

<i>Environmental Impact Assessment for Proposed Expansion of Aluminium Smelting Plant on Lot 36, Samalaju Industrial Park, Bintulu, Sarawak for Press Metal Bintulu Sdn. Bhd.</i>	Project No:	<i>P17004</i>
	Revision:	<i>0</i>
	Date:	<i>June 2019</i>

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LIST OF ABBREVIATIONS AND ACRONYMS

°C	Degree Celsius
µg/m ³	Micrograms Per Meter Cube
2D	2-Dimentional
3D	3-Dimentional
A	Ampere
ADMI	American Dye Manufacturer's Institute
AEGL	Acute Exposure Guideline Level
Ag	Silver
Al	Aluminium
Al ₂ O ₃	Aluminium Oxide, Alumina
ALARP	As Low as Reasonably Practicable
AlF ₃	Aluminium Fluoride
ALOHA	Areal Locations of Hazardous Atmospheres
AN	Ammoniacal Nitrogen
APC	Air Pollution Control
APCD	Air Pollution Control Devices
APCS	Air Pollution Control System
APHA	American Public Health Association
As	Arsenic
ASTM	American Society for Testing and Materials
atm	Atmospheric Pressure
B	Boron
Ba	Barium
BAT	Best Available Technology
BATEA	Best Available Technique Economically Achievable
BB	Billboard
BDA	Bintulu Development Authority
Be	Beryllium
BMP	Best Management Practice
BOD	Biochemical Oxygen Demand
BS	British Standard
BTEX	Benzene, Toluene, Ethylbenzene and Xylene
C	Carbon
C ₂ F ₆	Hexafluoroethane
CAD	Computer Aided Design
CadnaA	Computer Aided Noise Abatement Model
CAGR	Compound Annual Growth Rate
CAR	Clean Air Regulations
CC	Communication Channel
CCM	Chain Cleaning Machine
Cd	Cadmium
CEMS	Continuous Emission Monitoring System
CEMS-DIS	Continuous Emission Monitoring Systems-Data Interface System
CEO	Chief Executive Officer
CePBFO	Certified Environmental Professional in Bag Filter Operation
CePSO	Certified Environmental Professional in Scrubber Operation
CePSWaM	Certified Environmental Professional in Scheduled Waste Management

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CF ₄	Tetrafluoromethane
Cl ₂	Chlorine
CN	Cyanide
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
COA	Conditions of Approval
COD	Chemical Oxygen Demand
CP	Competent Person
Cr	Chromium
Cr ³⁺	Chromium Trivalent
Cr ⁶⁺	Chromium Hexavalent
Cu	Copper
DA	Data Analysis
dB	Decibel
dB(A)	A-Weighted Decibel
DEIA	Detailed Environmental Impact Assessment
DO	Dissolved Oxygen
DOE	Department of Environment
DOE-CLM	Contaminated Land Management and Control Guidelines
DRU	Dross Recovery Unit
E	East
E.S.	Environmental Science
EB	Environmental Budgeting
EC	Environmental Competency, Environmental Consultants, Exposure Concentration
ECA	Environmental Compliance Audit
ECAR	Environmental Compliance Audit Report
ECER	East Coast Economic Region
ECN	E-Consignment Note
EESIM	Environmental Essentials for Siting of Industries in Malaysia
EF	Emission Factor
EGIM	Environmental Impact Assessment Guideline in Malaysia
EHS	Environmental, Health, and Safety
EIA	Environmental Impact Assessment
EMC	Environmental Monitoring Committee
EMP	Environmental Management Plan
EMR	Environmental Monitoring Report
EO	Environmental Officer
EPA	Environmental Protection Agency
EPMC	Environmental Performance Monitoring Committee
EQ	Environmental Quality
EQA	Environmental Quality Act
ERC	Environmental Reporting and Communication
ERCMC	Environmental Regulatory Compliance Monitoring Committee
ERP	Emergency Response Plan
ESI	Environmental Scoping Information
ESM	Electrolyte Shovelling Machine
ESR	Environmental Sustainability Report
eSWIS	Electronic Scheduled Waste Information System

