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/m<sup>3</sup> of gaseous and particulate phase polychlorinated dibenzo-p-dioxins (PCDD) and

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polychlorinated dibenzofurans (PCDF) as tetrachloro-dibenzo-dioxin (TCDD) equivalent, WHO 2005 TEF, dry 101.3 kPa, 273 K, 15.7% O<sub>2</sub> 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.

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

Code	Waste	Description	Activity	Other Limits
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 51A of the Protection of the Environment Operations (Waste) Regulation 2005.	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	Non-ferrous metal wastes generated at other BSL site. Brought on to site for sorting and recycling.	Resource recovery	

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Z990	Not characterised	Co-mingled wastes generated at other BSL sites. Brought onto site for sorting and recycling.	Resource recovery	
Z990	Not characterised	Millscale, solid steel fines. Used to add iron units to Sinter Plant blend.	Resource recovery	
Z990	Not characterised	Waste timber packaging generated at other BSL sites. Brought onto site for recycling.	Resource recovery	
D300	Non toxic salts	Aluminium dross, solid metallic aluminium powder. Used in the desulphurisation of liquid iron.	Resource recovery	
Z990	Not characterised	Steel scrap, solid iron and steel. Used in the conversion of iron to steel.	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	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 not meet specification, solid. Returned to site for reprocessing and sale.	Waste storage	
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	
B100	Pickle Liquor	Spent Pickle Liquor.	Waste storage	No more than 600 000L stored at any one time.
Z990	Not characterised	Paper, pulp, solid paper	Resource recovery	

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		production residue. Used to produce briquettes for deoxidising slag in the BOS furnace.	Waste storage
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	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
Z990	Not characterised	Steel shot blast, solid steel fines. Used to add iron units to Sinter Plant blend.	Resource recovery Waste storage
Z990	Not characterised	Used refractory aggregate, solid crushed refractory brick. Used as a steel ladle slag conditioner.	Resource recovery Waste storage

## 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:

- a) 7:00 am to 6:00 pm Mondays to Fridays;
- b) 8:00 am to 1:00 pm on Saturdays; and
- c) 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.

### L6.4 OPERATIONAL NOISE LIMITS



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- 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) (dated 21/6/2007 or as varied with the prior written approval of the EPA)(The version dated 21 June 2007 is filed on EPA file 280032B40). 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 6 September 2002 and filed on EPA file 280032B40.

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.

ii) No DER rating and reporting requirements apply when wind speeds exceed 25 knots (12.9 m/sec) measured on the licensed premises.

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

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1. Development of any new stockpiles (permanent, temporary or emergency) must be in accordance with the BSL Risk Assessment Process (MA-ENV-02-08). 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.

## 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 %
5	5	3.8	3	4.5
6	7	3.5	4	4.0

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7A	6	6.0	3	6.0
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- 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 By 31 December 2016 all COG Solids must only be stored internally in sealed and bunded areas.
- O4.10 By 31 December 2018 no more than 50 tonnes of dewatered COG solids may be stored on the premises at any time.
- O4.11 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).
- O4.12 BASIC OXYGEN STEELMAKING (BOS)
- O4.13 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).
- O4.14 A monitoring system in compliance with the Authority's specifications for monitoring of opacity must be operated, maintained and calibrated to provide measurements of opacity in the waste gases from the roof of the BOS Building.
- O4.15 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.

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## O4.16 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 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.)

## O4.17 SINTER PLANT INCLUDING WASTE GAS CLEANING PLANT

O4.18 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/Nm<sup>3</sup> for particulate matter.

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

O4.19 The WGCP must be operated with the objective of ensuring the maximum practicable recovery of sulphur rich gas (SRG) for treatment and reuse.

O4.20 The Licensee must notify the EPA of any venting of sulfur rich gas (SRG) to atmosphere that exceeds 24 continuous hours.

## O4.21 ENERGY SERVICES

O4.22 The use of Spectrus CT1300 Biocide on the premises must:

- i) be utilised in accordance with the conditions specified in APVMA Permit (Number PER 9234) and;
- ii) may only be discharged from the Blower Station Drain (EPA identification number 79) or the Main Drain (EPA identification number 88) and;
- iii) not exceed a maximum discharge concentration of 0.192 mg/L when treating over a 12 hour period and;
- iv) not exceed a maximum discharge concentration of 0.096 mg/L from the when treating over a 24 hour period and;
- v) not be discharged from both drains at the same time.

## O4.23 SCRAP CUTTING COLD FERROUS PROCESSING PLANT (CFPP) AND RECYCLING AREA SCRAP CUTTING BUILDING

O4.24 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

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- 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.
- 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
Solid Particles	milligrams per normalised cubic metre	Quarterly	TM-15

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**POINT 8,9**

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

**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 (O2)	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

**POINT 106**

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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 (O <sub>2</sub> )	percent	Special Frequency 1	TM-25
Solid Particles	milligrams per cubic metre	Special Frequency 1	TM-15
Sulfuric acid mist and sulfur trioxide (as SO <sub>3</sub> )	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
Velocity	metres per second	Special Frequency 1	TM-2
Volumetric flowrate	cubic metres per second	Special Frequency 1	TM-2

## POINT 108

Pollutant	Units of measure	Frequency	Sampling Method
Cadmium	milligrams per cubic metre	Yearly	TM-12, TM-13 & TM-14
Dry gas density	kilograms per cubic metre	Yearly	TM-23
Mercury	milligrams per cubic metre	Yearly	TM-12, TM-13 & TM-14



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Moisture	percent	Yearly	TM-22
Solid Particles	milligrams per cubic metre	Yearly	TM-15
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 113

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 <sub>2</sub> )	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

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**POINT 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 <sub>2</sub> )	percent	Every 2 years	TM-25
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 140,143,144,145,146,147,148,149**

Pollutant	Units of measure	Frequency	Sampling Method
Ash	grams per square metre per month	Monthly	AM-19

