

December 3, 2004

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Dear Randy,

Thank you for providing the opportunity to comment on plans for the DPR pilot Environmental Justice Project and preparing the pesticide use maps for review. I have the following recommendations:

Issue 1: What should be the specific objectives of the air monitoring study?

The objectives in the pilot summary are appropriate. In addition, I would recommend: What is the relationship between the air levels measured and the amount of pesticide used in the area and the air stability at the time of monitoring? Results of the sampling should be compared with actual use of individual pesticides monitored in the vicinity of each sampling site in order to evaluate how air levels and pesticide use in the area correlated at different times of the year.

Issue 2: How should DPR select the community to monitor (and the sites within the community)?

The pilot should be conducted on several sites within a community rather than a single site.

Sites should be chosen which are on the periphery rather than center of a town and if possible in the immediate vicinity of high pesticide use, adjacent to fields where pesticide-intensive crops are grown as well as in general areas of heavy pesticide use.

The community should be in an area with high air stability and persistently low windspeed.

After sites at the periphery of a community are selected for the above criteria, a community with a high percentage of children should be chosen if possible.

I do not feel well qualified to recommend particular sites for sampling. However, I note the following areas of particularly heavy use of some high toxicity pesticides. These are not presented in any order of prioritization: 1) Use of fumigants, chlorpyrifos and methomyl use are very high in the sweet potato growing area around Merced; 2) Organophosphate and propargite and fungicide use applied by air-blast sprayer is high in nut and stone fruit growing areas of San Joaquin and Stanislaus, Madera, Fresno, Tulare, and Kern counties; 3) Aerial application of high toxicity pesticides is ofcourse heavy in cotton growing areas of Merced, Fresno, Kings

counties; 4) Use of propargite, methomyl and fungicides on table grapes in Fresno, Tulare and Kern; 5) The Arvin-Lamont area has both very concentrated pesticide use and high stability air conditions.

Issue 3: How should DPR select the pesticides to monitor?

High volatility, high acute or chronic toxicity and higher use should all be considered in selecting the pesticides monitored for. To best evaluate which pesticides to monitor for and how to time the sampling I would recommend looking at pesticide use data by month near sites you are considering for sampling.

Some sampling should be designed to capture dust and particle phase of pesticides in addition to vapor phase during periods of anticipated heaviest use or dust generation. For example, if you sample in an area where almonds or walnuts are grown I would recommend conducting some particulate sampling during the harvest time when a lot of dust is generated from tree shaking.

Some particulate sampling is particularly important for propargite, captan, chlorothalonil, iprodione, and sulfur. If possible such samples should be designed to evaluate total PM10 levels as well as pesticide content. It is my understanding that typical PM10 filters are not suitable for subsequent chemical analysis but that special filters could be used in their place. Limited sulfur monitoring would be valuable because use and respiratory complaints from sulfur drift are extensive even though sulfur is not highly toxic by other measures.

Some sampling should be conducted for pesticides are particularly volatile, toxic and/or heavily used in an area but can not be analyzed in the same sample as other pesticides. Perhaps such pesticides could be sampled during narrower time frames that are targeted to periods of expected heaviest use.

Issue 4: When should sampling be conducted?

Sampling should be conducted on weekend days and evenings as well as weekdays.

Sampling should span months of the year when the most stable weather conditions, or poorest ambient air quality is anticipated where these periods overlap periods of expected heavy pesticide use.

In addition, sampling should be conducted during months of heaviest pesticide use even if these are not the months when weather conditions are expected to be most stable. Again, I would recommend looking at monthly pesticide use to evaluate this.

Sincerely,

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