Ektimo

Address (Head Office)
427 Canterbury Road,
SURREY HILLS VIC 3127

Postal Address
Unit 3, 4 Monash Gate,
JANDAKOT WA 6164

Office Locations
VIC NSW WA QLD

Freecall: 1300 364 005
Int'l Call: +61 3 9813 7200
www.ektimo.com.au
ABN: 86 600 381 413

Report Number R001934

Workplace Testing Report
Clingcast Metals, Kirrawee

Document Information

Client Name:	Clingcast Metals
Report Number:	R001934
Date of Issue:	27 November 2015
Attention:	Chris Harden
Address:	98 Bath Rd KIRRAWEE NSW 2232
Testing Laboratory:	Ektimo (EML) ABN 98 006 878 342

Report Status

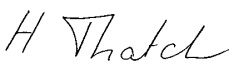
Format	Document Number	Report Date	Prepared By	Reviewed By (1)	Reviewed By (2)
Preliminary Report	-	-	-	-	-
Draft Report	-	-	-	-	-
Final Report	R001934	27 November 2015	JWe	DHi/HTh	DBa
Amend Report	-	-	-	-	-

Template Version: 150504

Amendment Record

Document Number	Initiator	Report Date	Section	Reason
Nil	-	-	-	-

Report Authorisation



Heath Thatcher
Client Manager

Daniel Balaam
Senior Laboratory Chemist

Table of Contents

1 EXECUTIVE SUMMARY

Ektimo was engaged by Clingcast Metals to determine workplace emissions to air as detailed below;

Location	Test Date	Test Parameters*
S. Feng (Personal)	3 November 2015	Inspirable dust, metals (type 1 and 2 substances)
Tim Dillon (Personal)	3 November 2015	Inspirable dust, metals (type 1 and 2 substances)
Moulding Area (Static)	3 November 2015	Inspirable dust, metals (type 1 and 2 substances)
Furnace Area (Static)	3 November 2015	Inspirable dust, metals (type 1 and 2 substances)

Test results are compared to Safe Work Australia workplace exposure standards of airborne contaminants. Specifically, the relevant Time Weighted Average Exposure Standard - (TWA) expressed as the airborne concentrations of that substance. This document can be found at:

http://www.safeworkaustralia.gov.au/sites/swa/about/publications/pages/workplace-exposure-standards
or,
http://safeworkaustralia.gov.au

All results are corrected to STP (standard conditions of temperature and pressure) i.e. 25°C and an atmospheric pressure of 101.325 kPa, unless otherwise specified

Pollutant	Units	TWA	S.Feng Detected Values 3/11/15	T.Dillon Detected Values 3/11/15	Moulding Area Detected Values 3/11/15	Furnace Area Detected Values 3/11/15
Inhalable Dust	mg/m^3	10	1.9	1.2	0.29	0.45
Antimony	mg/m^3	0.5	<0.01	<0.0098	<0.0098	<0.0099
Arsenic	mg/m^3	0.05	<0.004	<0.0039	<0.0039	<0.004
Cadmium	mg/m^3	0.01	<0.001	<0.00098	<0.00098	<0.00099
Lead	mg/m^3	0.05	0.002	0.002	<0.002	0.002
Mercury	mg/m^3	0.025	<0.0004	<0.00039	<0.00039	<0.0004
Beryllium	mg/m^3	0.002	<0.002	<0.002	<0.002	<0.002
Chromium	mg/m^3	0.5	0.001	<0.00098	<0.00098	<0.00099
Cobalt	mg/m^3	0.05	<0.001	<0.00098	<0.00098	<0.00099
Manganese	mg/m^3	1	0.002	0.0014	0.00098	0.0014
Nickel	mg/m^3	1	<0.002	<0.002	<0.002	<0.002
Selenium	mg/m^3	0.1	<0.01	<0.0098	<0.0098	<0.0099
Tin	mg/m^3	2	<0.004	<0.0039	<0.0039	<0.004
Vanadium	mg/m^3	0.05	<0.002	<0.002	<0.002	<0.002

Note: All analytes in green are below the TWA set by the Safe Work Australia workplace exposure standards of airborne contaminants.

