

**Comments on Peer Review of
South Coast Air Quality Management District
Revised Draft 2012 AQMP Appendix I Health Effects Version 2**

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Peer Review is an indispensable component of reliable science. Indeed the Rules governing the SCAQMD Air Quality Reports recognize that science without proper Peer Review is second-rate at best, and not a valid basis for important policy decisions.

However, in preparing its required 2012 Report on the Health Effects of particulate matter (PM) air pollution in the Southern Coast Air Basin, SCAQMD reveals a fundamental misunderstanding of the nature of a Peer Review. Every branch of science relies on *impartial* critiques of all its results, before they can be accepted. Scientific Peer Review is therefore the *opposite* of “Self-Review”. It must be done by scientific peers who are clearly *independent* of the authors of all the work under consideration. In fact it is essential that some, or most, of the reviewers (or ‘Referees’ as they are typically called) be selected specifically for their rivalry, disagreements, or competition with the authors. This is necessary because in the marketplace of scientific ideas there is always more than one point of view, a fact which is very dangerous to forget. The essence of scientific Peer Review is a thorough search for all possible problems or limitations with the research being reviewed. It is precisely the job of a Peer Reviewer to attempt to pick apart every aspect of the work, which will result in its revision and improvement. Reliable science is completely dependent on this correction mechanism. A scientific research report can only be accepted after it has weathered all available criticisms.

Unfortunately, all of the “Reviews” that have been obtained for Appendix I, particularly on the long-term Health Effects of PM_{2.5}, are either “Self-Reviews”--by authors and co-authors of the studies used by Appendix I (more accurately called ‘editing’)--or “Friends Reviews” (ie, by close colleagues and collaborators, known to share the same views as those authors). Self-Reviews may be of some use to ‘clean up’ a report, so long as it is clearly understood that they are *in no way a substitute* for actual Peer Review.

Fortunately there is no shortage of fully qualified Peer Reviewers who are unambiguously independent of the views advanced in Appendix I. Proper scientific Peer Review, and the rules in 40471(b) which mandate it, now require input from this large, hitherto excluded, group of health scientists.