**POINT 140,141**

Pollutant	Units of measure	Frequency	Sampling Method
Benzene	parts per billion	Every 6 days	Method approved in writing by the Authority

**POINT 140,143,144,145,146,147,148,149**

Pollutant	Units of measure	Frequency	Sampling Method
Insoluble solids	grams per square metre per month	Monthly	AM-19

**POINT 140,141,142,143**

Pollutant	Units of measure	Frequency	Sampling Method
Iron	micrograms per cubic metre	Every 6 days	AM-15

**POINT 140**

Pollutant	Units of measure	Frequency	Sampling Method
Polycyclic aromatic hydrocarbons	nanograms per cubic metre	Special Frequency 5	Method approved in writing by the Authority

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## POINT 140,141,142,143

Pollutant	Units of measure	Frequency	Sampling Method
Total suspended particles	micrograms per cubic metre	Every 6 days	AM-15
Zinc	micrograms per cubic metre	Every 6 days	AM-15

## POINT 141

Pollutant	Units of measure	Frequency	Sampling Method
Polycyclic aromatic hydrocarbons	nanograms per cubic metre	Special Frequency 3	Method approved in writing by the Authority

## POINT 150

Pollutant	Units of measure	Frequency	Sampling Method
Polycyclic aromatic hydrocarbons	nanograms per cubic metre	Special Frequency 4	Method approved in writing by the Authority

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;

- a) Special Frequency 1 means "Quarterly in duplicate";
- b) Special Frequency 2 means "Yearly in duplicate";
- c) Special Frequency 3 means for a 24 hour period each six days;
- d) Special Frequency 4 means:
  - (i) a weekly sample must be collected when the wind is blowing from the direction specified for each of the following sampling locations:
    - Printing Services Building - wind direction 0-60 degrees.
    - No 6 Jetty - wind direction 225-315 degrees.
  - (ii) sampling must be carried out for at least 80 per cent of the time up to a maximum of 24 hours when the wind is blowing from the specified direction.
  - (iii) one quarter of each filter, clearly labelled, must be preserved so as to minimise deterioration of sample and retained for a period of at least two years. These must be made available to any authorised officer of the Authority for audit purposes.
- e) Special Frequency 5 means both Special Frequency 3 and 4 must be conducted.
- f) Points 40, 47 and 120 - emissions must be reported under the reference conditions Dry, 273K, 101.3kPa and 7 per cent oxygen.
- g) Point 107 – The averaging period for SO<sub>2</sub> and NO<sub>x</sub> for testing purposes is one hour.
- h) Point 107 - Chromium (hexavalent) - The EPA will review the requirement for yearly monitoring of hexavalent chromium at point 107 following completion of a site wide Type 1 and 2 substances assessment.

## M2.4 Water and/ or Land Monitoring Requirements

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## 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
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

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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	Every 8 days	Grab sample
Cyanide	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
Phenols	milligrams per litre	Every 8 days	Grab sample
Temperature	degrees Celsius	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 89

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
Fluoride	milligrams 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
Total Zinc	milligrams per litre	Every 8 days	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

M2.5 For the purposes of the table(s) above:

- a) Special Frequency 6 means daily during any discharge which is not due to Wet Weather Conditions.

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- b) Special Frequency 7 means 24 representative grab samples per year. Samples must be taken a minimum of 15 days apart.
- c) 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.
- d) Special Frequency 9 means quarterly grab samples. Samples must be taken a minimum of 80 days apart.
- e) Special Frequency 10 means 6 representative grab samples per year. Samples must be taken a minimum of 50 days apart.

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

## 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

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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.

## M6 Weather monitoring

### M6.1 WIND SPEED AND DIRECTION RECORDING

Wind speed and wind direction must be monitored by an anemometer and wind vane according to Australian Standard 3580.14 of 2011, for the instrument calibration and operating method.

M6.2 The monitor must be located at/on the premises in accordance with Australian Standard 3580.1.1 of 2007 and Australian Standard 3580.14 of 2011.

## M7 Recording of pollution complaints

M7.1 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.

M7.2 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.

M7.3 The record of a complaint must be kept for at least 4 years after the complaint was made.

M7.4 The record must be produced to any authorised officer of the EPA who asks to see them.

## M8 Telephone complaints line

M8.1 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.

M8.2 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.

M8.3 The preceding two conditions do not apply until 3 months after:

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- a) the date of the issue of this licence or  
 b) if this licence is a replacement licence within the meaning of the Protection of the Environment Operations (Savings and Transitional) Regulation 1998, the date on which a copy of the licence was served on the licensee under clause 10 of that regulation.

## M9 Requirement to monitor volume or mass

M9.1 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

### 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



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## 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

- M9.2 *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
Volatile organic compounds	Tonnes/annum
Nitrogen oxides	Tonnes/annum
Benzo(a)pyrene	Tonnes/annum
Benzene	Tonnes/annum

- M9.3 *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.

## M10 Other monitoring and recording conditions

### M10.1 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.

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## M10.2 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
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

## 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:
- a Statement of Compliance; and
  - a Monitoring and Complaints Summary.

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

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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 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 Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:

a) the licence holder; or

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

**R1.9** A person who has been given written approval to certify a certificate of compliance under a licence issued under the Pollution Control Act 1970 is taken to be approved for the purpose of this condition until the date of first review of this licence.

## **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.

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## 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

- 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'*,

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'O4.13 BOS Kish Tipping', 'O4.14 Hot Metal Pouring', 'O4.17 - SRG Venting', and 'O4.19 Spectrus CT1300 Biocide'.

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

c) any additional data as requested by the EPA

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

NOTE: The requirement to provide an 'Annual Monitoring Report' will commence in the 2012/2013 licence year.

