From:	coalcommunities-bounces@lists.nsw.greens.org.au on behalf of Steve robinson
To:	coalcommunities@lists.nsw.greens.org.au
Subject:	[CoalCommunities] Fwd: [RiversSOS-Chat] Dust Monitoring EDO Fact sheet
Date:	Friday, 27 August 2010 9:34:01 PM
Attachments:	ATT00004.txt

FYI
A review of the EDO Dust fact sheet
Steve robinson

---------- Forwarded message ----------
From: **Steve robinson** <treesteve@gmail.com>
Date: Fri, Aug 27, 2010 at 9:22 PM
Subject: Re: [RiversSOS-Chat] Dust Monitoring EDO Fact sheet
To: "Ali ." <turtle_tale@hotmail.com>

Dear All
This fact sheet is way way out of date and should be immediately withdrawn. The science in this area is improving every year and this fact sheet is on average 10 years behind the times. The fact sheet belongs in a mining museum. I'll give you 10 reasons for saying this:-
Examples of it's out of datedness are
1) NPI data provided is from 2004. NPI update their data every year on April 1st. If you look at their data today you will get 2009 data. production rates are increasing each year.
2)Particle sizes are inaccurately defined and they seem to stop at PM2.5 in this publication. PM10 particles are coarse particles and have very little importance for health because they do not reach the lung. Respirable particles are PM4 - these are the largest particles to reach adult lung tissue. Diesel machinery produces PM2.5, PM1 (these are fine particles) and get into the lung where they set up inflammatory foci (like bacteria) which produce chemicals which then travel throughout the body. Diesel vehicles also emit ultrafine particles PM0.01 which are the most numerous and get inside cells (as viruses do and are therefore the most likely suspects for causing cancers.
Historically PM10 particles have been measured by collecting and then weighing (gravimetric analysis) them over a 24 period. This produces an average result, so if there was a peak for a few minutes after a blast that triggered health results e.g asthma attacks, the peak would not be detected and so you would miss this event which might be vital for some preventive strategy.
PM10 measurements use a filter that just allows particles smaller than 10 microns to be collected. it therefore contains PM2.5 and smaller particles as well. the PM10 particles fall to the ground much more quickly so that within a mine site they are 95% of the particles but by 1km they are only 75% and by 2km they might be 50%. This is very important because the max permitted annual average for PM10 is 30microgm/cubic metre whilst the max for PM2.5 is 8microgm. Thus if you have a PM10 monitor 2km from the mine which has a reading of 25 it will be a permissable level. If in fact half of that is PM2.5 particles the PM2.5 level would be 12.5 which is way over the limit. By avoiding adopting PM2.5 levels as a mandatory standard the mining industry have been literally getting away with murder. US have had PM2.5 as their gold standard for 10+years.
3) DECCW have recently released a summary 2010 of all the air monitor readings for the past few years for the Upper HUnter and this includes just one PM2.5 monitor placed in Muswellbrook the annual average for 2009 was 10.3 i.e considerably above the maximum permitted. PM2.5 particles travel many kms and are emitted at multiple sites in the Upper Hunter such that the air modeller on the expert committee currently looking at health in the Upper Hunter has said he

believes the levels will be much the same everywhere. This means all the population of Muswellbrook and probably also Singleton have been bathed in a potentially health damaging level of PM2.5 particles for at least the past 18 months. This fact sheet quotes 2004 results from DEC.
4)Compliance Performance is mentioned but no whisper of the 5000 breaches the Greens have compiled over a 6 year period.
5)Dust criteria are decided at a national level NEPM and then each state takes up their recommendations. these are currently under review. For the past few years there has been an advisory level for PM2.5 but a mandatory level for PM10. Every mine I am aware of chose to ignore the advisory PM2.5 measuring.
6) There are two principal methods of measuring dust levels. The old gravimetric method which gives an average over a long time period and the newer method which is to shine a laser light through the sample and this can simultaneously measure PM1, PM2.5, PM4, PM10. The machine i saw demonstrated at the recent mining expo in Singleton by Kenelec measured every second but this gives too much info for most purposes and so they average over 10 minute periods which will still capture peaks caused by sudden blast events etc. This machine is portable so you could set it up in school yards, hospitals, nursing homes etc and determine the best place for a permanent monitor. Cost is $20,000 approx. Our local mine has an annual profit of about $100million so it could well afford to give a few monitors to the community as part of their licence.
In Tasmania there is a statewide network which receives and immediately posts all results from every monitor. This is what we must demand for NSW. The fact sheet makes no mention of the proposed limited network for the Upper Hunter. Every coal community needs to be able to find out the prevailing particle level so that you can chose to retreat to your HEPA air filtered room (provided by your local community minded Mine) if you have severe asthma etc
7) No mention of the importance of pH (diesel fumes have a very acid pH as does sulphur that has been burned). Dust gets dissolved much more when there is acid rain or rainwater tanks
8) No mention of the groups who are particularly at risk of damage (pregnant, young, elderly, chronically ill)
9) No mention that heart disease and strokes increase which may be particularly important in rural populations. No mention of your immune response being strained by having to dispose of all the dust particles with the consequence you aremore sensitive to infections etc. No mention of the brain damage that has been shown from PAH's (polycyclic aromatic hydrocarbons). Present you will see from NPI data courtesy of your local mine and I suspect also from your local coal seam gas plant if you are so lucky.
10) No mention of open coal rail wagons spreading these death factory products all the way to newcastle or your local coal exporting terminal.

I hope i have convinced you this fact sheet reminds me of out of date mining advertising material and needs dramatic revision.
On Fri, Aug 27, 2010 at 5:54 AM, Ali . <turtle_tale@hotmail.com> wrote:

> http://www.edo.org.au/edonsw/site/pdf/scifs/sfs_air_quality_dust060405.pdf
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> Chatlist mailing list
> Chatlist@riverssos.com
> http://riverssos.com/mailman/listinfo/chatlist_riverssos.com