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Dear Council Member, RE item # 9

Next Tuesday, June 12th, the City Council will vote to "note and file" the CLA report that claims that the methane gas problems can be mitigated and that there are no other toxic gas problems. I am very concerned about the hydrogen sulfide issue that has been overlooked because the report states that hydrogen sulfide is not present in sufficient quantities to be considered a risk. This decision of course is dependent on what quantity is considered to be a 'risk'. It is important because there was hydrogen sulfide in more than 50% of the soils sampled. The standard used in the review of 10 parts per million (ppm) is more than 100 times higher than many other authorities have accepted. The California Ambient Air Quality Standard (CAAQS) for hydrogen sulfide is 0.03 ppm (or 30 parts per billion). The OEHHA (1999) also adopted 30 part per billion. The U.S. EPA has developed a reference concentration (RfC) of less than 1 part per billion. This is the estimate of a daily inhalation exposure of the human population (including sensitive groups) that is likely to be without an appreciable risk of deleterious effects during a lifetime.

The following is the testimony that I gave last Tuesday, June 5th at the PLUM Hearing on my understanding of this difficult problem that I believe should be thoroughly considered before moving on.

Toxicity of Hydrogen Sulfide

This final report is failing to respond to many expressions of concern about the health effects of the toxic gas hydrogen sulfide. On p28 of the original report and the final report continues to state that Kleinfelder in reviewing the soil data from 3 different surveys concluded that of 1199 soil gas samples, less than 1% contained hydrogen sulfide. The technical appendix page 11 of Kleinfelder showed that considerably more than 50% of the samples contained hydrogen sulfide. In the soil studies the maximum levels were 41, 2.1 and .023 ppm in the 3 studies.

I can only surmise that the 1% referred to the soil samples that contained hydrogen sulfide that was considered to be at toxic levels i.e. >10 ppm, which Cal OSHA has considered to be permissible exposure limit. This is an exceedingly high level that must be seriously questioned. I have been given to understand that other State Departments and other States consider .03 ppm to be the permissible exposure level. Elsewhere in the document it is stated that 10 ppm is the smell threshold for hydrogen sulfide. This was not correct. Most people start to smell this gas at 0.03 ppm.

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I am very concerned because levels of 10 ppm of hydrogen sulfide have been shown to be very toxic. In recent years there have been an increasing number of studies showing that what were once considered to be safe levels have now been shown to be very, very toxic to humans. The 2 studies that I would refer you to are Kilburn 1999 and Legator et al 2001 that has just been published. Unfortunately, Dr. Kaye Kilburn could not be here today. Dr. Kilburn is from USC School of medicine. In very careful and objective neurological tests in 1999 he found that persons exposed to 1 ppm of hydrogen sulfide for even very short periods of time may develop neurological changes consistent with brain damage. I have spoken with Dr. Kilburn about these studies which were very thorough and controlled.

I also contacted Dr. Marvin Legator who in recent weeks published a study of hydrogen sulfide exposures in Texas and Hawaii. He found that even lower levels of hydrogen sulfide in the range of 10 to 700 pp **billion** may produce a range of disorders of the central nervous system, the lungs, ears, nose and throat and other body systems. Ten parts per billion is 1000-fold lower concentrations than the 10 ppm the permitted level that was used in the present CLA report. As I mentioned earlier 10 pp billion is the level where you just start to smell the rotten egg smell of hydrogen sulfide.

Both these authors have now published a series of articles in peer review journals showing health effects at very low concentrations that are very disconcerting. This committee should not be accepting this final report without reviewing the data from these studies and talking with these investigators.

Submitted by,

John Montgomerie, MD

cc. All Los Angeles City Council Member