## R4.2 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.

### 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

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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
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

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18	Monitoring equipment upgrade at electroplating 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
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

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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
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



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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
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

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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
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

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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
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

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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 <sub>2</sub> 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
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

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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	-	-
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	-	-
138	Chemical Characterisation of Quencher Towers	-	-
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

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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
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
164	Steel Furnace Slag Dust Suppression Works	Oct-13	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 125 - 33kV Electrical Protection Upgrade

### U1.1 ORIGINAL NAME - PRP 125 IMPLEMENTATION OF THE 33 kV ELECTRICAL PROTECTION UPGRADE

### U1.2 This Pollution Reduction Program (PRP) has been agreed in accordance with section 4.3 of "The Statement of Agreed Facts for matter No 50020 of 2004, EPA v BlueScope Steel (AIS) Pty Limited.

The purpose of this PRP is for the licensee to upgrade the 33kV electrical protection system at its Port Kembla site consistent with current industry standard and Integral Energy's protection requirements such that it will respond to the type of fault that occurred on 14 March 2003 at the Oxygen Plant Substation, and limit the extent of the fault to Integral Energy incomer(s) directly supplying energy to the fault.

To improve the performance of the existing 33kV electrical protection system the overall philosophy of the scheme will be changed. The failure of any single element in the protection scheme will not prevent clearance of a fault on the 33kV system before operation of the distance protection at Integral Energy's supply substations.

In Stage 1 (which was PRP 121) the licensee has:

- Considered three alternative courses of action to upgrade the 33kV protection;
- Selected a preferred technical solution;
- Had the selected technical solution peer reviewed by an external industry protection specialist (Hydro Electric Corporation, Tasmania). Hydro Electric Corporation, Tasmania stated "The implementation of a protection scheme for the site based on duplicate unit protection for each element of primary plant and a fully implemented circuit breaker fail scheme is the correct approach which complies with standard industry practice"; and
- Concurred with the recommendations of the peer review and chosen to implement the selected technical solution.

Also the 33kV network has been re-configured with the aim of confining an incident such as that which occurred on 14 March 2003. The Environment Protection Authority (EPA) has been advised a steelworks wide blackout now should not occur following such an electrical fault.

### U1.3 Stage 2

1. The licensee must submit an implementation plan to the EPA for this upgrade by 30 June 2006. This plan must identify the indicative time when each sub-station will be upgraded.
2. The licensee must commence the installation of the selected technical solution by 31 December 2006.
3. The licensee must complete the upgrade by 31 July 2016.
4. The licensee must provide the EPA with regular reports on progress toward completing this upgrade. By 31 July each year, the licensee must provide the EPA a report. The report must include the following:
  - a) A certificate from an external industry protection specialist. The certificate must show:
    - that the commissioning tests for each upgraded substation has been evaluated; and
    - that the upgrade continues to comply with the stated objectives of this PRP.
  - b) A report that identifies the stages of the PRP completed over the previous 12 months, including any substations completed, or any other significant milestones.
 (The final report will coincide with completion of commissioning of the work and the external certification of the last item commissioned.)
5. The licensee must demonstrate to the EPA in a practical way how future changes to plant and equipment at the Steelworks can be assessed to confirm that the protection systems remain effective. Due date 30 June 2007. This would be best done by examining procedures adopted for an actual job which fell within the timeframe of this PRP.

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Note: PRPs 131 TO 152 REPRESENT THE 2008-2013 FIVE-YEAR PRP PROGRAM

## U2 PRP 131 - Develop Site Air Emissions Model

### U2.1 ORIGINAL TITLE - DEVELOP SITE AIR EMISSIONS MODEL TO PREPARE AND PRIORITISE FOR FUTURE WORKS

#### U2.2 Background/Objective

To develop a site wide model to account for a range of pollutants emitted from point sources and major fugitive sources. The model is to be used to quantify site emissions, assess off-site impacts, prioritise emissions for future mitigation works, locate monitoring equipment, and assess the impacts of future site changes to pollutant loads. Pollutants to be investigated are particulate matter (less than 10 microns), total solid particles, hydrogen sulphide, nitrogen oxides, sulphur oxides, dioxins, PAHs and VOCs. The initial phase of this PRP will concentrate on the control of particulate matter from the site to ensure ambient particulate matter guidelines are not exceeded.

Approved Methods for sampling hydrogen sulphide air emissions are based on a continuous stack discharge. Emissions from quench stacks and slag granulators are episodic and saturated with water vapour. Difficulty is therefore experienced in obtaining meaningful results for comparison with Clean Air Regulation limits. It is proposed to use the information gained from this PRP to develop a specific monitoring and reporting protocol for hydrogen sulphide. This protocol will be used in PRP 138 – 'Chemical Characterisation of the Coke Ovens Quench Plume'.

#### U2.3 Methodology / Deliverables

##### Part A: TSP and PM10

*Model Design:* By 29 February 2008 the licensee must submit the proposed model design for TSP and PM10 to the EPA for review. The design proposal must include:

1. The proposed methodology to estimate point and major area based fugitive emissions from each source. Note: Major area based fugitive emissions includes: iron ore stockpiles; coke stockpiles, coal stockpiles; limestone handling area; and slag stockpiles;
  2. The meteorological data to be used in the dispersion modelling;
  3. A description of the proposed dispersion model and a list of representative receiver locations for assessing results;
  4. A validation step where the predicted model results are compared against actual on site and ambient monitoring data; and
  5. A schedule for implementation of the data gathering, model development and validation phases.
- Completed

*Site Particulate Model:* By 18 December 2009, the licensee must submit a written report that :

6. Quantifies and ranks the total suspended particulate (TSP) matter and PM10 point source emissions and the major area based fugitive emission sources from the premises.
7. Provides the results of modelling that predicts TSP and PM10 concentrations surrounding the premises. At the selected representative receiver locations the sources most affecting the glc must be quantified.
8. Discusses the findings of the validation step listed as (d) above. (Note: If the predicted glc's and ambient monitoring data vary significantly, the licensee must recommend modifications to the model such as the inclusion of building based and other area based fugitive emission sources. Following agreement with the EPA on the improvements to the model, an alternative schedule will be agreed between the



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licensee and the EPA for completion of the modelling and the submission of the TSP and PM10 report).

