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Department of Planning and Environment
Industry Assessments
Via e-mail at: information@planning.nsw.gov.au

Attention: Ms Emma Barnet, Mr Nicholas Hall & Mr Kelly McNicol

14 May 2018

Dear Mr Ritchie

Weston Aluminium Pty Limited – SSD 7396
EPA revised recommended conditions of approval

I refer to the email from Ms Emma Barnet of the Department of Planning & Environment (DPE) dated 16 April 2018 seeking comment and input from the Environment Protection Authority (EPA) following that meeting held between DPE, the EPA, Weston Aluminium Pty Limited (Weston) and its consultant on 26 March 2018 in relation to State Significant Development (SSD) 7396 and following the consolidated correspondence from Mr Aleks Todoroski dated 13 April 2018. I appreciate the time afforded by DPE to allow the EPA to make a proper and informed submission.

Following the abovementioned meeting, Mr Todoroski's consolidated correspondence and following the additional information provided by Mr Chris McClung of Weston on 07 May 2018 in relation to the revised manufacturers performance guarantees, the EPA is generally able to support the proposal and provides its revised consolidated recommended conditions of approval at Attachment A.

You will find that the EPA:

1. Has revised the proposed concentration limits and reference conditions.

Note that the recommended discharge concentration limits do not require that the discharge from Stack 5 has an oxygen concentration of 11%. Instead, the concentrations at discharge must be referenced to 11% oxygen.

2. Has reduced the discharge concentration limits recommended by Mr Todoroski in 2017 for sulfuric acid, metals, cadmium, mercury and nitrogen oxides to ensure compliance with the *Protection of the Environment Operations (Clean Air) Regulation 2010* (the Regulation).

Note that both technical and legal input has been sought in relation to the revised concentration limits discussed above.

3. Only requires continuous emissions monitoring of the following pollutants: carbon monoxide, total solid particles and hydrochloric acid.

As discussed, this submission only relates to SSD 7396.

If the proponent wishes to discuss these revised consolidated recommended conditions of approval, please contact me in the first instance on (02) 4908 6830.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'Matthew Corradin', is positioned above the printed name.

MATTHEW CORRADIN
A/Unit Head Hunter South
Environment Protection Authority

CC: Weston representatives

ATTACHMENT A – EPA revised recommended conditions of approval (PART 1)

1. Preconstruction Design Report

At least 2 months prior to construction, the proponent must submit to DPE and the EPA a 'Preconstruction Design Report' which includes, but is not limited to:

- a. Final thermal treatment plant design;
- b. Detailed discussion and illustration of all process units and plant associated with generation and discharge of emissions from the thermal treatment plant;
- c. The design air/gas flow balance for the thermal treatment process expressed at both normalised and actual conditions;
- d. Manufacturers emission guarantees;
- e. Calculations of design discharge concentrations and emission rates from the thermal treatment plant; and
- f. Post commissioning Proof of Performance Air Emission Sampling Plan, for EPA approval, including
 - i. manual reference methods testing; and
 - ii. continuous emission monitoring, commissioning, quality assurance and calibration plans.

2. Post Commissioning Air Emission Verification Report

Within 3 months of commissioning, the proponent must submit to DPE and the EPA a "Post Commissioning Air Emissions Verification Report" for the thermal waste treatment plant which includes:

- a. Air emissions sampling results for the thermal treatment plant obtained in accordance with the EPA approved Post Commissioning Proof of Performance Air Emission Sampling Plan;
- b. Comparison of the emission sampling results against the discharge limits for the thermal treatment plant specified in the Environment Protection Licence for the premises;
- c. Detailed evaluation of potential off-site impacts based on measured emission concentrations and rates; and
- d. Proposed approach, including timeframe for implementation, to resolve any non-compliances with Environment Protection Licence limits and the *Protection of the Environment Operations (Clean Air) Regulation 2010*.

3. Air Quality Management Plan

The proponent must develop and implement an air quality management plan to the satisfaction of DPE and the EPA prior to the commencement of project operations. As a minimum, the air quality management plan must include the following parts:

- a. Key performance indicator(s);
- b. Monitoring method(s);
- c. Location, frequency and duration of monitoring;
- d. Record keeping;
- e. Response mechanisms; and
- f. Compliance reporting.

