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Director

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December 12, 2006

TO: Parlier Local Advisory Group
Sent by e-mail

SUBJECT: OVERVIEW OF SECOND PROGRESS REPORT -
PARLIER AIR MONITORING PROJECT

This memo accompanies e-mail transmission of the progress report on the first seven-and-a-half months of DPR monitoring in Parlier. We are sending just the narrative and tables because the whole report is a large file. We didn't want to attach it automatically since some of you may have limited Internet connectability. If you want a copy of the entire report sent to you either by e-mail or by postal mail, please reply to this message with that request.

As we approach the final weeks of monitoring in our year-long pilot project, we need to explore the role the LAG, the TAG and the community will play in examining the results and providing input to DPR and the Air Resources Board on next steps. Most notably, while many pesticides and other chemicals were detected, so far there are only a few that could be of concern; our scientists, working with the project's Technical Advisory Group (TAG), have begun evaluating these results.

We will go over the interim report in detail at our January 11 LAG meeting. We also want to talk about how we should do outreach to the community on the results and get input from them. One possibility would be to hold a workshop to foster greater public participation.

Highlights of what we found in monitoring from January through August 16, 2006:

- Most of the 40 pesticides and breakdown products we are testing for were either not detected or detected at trace levels. However, many of these pesticides were not reported used in the area during the study period.
- Twenty-two pesticides or breakdown products were detected. (See Table 1 for more information.)
 - Of the 22, 17 are assumed to be present because of their use as pesticides. One had no reported use in the Parlier area during the study period (dichlorvos, used both in agricultural and home-and-garden settings)



- The remaining five compounds detected have some pesticidal uses, but their presence is typically due to non-pesticidal sources (for example, vehicle emissions). Four of the five had no reported pesticidal use. The fifth, xylene, had reported use as a pesticide but most of the detections are believed to be non-pesticidal in origin.
- A few results warrant closer examination. In keeping with our project protocol, we said that detections above a screening level, while not necessarily representing a significant health concern, would signal the need for a further and a more refined evaluation. Our scientists and the TAG have begun a more detailed evaluation while monitoring continues. The final project report (due late next year) will have a more in-depth characterization of the results and their import. This may result in actions that could include initiating a risk assessment, focused pest management projects to reduce a particular risk, regulatory restrictions, or a combination of these.
- One sample (out of 297) had levels of the insecticide diazinon above the acute screening level. Please note that the screening level for diazinon is very health-protective. U.S. EPA recommended (in its diazinon registration eligibility document) that the results of a 21-day animal inhalation study be used to assess human exposures for all time periods (that is, for short-term, medium-term, and long-term exposures), since this was the only available inhalation study. Therefore, a multi-day study was being used to set target exposure levels for a single day. Typically, allowable exposures for one day are higher than the acceptable exposure over a longer period.

So, considering the very protective diazinon screening level, our scientists do not believe this single diazinon sample represents an immediate health concern. Nonetheless, as we will with every sample over a screening level, we are following up the detection with a more refined evaluation.

- Diazinon was the only pesticide monitored that exceeded its screening level for an acute (one-day) period due to pesticidal use. No pesticides exceeded the screening levels for subchronic exposure (two-week period).
- The insecticide chlorpyrifos or its breakdown product was also detected in many samples. No sample was above the screening level. However, if the federal Food Quality Protection Act (FQPA) safety factor had been applied to the acute screening level for chlorpyrifos, it would have lowered it by a factor of 10. If that were done, six of the 297 samples would have been above the screening level.

- Our scientists are more concerned about the frequency of chlorpyrifos detections. It was found in 75 percent of samples.
- Since chlorpyrifos and diazinon are in the same chemical family--organophosphates (OPs) -- they have the same mechanism of toxicity, meaning they act in the body in similar ways. Our evaluation will examine the potential cumulative effects of chlorpyrifos and diazinon and any other monitored OPs.
- For the fumigants, MITC was detected in 78 percent of the samples. All were well below the screening level. Methyl bromide was found in 45 percent of the samples, all below the screening level; detections are probably from commodity fumigation chambers located about four miles southeast of Parlier, in Tulare County.
- Our evaluation will address various issues and may require collection of more data. This could result in changes in pesticide use practices to reduce ambient air exposures. However, such changes would only come after a reasoned, scientifically sound, credible approach involving all stakeholders. This will be an inclusive process involving the LAG and other interested parties.
- There are several chemical-specific questions that we want to answer. Among them:
 1. Do the use data for diazinon and chlorpyrifos correlate with the air measurements, especially the peak air levels?
 2. Do the methods and sites of application correlate with the air measurements?
 3. Are the results relevant to other pesticides in terms of methods of application or other use practices?
 4. Do weather conditions correlate with the air measurements?
 5. How do the results relate to previous monitoring and what we might expect to find in other areas of the state?
 6. Are the frequent chlorpyrifos detections because of relatively constant use during this period or because of its persistence in the environment leading to off-site movement in soil particles or in vapor?
- There are also several more general questions that will be explored:
 1. What pests are being controlled?
 2. Are there alternative chemicals or practices that can be reasonably and economically employed to control these pests?

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3. Are there alternative methods of application that would be feasible and reduce ambient exposure?
4. Are voluntary methods feasible with a reasonable likelihood of success, or are greater regulatory controls necessary?

We want to address these and other questions and concerns raised by the results, and do it in an open, credible process. We might not be able to answer every question immediately, but together we can work toward getting answers. At the January 11 LAG meeting, we will go over the results and get your input on the questions outlined above, and anything else you want to talk about. We would also appreciate your thoughts on having a workshop and how to make it a success. If you have thoughts and suggestions before the LAG meeting, please e-mail or call me.

Sincerely,

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