9. Assesses the predicted TSP and PM10 concentrations surrounding the premises against the ground level concentration (glc) limits.

10. The licensee must develop a prioritised list of point sources and fugitive site sources that most significantly contribute to the total pollutant load or influence the glc.

11. Confirms the current siting or proposes the resiting of the existing ambient air quality monitors and/or the installation of additional ambient air quality monitors.

Completed

*Validation Testing Identification:* By 26 February 2010, the licensee must submit a written report that:

12. Outlines additional validation testing (if required) to be undertaken of those point sources and fugitive site sources identified in the prioritised list to confirm the actual contribution to the total pollutant load.

13. Includes which validation sites require testing methodologies to be developed.

Completed

*Validation Testing Methodology:* By 31 May 2011, the licensee must submit a written report that:

14. Details the validation sites and testing methodologies to be utilised.

15. Includes a schedule for the validation work.

16. Both 14 and 15 must be developed in consultation with the EPA.

Completed

*Remodelling Schedule:* By 30 June 2011, the licensee must submit a written report that:

17. Includes a schedule of work for the remodelling.

18. Provides a completion date for submission of the remodelling report.

Completed

## *Validation Testing*

19. Validation testing is to be undertaken in accordance with the methodology submitted to the EPA.

20. Validation testing is to be completed by 23 March 2012.

*Note: Validation testing to be carried out between 1 July 2011 and 23 March 2012.*

*Remodelling Report:* By 15 September 2012, the licensee must submit a written report to the Authority that:

21. Discusses the findings of the additional validation testing,

22. Addresses points 6 – 11 listed above.

23. Proposes a timeframe to complete Part E of this PRP.

## U2.4 Part B: NO<sub>x</sub>, SO<sub>x</sub>, Dioxins and VOCs

**Model Design:** By 28 February 2009 the licensee must submit a proposal for the inclusion of nitrogen oxides, sulphur oxides, dioxins, and VOCs in the Site Air Pollutant Model. The proposal must include:

1. The proposed methodology to estimate point and major fugitive emissions from each source

2. A description of any proposed changes to the dispersion model

3. A validation step where predicted model results are compared against actual on site and ambient monitoring data (where available); and

4. A schedule for implementation of the data gathering, any further model development and validation phases.

Completed

**Site Pollutant Model:** On the acceptance of the proposal by the EPA and in compliance with the agreed schedule, the licensee must submit a written report that:

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5. Quantifies and ranks point source emissions of nitrogen oxides, sulphur oxides, dioxins, and VOCs from the premises.
  6. Provides the results of modelling that predicts glc for each pollutant.
  7. For each pollutant, compare the predicted glc to relevant guideline limits.
  8. The licensee must develop a prioritised list of point sources and fugitive site sources that most significantly contribute to the total pollutant load or influence the glc.
  9. Confirms the current siting or proposes the resiting of the existing ambient air quality monitors and/or the installation of additional ambient air quality monitors.
- Completed

Validation Testing Identification: By 30 April 2010, the licensee must submit a written report that:

10. Outlines additional validation testing (if required) to be undertaken of those point sources and fugitive site sources identified in the prioritised list to confirm the actual contribution to the total pollutant load.
  11. Identifies which validation sites require testing methodologies to be developed.
- Completed

Validation Testing Methodology: By 31 May 2011, the licensee must submit a written report that:

12. Details the validation sites and testing methodologies to be utilised.
  13. Includes a schedule for the validation work.
  14. Both 14 and 15 must be developed in consultation with the EPA.
- Completed

Remodelling Schedule: By 30 June 2011, the licensee must submit a written report that:

15. Includes a schedule of work for the remodelling.
  16. Provides a completion date for submission of the remodelling report.
- Completed

Validation Testing

17. Validation testing is to be undertaken in accordance with the methodology submitted to the EPA.
  18. Validation testing is to be completed by 23 March 2012.
- Note: Validation testing to be carried out between 1 July 2011 and 23 March 2012.

Remodelling Report: By 15 September 2012, the licensee must submit a written report to the Authority that:

19. Discusses the findings of the additional validation testing,
20. Addresses points 5 – 9 listed above.
21. Proposes a timeframe to complete Part E of this PRP.

## U2.5 Part C: H<sub>2</sub>S:

*Monitoring Methodology:* By 31 October 2008 the licensee must submit a report to the EPA that:

1. Examines the methodologies used in other jurisdictions for the sampling and reporting of hydrogen sulfide from episodic stack emissions;
  2. Provides a proposed methodology for the sampling and reporting of hydrogen sulfide levels from the quench stacks and granulator stacks so that results may be meaningfully compared to limits shown in the Clean Air Regulation;
  3. Provides a schedule for implementation of the data gathering and model design.
- Completed

*Model Design:* On the acceptance of the proposed monitoring methodology by the EPA and in compliance with the agreed schedule, the licensee must submit the proposed model design for H<sub>2</sub>S to the

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EPA for review. The design proposal must include:

4. The proposed methodology to estimate the episodic point emissions from each source;
  5. A description of the proposed dispersion model;
  6. A validation step where predicted model results are compared against actual on site and ambient monitoring data; and
  7. A schedule for implementation of the data gathering, model development and validation phases.
- Completed

*Site H<sub>2</sub>S Model:* On the acceptance of the proposed model design by the EPA and in compliance to the agreed schedule, the licensee must submit a written report that:

8. Provides average hydrogen sulfide levels from the stacks while quenching and granulating is occurring;
9. Provides daily average hydrogen sulfide levels for coke ovens quench stacks and granulator stacks;
10. Provides modelled hydrogen sulfide results that includes all relevant sources across the whole premises;

Note 1: The modelling must be done using:

- a) The chosen methodology to estimate hydrogen sulphide, as detailed in item 4 above;
- b) Averaged hydrogen sulfide levels while quenching and granulating is occurring; and
- b) Daily average hydrogen sulfide levels for coke ovens quench stacks and granulator stacks

Note 2: All model input data must be reported.