2 RESULTS

2.1 Personal and Static

Date	3/11/2015	**Client**	Clingcast Metals		
Report	R001934	**Site ID**	Workshop		
Licence No.	-	**Location**	Kirrawee	**State**	NSW
Ektimo Staff	Swe/ Ada				
Reason for testing:	Client requested testing to determine emissions to air				

	S.Feng (Personal)	Tim Dillon (Personal)	Moulding Area (Static)
Date	3/11/15	3/11/15	3/11/15
Start/End time	0752-1152	0804-1205	0806-1208
Sample period (min)	240	241	242
	Concentration mg/m³	Concentration mg/m³	Concentration mg/m³
Inspirable dust	1.9	1.2	0.29
Lead	0.002	0.002	<0.002
Antimony	<0.01	<0.0098	<0.0098
Arsenic	<0.004	<0.0039	<0.0039
Cadmium	<0.001	<0.00098	<0.00098
Mercury	<0.0004	<0.00039	<0.00039
Beryllium	<0.002	<0.002	<0.002
Chromium	0.001	<0.00098	<0.00098
Cobalt	<0.001	<0.00098	<0.00098
Manganese	0.002	0.0014	0.00098
Nickel	<0.002	<0.002	<0.002
Selenium	<0.01	<0.0098	<0.0098
Tin	<0.004	<0.0039	<0.0039
Vanadium	<0.002	<0.002	<0.002
Type 1 Substances	0.002	0.002	<0.0098
Type 2 Substances	0.003	0.0014	0.00098
Type 1 and 2 Substances	0.0051	0.0033	0.00098

	Furnace Area (Static)
Date	3/11/15
Start/End time	0808-1210
Sample period (min)	242 min
	Concentration mg/m³
Inspirable dust	0.45
Lead	0.002
Antimony	<0.0099
Arsenic	<0.004
Cadmium	<0.00099
Mercury	<0.0004
Beryllium	<0.002
Chromium	<0.00099
Cobalt	<0.00099
Manganese	0.0014
Nickel	<0.002
Selenium	<0.0099
Tin	<0.004
Vanadium	<0.002
Type 1 Substances	0.002
Type 2 Substances	0.0014
Type 1 and 2 Substances	0.0034

3 TEST METHODS

All sampling and analysis was performed by Ektimo unless otherwise specified. Specific details of the methods are available upon request

Parameter	Reference Method	Method Detection Limit	Uncertainty*
Inhalable dust	AS 3640-2009	-	-
Metals [1]	NIOSH 7300	-	-

* Uncertainty values cited in this table are calculated at the 95% confidence level (coverage factor = 2)

1. Analysis was performed by Envirolab, NATA accreditation number 2901. Results were reported to Ektimo on 19 November 2015 in report number 137214.

4 QUALITY ASSURANCE/ QUALITY CONTROL INFORMATION

Ektimo is accredited to Australian Standard 17025 – General Requirements for the Competence of Testing and Calibration Laboratories. Australian Standard 17025 requires that a laboratory have a quality system similar to ISO 9002. More importantly it also requires that a laboratory have adequate equipment to perform the testing, as well as laboratory personnel with the competence to perform the testing. This quality assurance system is administered and maintained by the Compliance Manager.

A formal Quality Control program is in place at Ektimo to monitor analyses performed in the laboratory and sampling conducted in the field. The program is designed to check where appropriate; the sampling reproducibility, analytical method, accuracy, precision and the performance of the analyst. The Laboratory Manager is responsible for the administration and maintenance of this program.

5 DEFINITIONS

The following symbols and abbreviations may be used in this test report:

STP	Standard temperature and pressure. Gas volumes and concentrations are expressed on a dry basis at 25°C, at discharge oxygen concentration and an absolute pressure of 101.325 kPa, unless otherwise specified.
TWA	(Exposure Standard - Time Weighted Average) expressed as airborne concentrations of substances, is an average concentration which provides a guideline value a worker should not be exposed to over an eight hour working day. Excursions above this value are permitted (within STEL limitations) providing these excursions are compensated with equivalent excursions below the standard during the working day. However, because some substances can give rise to acute health effects even after brief exposures to high concentrations, it is evident that excursions above the TWA concentration should be restricted. Reference : Exposure Standards for Atmospheric Contaminants in the Occupational Environment, 3rd Ed. Worksafe Australia Standard, May, 1995.
STEL	(Exposure Standard - Short term exposure limit) expressed as airborne concentrations of substances, provides a guideline for which the worker should not be continuously exposed to for more than 15 minutes. A minimum of 60 minutes should be allowed between each exposure and the worker should not be exposed more than four times during the day. Reference : Exposure Standards for Atmospheric Contaminants in the Occupational Environment, 3rd Ed. Worksafe Australia Standard, May, 1995.
Peak Limitation	For some rapidly acting substances and irritants, the averaging of the airborne concentration over an eight-hour period is inappropriate. These substances may induce acute effects after relatively brief exposure to high concentrations and so the exposure standard for these substances represents a maximum or peak concentration to which workers may be exposed. Although it is recognised that there are analytical limitations to the measurement of some substances, compliance with these `peak limitation' exposure standards should be determined over the shortest analytically practicable period of time, but under no circumstances should a single determination exceed 15 minutes.
<	Less than