ATTACHMENT A – EPA revised recommended conditions of approval (PART 2 – to be added to environment protection licence 6423 if approval is granted)

1. Thermal Waste Treatment Plant Operations and Processing

- a. Thermal treatment of waste at the premises must, at a minimum, use of a primary and secondary (two stage) combustion.
- b. The maximum amount of waste that can be processed per hour is 800 kilograms;
- c. Acceptable wastes are limited to:
 - i. Medical wastes;
 - ii. Quarantine wastes (no more than 15%¹ by mass at any one time); and
 - iii. Other wastes: limited to oily rags, pitch sludge residue and solvents and paints, confidential documents (no more than 10%¹ by mass at any one time); and waste chemical substances from research and development or teaching activities. Waste chemical substances from research and development or teaching activities must not be used unless specifically approved in writing by the EPA prior to use.
- d. The bypass stack (stack 8) is not to be used except in the event of an emergency shutdown. The Licensee must notify the EPA immediately in the event that emissions are directed to and discharged from the bypass stack.
- e. All emissions from the burnout hearth must be directed to emission control equipment associated with the thermal treatment plant.
- f. The reverberatory furnace and thermal treatment plant (rotary kiln) cannot be used simultaneously.
- g. Emissions from point 13 (stack 5) should have a minimum velocity at discharge of 18 m/s.

2. Concentration Limits

The concentration of a pollutant discharging from discharge point 13 (Stack 5) when the thermal processing plant is operational must not exceed the concentration limits specified for that pollutant in the table below:

- a. Limit conditions for licensed discharge point 13 (Stack 5), when the rotary kiln is in operation.

Pollutant	Units of measure	100 percentile concentration limit	Reference conditions	Averaging Period
Volatile Organic Compounds (as n-propane)	mg/m ³	20 ¹	Dry, 273K, 101.3kPa 11% O ₂	1 hour rolling
Hydrogen Chloride	mg/m ³	50	Dry, 273K, 101.3kPa 11% O ₂	1 hour, or the minimum sampling period specified in the relevant test method referred to in Part 1 Schedule 5 of Part 7 of the Regulation
Solid Particles	mg/m ³	20	Dry, 273K, 101.3kPa 11% O ₂	
Sulphuric acid mist and/or sulphur trioxide	mg/m ³	50	Dry, 273K, 101.3kPa 11% O ₂	

Type I and Type II substances in aggregate	mg/m ³	0.5	Dry, 273K, 101.3kPa 11% O ₂	whichever is the greater.
Cadmium	mg/m ³	0.1	Dry, 273K, 101.3kPa 11% O ₂	
Mercury	mg/m ³	0.1	Dry, 273K, 101.3kPa 11% O ₂	
Nitrogen Oxides (as NO ₂ equivalent)	mg/m ³	190	Dry, 273K, 101.3kPa 11% O ₂	1 hour block
Dioxins or Furans	ng/m ³	0.1	Dry, 273K, 101.3kPa 11% O ₂	6 hours
Sulfur Dioxide	mg/m ³	200	Dry, 273K, 101.3kPa 11% O ₂	1 hour block
Carbon Monoxide	mg/m ³	62.5	Dry, 273K, 101.3kPa 11% O ₂	1 hour rolling

These percentage limits, as well as the need for percentage limits, will be reviewed by the EPA following receipt of the post commissioning Air Emissions Verification Report.

The EPA intends to review the concentration limit for volatile organic compounds based on test results from the post commissioning verification report.

3. Monitoring and Recording Conditions

The licensee must monitor the concentration of each pollutant and parameter specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency specified, in the other columns.

a. Monitoring Requirement for Discharge Point 13 (Stack 5)

Pollutant	Units of measure	Frequency	Sampling Method
Sampling position			TM-1
Cadmium	mg/m ³	Quarterly	TM-14
Carbon Monoxide	mg/m ³	Continuous	CEM-4
Dioxins or Furans	ng/m ³	Quarterly	TM-18
Dry gas density	mg/m ³	Quarterly	TM-23
Hydrogen Chloride	mg/m ³	Continuous	Special Method 1
Mercury	mg/m ³	Quarterly	TM-14
Nitrogen Oxides (as NO ₂ equivalent)	mg/m ³	Quarterly	TM-11
Oxygen (O ₂)	%	Continuous	CEM-3
Solid Particles	mg/m ³	Continuous	Special Method 2
Sulfuric acid mist and sulfur trioxide	mg/m ³	Quarterly	TM-3
Sulfur dioxide	mg/m ³	Quarterly	TM-4
Temperature	°K	Continuous	CEM-6
Type I and Type II substances in aggregate	mg/m ³	Quarterly	TM-12, TM-13 & TM-14
Velocity	m/s	Continuous	CEM-6
Volatile Organic Compounds	mg/m ³	Quarterly	TM-34
Volumetric flowrate	m ³ /s	Continuous	CEM-6

Notes:

1. TM Sampling must be conducted under conditions associated with reasonable worst case emissions potential, with consideration of process load and waste composition.

Special Method 1: means US EPA Performance Specification 18 or an alternative method agreed to in writing by the EPA

Special Method 2: means US EPA Performance Specification 11 or an alternative method agreed to in writing by the EPA