Attn: Mike Young
Department of Planning & Environment
23-33 Bridge Street
SYDNEY NSW 2000

05-June-2015

RE: Galong Limestone Mine and Kiln Emission Monitoring Requirements

Dear Mike,

In regards to our conversation on the 4th of June, Sibelco are currently undertaking a refurbishment of the kiln at the Galong Limestone Mine and Kiln at Galong, NSW. As this project is approaching the commissioning phase, I have undertaken a review of the Development Approval and the Environmental Protection Licence to determine requirements for the commissioning and operational phases of the project and found that there are inconsistencies between the DA and EPL regarding monitoring emissions from the lime kiln stack.

The below information provides details of the emissions monitoring requirements for each of these documents.

Development Approval 317-7-2003-i (2003)

Section 4.2 of the DA states that:
For each monitoring/discharge point or utilisation area specified in column 1 of Table 5 the applicant must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in column 2. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns.

Table 1 below has been extracted from DA 317-7-2003-i showing monitoring requirements and frequency.

Table 1: DA Air Quality Monitoring Requirements

Location	Pollutant	Units of Measure	Frequency	Sampling Method
Lime Kiln Stack	Solid Particles	mg/m^3	Post commissioning, Annually	TM-15
	Hazardous Substances	mg/m^3	Post commissioning, Annually	TM-12, TM-13, TM-14
	Mercury	mg/m^3	Post commissioning, Annually	TM-12, TM-13, TM-14
	Cadmium	mg/m^3	Post commissioning, Annually	TM-12, TM-13, TM-14
	Nitrogen Oxides	mg/m^3	Post commissioning, Annually	TM-11
	Sulphur Oxides	mg/m^3	Post commissioning, Annually	TM-4
	Carbon Monoxide or	mg/m^3	Post commissioning, Annually	OM-1 or OM-2

Location	Pollutant	Units of Measure	Frequency	Sampling Method
	Volatile Organic Compounds			
	Velocity	m/s	Post commissioning, Annually	TM-2
	Volumetric Flow Rate	M^3/sec	Post commissioning, Annually	TM-2
	Temperature	°C	Post commissioning, Annually	TM-2
	Moisture	%	Post commissioning, Annually	TM-22
	Dry Gas Density	Kg/m^2	Post commissioning, Annually	TM-23
	Molecular Weight of Stack Gasses	g/g.mol	Post commissioning, Annually	TM-23
	Oxygen	%	Post commissioning, Annually	TM-25
	Carbon Dioxide	%	Post commissioning, Annually	TM-24
	Carbon Monoxide or Volatile Organic Compounds	mg/m^3	Continuous	CEM-4 or CEM-8
	Temperature	°C	Continuous	TM-2
	Moisture	%	Continuous	TM-22
	Volumetric Flow Rate	M^3/sec	Continuous	CEM-6
	Oxygen	%	Continuous	CEM-3
	Selection of Sampling Points			TM-1

Environmental Protection Licence 4660 (2012)

Section M2 states that:
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

Tables 2 and 3 below have been extracted from EPL 4660 showing monitoring requirements and frequency.

Table 2: Air Monitoring Requirements Point 1

Pollutant	Unit of Measure	Frequency	Sampling Method
Cadmium	milligrams per cubic metre	Yearly	TM-12, TM-13, TM-14

Pollutant	Unit of Measure	Frequency	Sampling Method
Carbon Dioxide	percent	Yearly	TM-24
Dry Gas Density	kilograms per cubic metre	Yearly	TM-23
Hazardous Substances	milligrams per cubic metre	Yearly	TM-12, TM-13, TM-14
Mercury	milligrams per cubic metre	Yearly	TM-12, TM-13, TM-14
Moisture	percent	Yearly	TM-22
Molecular Weight of Stack Gasses	grams per gram mole	Yearly	TM-23
Nitrogen Oxides	milligrams per cubic metre	Yearly	TM-11
Oxygen	percent	Yearly	TM-25
Solid Particles	milligrams per cubic metre	Yearly	TM-15
Sulphur Oxides	milligrams per cubic metre	Yearly	TM-4
Temperature	degrees Celsius	Yearly	TM-2
Velocity	metres per second	Yearly	TM-2
Volatile Organic Compounds	milligrams per cubic metre	Yearly	OM-2
Volumetric Flow Rates	cubic metres per second	Yearly	TM-2

Table 3: Air Monitoring Requirements Point 2

Pollutant	Unit of Measure	Frequency	Sampling Method
Moisture	percent	Yearly	TM-22
Solid Particles	milligrams per cubic metre	Yearly	TM-15
Temperature	degrees Celsius	Yearly	TM-2
Velocity	metres per second	Yearly	TM-2
Volumetric Flow Rates	cubic metres per second	Yearly	TM-2

From review of Sibelco documentation I have determined that the EPL for the Galong Limestone Mine and Kiln has been varied three times resulting in the inconsistency:

- 23/06/2004 Conditions added with regards to the kiln, including the requirement for continuous monitoring

- 11/12/2008 Condition removed with regards to requirement for continuous carbon monoxide monitoring

- 04/08/2010 Conditions removed with regards to all continuous monitoring requirements

As this information indicates, the EPA has actively been involved with regulation of the Galong Limestone Mine and Kiln site, which is demonstrated by the EPL variations. With the EPA having direct responsibility for regulating emissions in industry, in addition to the currency and relevance of the EPL, Sibelco proposes the alignment of the Department of Planning compliance requirements in the DA with the EPL.

I have attached a copy of the current Environmental Protection Licence and Development Approval for this mine for your information.

Please call if I can provide any further information to assist with your review.

Regards,

Christine Jones
Environmental Advisor - NSW
Sibelco Australia Limited
Level 16, 111 Pacific Highway
North Sydney NSW 2060