HOW LOW DOES YOUR VOC HAVE TO BE

The view above the stairwell where you can see five paint colors!

As we embarked on painting, I was rapidly running out of time to research what we needed to do with the paint, so this is a bit quick and dirty. I know that low or no VOC (Volatile Organic Compounds) paint gets you LEED points and "Green Points" and your Boy Scout merit badge for saving the earth, but NOWHERE in all of the info about low and no VOC paints is there any kind of *quantitative* data about how much you don't emit if you "go low VOC". There are many of the same kind of wishy washy relative "this is better than that" statements to be found on the web and in those lazy journalism eco-articles, that made me go beserk about countertops. Of course the marketing materials of these paint companies assure me that I am saving the world by buying their product, but, can you blame me for being suspicious? I couldn't find anything that would let me calculate how much I would save by using low VOC, in numbers that meant anything to me and could give me an idea of relative values.

So I did a back of the envelope calc, and decided to buy zero VOC paints, but this is not as rigorous as I would like it to be, and if there is anyone out there who has done a real analysis of this, I'd love it if you could drop me a note.

First some definitions:

"No VOC" = 5 grams VOC/Liter of paint

"Low VOC" = 20-200 grams VOC/Liter (most eggshell and flat paints that claim "Low VOC" on the label are in the 25 g/L range, but glossy paints tend to be up towards 150 g/L)

"Regular" (i.e. "interior latex paint") = 200 grams+/L

NOTE: this is for the base only, and some companies play fast and loose with their claims as the colorants can add significantly to the VOCs in the paint, but these are reasonably good ranges.

Some of the 27 odd gallons of paint we used

Many of the benefits that people ascribe to the low and no VOC paints have to do with indoor air quality, but since 99.9% of the VOCs are gone after the first two weeks of drying – it seems to me that this aspect of the low/no VOC debate only really matters if you are painting a house you are going to be living in at the time of painting, since after the paints are fully dry, a properly vented house would have no discernible difference in air quality. Given that we aren't living in the house yet, I discounted the indoor air quality aspect (since painting with the stuff, however, next time I am painting a house that I am living in at the time, I am DEFINITELY using "no VOC" paints, as anecdotally, it made a huge difference in the livability of the space during the two week drying time)

But if I am simply interested in figuring out my effect on the environment, if I use about 100 liters of paint (~27 gallons) of paint inside the house (including primer and extra coats), then using zero VOC paint in the house vs. "regular" saves at least 200g/L*100L = 20 kg of VOCs

From the EPA "Automobile Emissions: An Overview." Fact Sheet OMS-5. August 1994, my typical commute of two "cold start" car trips a day and my car sitting around evaporating fuel, I produce about 24g of VOC per day from my car (4 g/day from evaporation only if I just let it sit and don't use it). So painting the house with "zero VOC" paint is the equivalent of over *800*

days of a 1997 automobile's VOC emissions. (OK, I have a newer car that that, and my running and evaporative emissions are probably much lower, but even if it is half that, I am saving over a year of car emissions)

That was enough for me to make the decision. Without looking into it further, we went zero VOC, and bought the Benjamin Moore "Natura" paints. And they were remarkably un-stinky as we painted.

Source : http://www.301monroe.com/?p=652