Note 3: Hydrogen sulfide emissions are also to be reported in milligrams per cubic meter per quench

11. Compares modelled results to historical ambient results and relevant GLC guidelines.

Completed

*Validation Testing Identification:* By 30 April 2010, the licensee must submit a written report that:

12. Outlines additional validation testing (if required) to be undertaken of those point sources and fugitive site sources identified in the prioritised list to confirm the actual contribution to the total pollutant load.
13. Identifies which validation sites require testing methodologies to be developed.

Completed

*Validation Testing Methodology:* By 31 May 2011, the licensee must submit a written report that:

14. Details the validation sites and testing methodologies to be utilised.
15. Includes a schedule for the validation work.
16. Both 14 and 15 must be developed in consultation with the EPA.

Completed

*Remodelling Schedule:* By 30 June 2011, the licensee must submit a written report that:

17. Includes a schedule of work for the remodelling.
18. Provides a completion date for submission of the remodelling report.

Completed

*Validation Testing*

19. Validation testing is to be undertaken in accordance with the methodology submitted to the EPA.
20. Validation testing is to be completed by 23 March 2012.

Note: Validation testing to be carried out between 1 July 2011 and 23 March 2012.

*Remodelling Report:* By 15 September 2012, the licensee must submit a written report to the Authority that:

22. Discusses the findings of the additional validation testing,
23. Addresses points 8 – 11 listed above.

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24. Proposes a timeframe to complete Part E of this PRP.

## U2.6 Part D: PAH's

### *Model Design*

1. By 28 February 2009 the licensee must submit a proposal for inclusion of PAH into the Site Air Pollutant Model.

Completed

### *Assess Speciated PAH from Existing Monitors*

2. By 26 March 2010 submit a report that assesses the PAH monitoring data from existing sites for the speciated PAH and compare levels against relevant guideline values.

Completed

*Site PAH Model:* The licensee must submit a report to the EPA by 26 March 2010 that;

3. Uses the site air pollutant model and estimates of point source and fugitive PAH emissions to predict the location(s) of greatest potential glc in the areas surrounding the premises.

4. Makes recommendations with regard to the need for any additional monitoring stations to measure PAH.

Completed

*Validation Testing Identification:* By 30 April 2010, the licensee must submit a written report that:

5. Outlines additional validation testing (if required) to be undertaken of those point sources and fugitive site sources identified in the prioritised list to confirm the actual contribution to the total pollutant load.

6. Identifies which validation sites require testing methodologies to be developed.

Completed

*Validation Testing Methodology:* By 31 May 2011, the licensee must submit a written report that:

7. Details the validation sites and testing methodologies to be utilised.

8. Includes a schedule for the validation work.

9. Both 14 and 15 must be developed in consultation with the EPA.

Completed

### *Additional PAH Monitoring:*

10. By 30 June 2011, if the model determines that additional air monitors are necessary, install additional ambient air quality monitors as close as practicable to the locations identified by the modelling.

11. If additional PAH monitors are needed, monitor ambient concentrations for a period of about 5 years.

Completed

*Note: Model determined that additional monitors are not required.*

*Remodelling Schedule:* By 30 June 2011, the licensee must submit a written report that:

12. Includes a schedule of work for the remodelling.

13. Provides a completion date for submission of the remodelling report.

14. Includes a completion date for submission a report that contains an assessment of speciated PAH from monitors.

Completed

### *Validation Testing*

15. Validation testing is to be undertaken in accordance with the methodology submitted to the EPA.

16. Validation testing is to be completed by 23 March 2012.

*Note: Validation testing to be carried out between 1 July 2011 and 23 March 2012.*

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**Remodelling Report:** By 15 September 2012, the licensee must submit a written report to the Authority that:

17. Discusses the findings of the additional validation testing,
18. Addresses point 3 listed above.
19. Proposes a timeframe to complete Part E of this PRP.

**Assess Speciated PAH from Monitors:** By a date agreed with the EPA, the licensee must submit a report that assesses approximately 5 years of data and:

20. Compares the ambient air monitoring results against the glc criteria (1).
21. Develop a prioritised list of point sources and fugitive site sources that most significantly contribute to the total pollutant load or influence the glc
22. For the major sources identified in the prioritised list the licensee must include a cost/benefit analysis of the practicable and feasible options for mitigating the emissions.
23. If required, prioritises implementation of the mitigation works based on the above analysis and includes proposed dates for completion of mitigation works.
24. The licensee must present the findings and any proposed mitigation works to the EPA by the agreed date, at which time the schedule of works and the implementation timeframe will be agreed between the EPA and the Licensee. Note: Any major initiatives identified may result in the agreement of an additional PRP to be undertaken in the subsequent 5-Year plan.

## U2.7 PART E: Mitigation Works

1. For all major sources identified in the prioritised list for the TSP/PM10, NOx, SOx, Dioxins & VOC's models, conduct a cost/effectiveness analysis of the practicable and feasible options for mitigating the emissions.
2. If required, prioritise implementation of the mitigation works based on the above analysis and include proposed dates for completion of mitigation works.
3. The licensee must report these findings and any proposed mitigation works, to the EPA by a date agreed with the EPA, at which time the schedule of works and the implementation timeframe will be agreed between the EPA and the licensee.

Note 1: It is expected that works identified will be completed in the 2007/08-2011/12 financial year period, however any major initiatives may result in the agreement of an additional PRP to be undertaken in the subsequent 5-Year plan.

Note 2: If Part D steps 1 to 9 are completed when work commences on Part E, then PAHs may be included in the prioritisation of mitigation work described by this Part.

All sampling and assessment of results must be undertaken in accordance (DEC 2005) Approved Methods and Guidance for the Modeling and Assessment of Air Pollutants in NSW and (DEC 2005) Approved Methods for the Sampling and Analysis of Air Pollutants in NSW. Where this is not possible, an alternative method is to be agreed between the EPA and the licensee.

