

Air quality live data link. 22 May 2016

http://www.ehp.qld.gov.au/air/data/search.php?day=20&month=05&year=2016&hour=08&category_id=1&mode=measurement&goto=Latest+hour

The screen shot of the table below shows air data for the 20th of May 2016 between 7:00 am – 8:00 am. Obviously all the particles in the columns below can be detrimental to human health if they are present in excessive levels, that is why they are being monitored.

We are particularly interested in the Column titled “Particle PM 2.5 (24hr av)(ug/m³)”

PM_{2.5} means particles with a mean aerodynamic diameter less than 2.5 microns, this further means particle less than two and a half millionths of a metre in size. Particles which are so small can be absorbed deep into our lungs and can in excessive volumes and over long periods of exposure cause damage to our respiratory system/i.e. our lungs. As we understand it the EPP (AIR)2008 guideline for PM 2.5 is 25 ug/m³, this mean 25 millionths of a gram per cubic metre.

Obviously this figure represents all dust particles around the 2.5 micron size. However if this figure was achieved next to a residents home adjacent to a quarry then the respirable silica portion of that dust could well be $27.1 \times 37\% = 10.027$ micro grams per cubic meter which is well over the recognised safe level of 3 micro grams per cubic metre. Note this is an oversimplification as there will also be other dust particles in the mix. This also does not isolate asbestos for which there may be no safe level.

Region	Station	Carbon Monoxide (8hr Av) (ppm)	Nitrogen Dioxide (1hr Av) (ppm)	Ozone (1hr Av) (ppm)	Sulfur Dioxide (1hr Av) (ppm)	Particles TSP (24hr Av) (ug/m ³)	Particle PM10 (24hr Av) (ug/m ³)	Particle PM2.5 (24hr Av) (ug/m ³)	Visibility (1hr Av) (Mm ⁻¹)
South East Queensland	Mountain Creek		0.009	0.003			14.4		17
	Deception Bay		0.021	0.003					
	Wynnum		0.022		0.001		26.2	13.2	
	Wynnum West				0.001		23.7	12.6	
	Lytton				0.011		37.5	16.5	
	Cannon Hill					40.9	36.9	27.1	
	Brisbane CBD						27.8		28