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ET	Environmental Transparency
F	Fluoride
FD	Final Discharge Point
Fe	Iron
FTS	Fume Treatment System
g/s	Gram Per Second
GCC	Gulf Cooperation Council
GHG	Greenhouse Gases
GLC	Ground Level Concentration
GLCC	Global Land Cover Characterisation
GPS	Global Positioning System
GWH	Gigawatt hour
GWP	Global Warming Potential
H	Height
H ₂	Hydrogen
HAZOP	Hazard and Operability study
HF	Hydrogen Fluoride
Hg	Mercury
HIA	Health Impact Assessment
HIV	Human Immunodeficiency Virus
HPV	Human Papillomavirus
Hr	Hour
HRA	Health Risk Assessment
HSV	Herpes Simplex Virus
Hz	Hertz
IAI	International Aluminium Institute
lb/ton	Pound per Ton
ID	Identification
IETS	Industrial Effluent Treatment System
IFC	International Finance Corporation
IR	Internal Reporting
IRDA	Iskandar Malaysia in Southern Johor
ISO	International Standard Organization
IT	Interim Target
ITC	Iron Thimble Crusher
IWMS	Integrated Waste Management System
K	Kelvin
kA	Kiloampere
Kg	Kampung
kg	Kilogram
kg/MT	Kilogram Per Metric Ton
KLSE	Kuala Lumpur Stock Exchange
km	Kilometer
km/h	Kilometer Per Hour
km/hr	Kilometer Per Hour
kW	Kilowatt
kW/m ²	Kilowatt Per Meter Square
L	Liter
L ₁₀	Noise Level Exceeded for 10% of Measurement Period
L ₉₀	Noise Level Exceeded for 90% of Measurement Period

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L _{Aeq}	A-Weighted Equivalent Sound Level
L _{max}	Maximum Sound Level
L _{min}	Minimum Sound Level
LPG	Liquefied Petroleum Gas
m	Meter
m/s	Meter Per Second
m ²	Meter Square
m ³	Cubic Meter
m ³ /day	Cubic Meter Per Day
m ³ /hr	Cubic Meter Per Hour
m ³ /min	Cubic Meter Per Minute
m ³ /year	Cubic Meter Per Year
MAAQS	Malaysian Ambient Air Quality Standard
MAIC	Maximum Average Incremental Concentration
Mg	Magnesium
mg/kg	Milligram Per Kilogram
mg/l	Milligram Per Liter
mg/L	Milligram Per Liter
mg/m ³	Milligram Per Cubic Meter
mg/Nm ³	Milligram Per Newton Cubic Meter
mm	Millimeter
Mn	Manganese
MPA	Malaysian Phosphate Additives
MS	Malaysia Standard
MSDS	Material Safety Data Sheet
MT	Metric Ton
MT/m ³	Metric Ton Per Cubic Meter
MT/month	Metric Ton Per Month
MT/year	Metric Ton Per Year
N	North
N/A	Not available
N ₂	Nitrogen
NA	Not Available
Na ₂ AlF ₆	Cryolite
NCER	Northern Corridor Economic Region
NCR	Non-Compliance Report
NE	North East
NH ₃	Ammonia
Ni	Nickel
NO ₂	Nitrogen Dioxide
NOAA	National Oceanic and Atmospheric Administration
NTU	Nephelometric Turbidity Unit
NWQS	National Water Quality Standard
O&G	Oil and Grease
O ₃	Ozone
OAAQC	Ontario's Ambient Air Quality Criteria
OBR	Observations
P	Power
P2M2	Pollution Prevention and Mitigation Measures
PAH	Polycyclic Aromatic Hydrocarbon

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Pb	Lead
PC	Pre-Commissioning
PCB	Polychlorinated Biphenyl
PFC	Perfluorocarbon
pH	
PM	Particulate Matter
PM ₁₀	Particulate Matter Less than 10 micron
PM _{2.5}	Particulate Matter Less than 2.5 micron
PMB	Press Metal Bintulu
PP	Project Proponent
PPE	Personal Protective Equipment
Q	Air Flow
QRA	Quantitative Risk Assessment
RECODA	Regional Corridor Development Authority
RfC	Reference Concentration
RI	Risk Integration (Characterisation)
RMK	Rancangan Malaysia
rpm	Rate Per Minute
RRA	Relative Accuracy Audit
S	South, Sulphur
S ²⁻	Sulfide
SAMM	Skim Akreditasi Makmal Malaysia
Sb	Antimony
SCORE	Sarawak Corridor of Renewable Energy
SDC	Sabah Development Corridor
Sdn. Bhd.	Sendirian Berhad
Se	Selenium
SE	South East
Sg	Sungai
SHO	Safety and Health Officer
Si	Silicone
SIP	Samalaju Industrial Park
SO ₂	Sulphur Oxides
SOP	Standard Operation Procedures
SPL	Sound Power Levels, Spent Pot Linings
STD	Sexually-Transmitted Diseases
Std	Standard
STP	Sewage Treatment Plant
SW	Scheduled Waste
SW	South West
TF	Total Fluoride
Tin	Sn
TOR	Terms of References
TORAC	Terms of Reference Adequacy Check
TPH	Total Petroleum Hydrocarbon
T _r	Flash Point
TSS	Total Suspended Solids
US\$	US Dollar
USEPA	United States Environmental Protection Agency
V	Volt

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v/v	Volume/Volume
VAR	Varies
VOC	Volatile Organic Compound
W	West
W	Width
WHO	World Health Organization
WS	Website
XRF	X-Ray Fluorescence
Zn	Zinc