## U2.8 The completion dates for PRP 131 are summarised in the table below.

Item	Part A - TSP	Part B- NOx, SOx, Dioxins and VOC's	Part C - H2S	Part D - PAHs
Model Design	29 Feb 2008 Completed	28 Feb 2009 Completed	31 Oct 2008 Completed	28 Feb 2009 Completed

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Modelling Report	18 Dec 2009 Completed	30 March 2010 Completed	30 March 2010 Completed	26 March 2010 Completed
Validation Testing Identification	26 Feb 2010 Completed	30 Apr 2010 Completed	30 Apr 2010 Completed	30 April 2010 Completed
Validation Testing Methodology	31 May 2011 Completed	31 May 2011 Completed	31 May 2011 Completed	31 May 2011 Completed
Remodelling Schedule	30 Jun 2011 Completed	30 Jun 2011 Completed	30 Jun 2011 Completed	30 Jun 2011 Completed
Validation Testing	23 Mar 2012	23 Mar 2012	23 Mar 2012	23 Mar 2012
Remodelling Report	15 September 2012	15 September 2012	15 September 2012	15 September 2012
Additional Monitoring Equipment Installed	N/A	N/A	N/A	30 Jun 2011 Not required Completed
Part E: Mitigation Works	Date agreed with the EPA	Date agreed with the EPA	Date agreed with the EPA	Date agreed with the EPA
Part F: Coke Ovens Quencher Model	15 September 2012	15 September 2012	15 September 2012	15 September 2012

## U2.9 PART F: COKE OVENS QUENCHER MODEL

(Note: In October 2011 the EPA agreed with the licensee that Part 3 of PRP 138 should be combined into PRP 131)

### Stage 3: *Coke Ovens Quencher Model*

The licensee must submit a written report to the EPA that:

- 1) Compares the mass loads in kilograms (quencher water versus quench plume) of all pollutants investigated through Parts 1 and 2 of PRP 138.
- 2) Uses the site air model developed in PRP 131 to model the impacts of quenching on surrounding communities.
- 3) Details the results of the monitoring.
- 4) Provides a comparison of the results to relevant ground level concentration guidelines and a discussion of these results.

Due Date: 15 September 2012.

## U3 PRP 137 - Video Surveillance Management System

### U3.1 ORIGINAL TITLE - EXPANSION OF THE VIDEO SURVEILLANCE MANAGEMENT SYSTEM

#### U3.2 Background/Objective

Video surveillance systems have been implemented successfully at premises in the Illawarra to assist in identifying air emission sources and hence lead to site improvements. The purpose of this PRP is for the licensee to develop and implement an operational management system incorporating a video surveillance system to assess and record airborne pollutant emissions from selected areas. The video surveillance systems will be used to identify sources of fugitive emissions as well as investigate complaints and incidents as part of an improved monitoring and reporting system.



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## U3.3 Methodology / Deliverables

- i) By 30 November 2007 the licensee must submit a draft video surveillance management program to EPA which includes:
1. A schedule to install staged video surveillance units to monitor and record emissions continuously from the following areas:
    - Stage 1 - slag handling area to the north of the BOS,
    - Stage 2 - #5 and #6 Blast Furnaces cast house roofs,
    - Stage 3 - the Recycling Area (Metal Recovery Plant and the Crushing and Screening Plant).
  2. Time and date stamping on all images
  3. Operation in all weather conditions
  4. Real time access in control rooms and / or production units
  5. Development of a system for periodic review of tapes to assess operational performance and make changes to work practices where necessary.
- ii) The licensee must commence operation of the each stage of the video surveillance system within the agreed timeframe.
- iii) The licensee must supply EPA with a report on the first twelve months operation of each of the video surveillance systems installed as a result of this PRP and: detailing any:
- a) changes to the system to make it more useful; and
  - b) operational changes that have been implemented to make the video surveillance system an integral part of the licensee's environmental management systems.

Due dates:

- Stage 1 - 30 April 2008 - Completed
- Stage 1 Operation Report – 30 April 2009 - Completed
- Stage 2 - 30 April 2010 - Completed
- Stage 2 Operation Report – 30 April 2011 Completed
- Stage 3 - 30 December 2013
- Stage 3 Operation Report – 30 December 2014

## U4 PRP 163 - Verification of BOS Roof Monitoring Method

U4.1 ORIGINAL TITLE - PRP 163 VERIFICATION OF BOS ROOF MONITORING METHOD AND REMOVAL OF OPACITY METERS.

### U4.2 Background and Objective

Following the completion of PRP 159 investigating alternative methods to the current opacity monitors used to monitor BOS roof emissions, BSL will undertake further trials of a new permanently positioned camera with both visual and infra red recording capabilities. PRP 159 showed potential for good correlation of positive and negative detection of BOS roof emissions using both visual and infra red detection techniques. Under PRP 163 BSL will run a further trial to gather sufficient data under various climatic and operational conditions to validate the adequacy of the proposed emissions monitoring system. Following successful results of this trial BSL will permanently operate the camera system as the primary means of detecting emissions from the BOS roof. Subsequent to BSL implementing the camera and software detection system EPA will remove the requirement to operate the opacity meters at the BOS from the licence, allowing BSL to decommission the meters.

### U4.3 Deliverables

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## PART 1 – Relocate Camera - Installation

Relocate the trial camera to the mid landing of one of the BOS stacks to provide a preferred angle to better detect BOS roof emissions both visually and in the infra-red spectrum and reduce negative correlations.

DUE DATE: 28 February 2013 - COMPLETE

## PART 2a – Validation of new location with primary infra-red camera trial and report

Following completion of the new camera location trial (using the primary camera setup), prepare and submit a report on the success or otherwise of the new location and the readiness of the camera system and software.

DUE DATE: 14 June 2013 - COMPLETE

## PART 2b – Alternate infra-red camera trial and report

Following completion of the alternate camera trial, prepare and submit a report on the success or otherwise of the preferred infra-red camera, and the readiness of the camera system and software to be implemented for use as the primary means of BOS roof emissions.

DUE DATE: 15 July 2013 - COMPLETE

## PART 3 – Implement new BOS Emissions Monitoring System (Allowing removal of existing Opacity Meters)

Subsequent to EPA reviewing and approving the reports from Part 2a and Part 2b, BSL will permanently implement the preferred new infra-red camera and software system and use this to detect and report on BOS roof emissions. EPA will then vary the licence to remove the requirement to use opacity meters at the BOS.

DUE DATE: 14 February 2014

## 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



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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

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	m3/s	TM-2	Quarterly

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10	Temperature	K	TM-2	Quarterly
10	Moisture	%	TM-22	Quarterly
10	Dry gas density of stack gases	kg/m3	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	m3/s	TM-2	Quarterly
11	Temperature	K	TM-2	Quarterly
11	Moisture	%	TM-22	Quarterly
11	Dry gas density of stack gases	kg/m3	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	m3/s	TM-2	Quarterly
104	Temperature	K	TM-2	Quarterly
104	Moisture	%	TM-22	Quarterly
104	Dry gas density of stack gases	kg/m3	TM-23	Quarterly
104	Molecular weight of stack gases	g/g.mole	TM-23	Quarterly
10	Selection of sampling positions	-	TM-1	-
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

## E1.6 PREPARE A REPORT ON CLEANER PRODUCTION TECHNIQUES

The occupier must investigate the options available and their costs to reduce the levels of hydrogen sulphide in emissions from the Number Five Blast Furnace Slag Granulators and the Number Six Blast Furnace Slag Granulator. The occupier must provide a written report to the EPA detailing the cost and environmental effectiveness of the different options available for hydrogen sulphide reduction. In addition this report must recommend the most appropriate hydrogen sulphide control strategy to achieve the following hydrogen sulphide mass emission limits:-

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(a) Number Five Blast Furnace Slag Granulators (discharge points 10 and 11) – 0.2 g/s. This stack emission rate relates to a hydrogen sulphide ground level concentration of 1.38 ug/m<sup>3</sup> (nose response time average, 99th percentile) with the slag granulator operating 100% of available operating hours.

(b) Number Six Blast Furnace Slag Granulator (discharge point 104) – 0.2 g/s. This stack emission rate relates to a hydrogen sulphide ground level concentration of 1.38 ug/m<sup>3</sup> (nose response time average, 99th percentile) with the slag granulator operating 100% of available operating hours.

Complete.

## E2 Visible Emissions Monitoring and Reporting - BOS

### E2.1 BOS VISIBLE EMISSIONS REPORTING

The licensee must lodge a two weekly written report to EPA of all visible emissions from the roof of the BOS building, and from the tipping of kish at the BOS. The information must be provided to EPA as specified in condition E2, unless another time is agreed to by the EPA.

The report must include the following information:

- a) All emissions of dust from the tipping of kish with a Dust Emission Rating (DER) 3 or greater.
- b) All significant emissions of dust as regulated by condition O4.12 under the heading of O4.11 Basic Oxygen Steelmaking (BOS).
- c) All visible emissions of dust from the roof of the BOS, including charging emissions, that are not classified as significant emissions under the terms of condition O4.12.
- d) The date and time of all reported emissions.
- e) A trend line, that shows the number of kish tipping emissions (E2.1a), the number of significant BOS roof emissions (E2.1b), the number of non significant BOS roof emissions (E2.1c) and the number of BOS charging emissions (E2.1c), for the 'fortnight' being reported compared to the previous 12 months

## E3 Other Monitoring Conditions

### E3.1 2012 DRAIN MONITORING REVIEW

In March 2012, on the basis of historical monitoring data, the licensee proposed changes to water discharge points monitoring frequencies. Parts of this proposal were accepted by the EPA and the licence varied accordingly. The EPA and the licensee would like to revisit this proposal to compare the changes made to the EPL against the monitoring data collected after these changes.

By 30 April 2013 the licensee must submit an updated Drain Review Proposal which:

- i. revisits and updates the original proposal on the basis of additional monitoring conducted since that time.
- ii. compares current water quality monitoring sampling frequencies against the EPA Load Based Licensing sampling frequencies.

Due date: 30 April 2013

### 2013 DRAIN MONITORING REVIEW

In June 2013, on the basis of historical monitoring data, the licensee proposed changes to water discharge points monitoring frequencies. Parts of this proposal were accepted by the EPA and the

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licence varied accordingly. The EPA and the licensee would like to revisit this proposal to compare the changes made to the EPL against the monitoring data collected after these changes.

By 31 July 2014 the licensee must submit an updated Drain Review Proposal which:

- i. revisits and updates the original proposal on the basis of additional monitoring conducted since that time.
- ii. compares current water quality monitoring sampling frequencies against the EPA Load Based Licensing sampling frequencies.

Due date: 31 July 2014

## E4 Contaminated Lands Conditions

### Implementation of Priority Site Contamination Actions

#### E4.1 Background

As an outcome of PRP 160 the licensee must implement the Groundwater Monitoring Program and the Contaminated Lands Investigation at the Gas Holder Compounds in accordance with the approved program. That is BSL report Proposed Actions Report held on EPA file LIC07/1009-13 (DOC11/58844). Note: This program includes the commitments and additional information provided in the BSL correspondence of 14 September 2012 (EPA reference DOC12/38741).

#### Requirements

##### Groundwater Monitoring Program

1. The approved Groundwater Monitoring program data must be reviewed annually and a narrative of this review provided in a report to be submitted by 31 December each year until 2015.

##### Investigations Of Contaminated Land At The Gas Holder Compound

2. By 30 January 2013 must provide the following to the EPA:

- i. Further information on the September 2012 sampling which found tar in the gas holder north well (well G7)
- ii. Potential Polyaromatic Hydrocarbons (PAH) Contamination – an assessment of options to reduce or eliminate the risk of PAH contamination in soils including the removal of tar contaminated solids. The response must also include a preferred option and the anticipated implementation timing.
- iii. An assessment and recommendations regarding the implementation of further programs to those presented regarding the in-ground tanks. These could include a loss monitoring procedure, tank integrity testing, and details regarding the location of groundwater wells down-gradient of the in-ground tanks.

COMPLETE (EPA DOC13/2977) (DOC13/35855 15 July 2013)

##### Separate Phase Hydrocarbon Removal At The Coke Making / Gas Processing Area

2. By 1 August 2013 the results and an assessment report for the Contaminated Lands removal of Gas Processing light non-aqueous phase liquid must be provided to the EPA.

COMPLETE DOC13/39366 1 August 2013

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2. By 1 August 2014 the results and an updated assessment report for the Contaminated Lands removal of Gas Processing light non-aqueous phase liquid must be provided to the EPA.

## Program Review

3. By 31 December 2015 a Groundwater Monitoring Program Review Report must be submitted to the EPA.

The report must include but may not be limited to:

- i) all monitoring data and program findings to date
- ii) a discussion regarding any further delineation or data gaps that exist in the monitoring network
- iii) the adequacy of the existing monitoring procedures
- iv) A detailed summary on the extent of the plumes monitored by the Program through text and figures summarising relevant hydro-geological parameters (e.g. groundwater flow direction, gradient, estimated plume boundaries)
- v) recommendations for any modification to the monitoring program

Due Date: 31 December 2015

## E5 Special Dictionary

E5.1 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/m <sup>3</sup>	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.
NO <sub>x</sub>	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”
SO <sub>2</sub>	means Sulfur Dioxide.

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Wet weather conditions

means weather conditions in which ten or more millimetres of rain falls within a 24 hour period.

## E6 Works Implementation

### E6.1 Installation of Stormwater Works at Number 4 Blast Furnace Subs Area

To implement the remaining works identified in the PRP 134 report (EPA references NSR10/4452 and DOC11/550055):

1. By 30 June 2013 the licensee must submit detailed plans of works for the installation of stormwater soak away pits for the Number 4 Blast Furnace Subs Area to the EPA; and

Note: the soak away pit must be designed to retain a 95th percentile rain event over 5 days (i.e. 96.5 mm)

Complete (EPA reference DOC13/31071)

2. By 30 June 2014 the Licensee must have installed the above works.

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## Dictionary

### General Dictionary

<b>3DGM [in relation to a concentration limit]</b>	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
<b>Act</b>	Means the Protection of the Environment Operations Act 1997
<b>activity</b>	Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment Operations Act 1997
<b>actual load</b>	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
<b>AM</b>	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> .
<b>AMG</b>	Australian Map Grid
<b>anniversary date</b>	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.
<b>annual return</b>	Is defined in R1.1
<b>Approved Methods Publication</b>	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
<b>assessable pollutants</b>	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
<b>BOD</b>	Means biochemical oxygen demand
<b>CEM</b>	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> .
<b>COD</b>	Means chemical oxygen demand
<b>composite sample</b>	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.
<b>cond.</b>	Means conductivity
<b>environment</b>	Has the same meaning as in the Protection of the Environment Operations Act 1997
<b>environment protection legislation</b>	Has the same meaning as in the Protection of the Environment Administration Act 1991
<b>EPA</b>	Means Environment Protection Authority of New South Wales.
<b>fee-based activity classification</b>	Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 2009.
<b>general solid waste (non-putrescible)</b>	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

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<b>flow weighted composite sample</b>	Means a sample whose composites are sized in proportion to the flow at each composites time of collection.
<b>general solid waste (putrescible)</b>	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
<b>grab sample</b>	Means a single sample taken at a point at a single time
<b>hazardous waste</b>	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
<b>licensee</b>	Means the licence holder described at the front of this licence
<b>load calculation protocol</b>	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
<b>local authority</b>	Has the same meaning as in the Protection of the Environment Operations Act 1997
<b>material harm</b>	Has the same meaning as in section 147 Protection of the Environment Operations Act 1997
<b>MBAS</b>	Means methylene blue active substances
<b>Minister</b>	Means the Minister administering the Protection of the Environment Operations Act 1997
<b>mobile plant</b>	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
<b>motor vehicle</b>	Has the same meaning as in the Protection of the Environment Operations Act 1997
<b>O&amp;G</b>	Means oil and grease
<b>percentile [in relation to a concentration limit of a sample]</b>	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.
<b>plant</b>	Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.
<b>pollution of waters [or water pollution]</b>	Has the same meaning as in the Protection of the Environment Operations Act 1997
<b>premises</b>	Means the premises described in condition A2.1
<b>public authority</b>	Has the same meaning as in the Protection of the Environment Operations Act 1997
<b>regional office</b>	Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence
<b>reporting period</b>	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.
<b>restricted solid waste</b>	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
<b>scheduled activity</b>	Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997
<b>special waste</b>	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
<b>TM</b>	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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<b>TSP</b>	Means total suspended particles
<b>TSS</b>	Means total suspended solids
<b>Type 1 substance</b>	Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements
<b>Type 2 substance</b>	Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any compound containing one or more of those elements
<b>utilisation area</b>	Means any area shown as a utilisation area on a map submitted with the application for this licence
<b>waste</b>	Has the same meaning as in the Protection of the Environment Operations Act 1997
<b>waste type</b>	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.
- 18 Licence varied by notice 1036177, issued on 03-Jun-2004, which came into effect on 10-Jun-2004.

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|----|--|
| 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.                  |
| 37 | Licence varied by notice 1109845, issued on 17-Dec-2009, which came into effect on 17-Dec-2009.                  |

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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
60	Licence varied by notice 1506570 issued on 28-Jun-2012
61	Licence varied by notice 1507238 issued on 16-Aug-2012

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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