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9 SUPERIOR COURT OF CALIFORNIA

10 COUNTY OF SANTA CRUZ

12 COUNTY OF SANTA CRUZ	Case No. 158516
13 14 Plaintiff/Petitioner, v.	DECLARATION OF RICHARD PHILP IN SUPPORT OF EX PARTE APPLICATION FOR TEMPORARY RESTRAINING ORDER
15 CALIFORNIA DEPARTMENT OF FOOD 16 AND AGRICULTURE; A.G. KAWAMURA, in his official capacity as Secretary of the 17 California Department of Food and Agriculture; and DOES 1 through 100, inclusive,	Date: October 31, 2007 Time: 1:00 p.m. Dept: 8
18 19 Defendants/Respondents.	

20
21 I, Richard Philp, hereby declare:

22 1. I am an Emeritus Professor of Pharmacology and Toxicology with the University of
23 Western Ontario in London, Canada. I have a Ph.D. in Pharmacology from the University of
24 Western Ontario and have spent my career as a professor of Pharmacology and Toxicology. I have
25 published over 90 peer-reviewed manuscripts in the area of pharmacology and toxicology and I am
26 an experienced researcher on pharmacology and toxicology issues. A copy of my curriculum vitae is
27 attached hereto as Exhibit A. I have personal knowledge of the facts set forth below, and if called
28 upon to testify thereto I could and would do so competently.

1 2. After Monterey County was aerially sprayed with the pesticide Checkmate OLR-F in
2 September 2007, I was asked to review the health hazards associated with this aerial spraying. In
3 conducting my review, I reviewed available literature and government documents concerning
4 Checkmate and I drafted a preliminary report on this issue, a true and correct copy of which is
5 attached hereto as Exhibit B. My general conclusions and recommendations are set forth at page 8
6 of my final report.

7 3. In sum, I have concluded that no chronic toxicity study of Checkmate has been
8 conducted in a mammalian species by any route of administration and certainly not involving
9 exposures to the product to be employed by the intended method of application (aerosol spray of
10 microcapsules). Any claims of the safety of Checkmate are based on extrapolation from acute
11 toxicity studies and one sub-acute, 90-day study that employed the oral route of administration of
12 certain chemicals related, but not identical, to those used in Checkmate. One cannot conclude from
13 these studies that Checkmate is a safe product to aerial spray over an urban population, nor can one
14 guarantee that longer-term, repeated exposures of humans are without risk. A chronic toxicity study
15 of at least 90 days and preferably six months duration, employing daily exposure to aerosol of
16 Checkmate at a high exposure level would be required before a conclusion of safety could be
17 legitimately drawn. It is customary in such studies to use a much higher exposure level in order not
18 to miss adverse reactions that might occur too infrequently to be detected at lower exposures.

19 4. In none of the documents I reviewed, including the USDA environmental assessment,
20 is there any mention of previous experience with aerial spraying of populated, urban areas. Previous
21 efforts to control LBAM in the proposed treatment area employed ground application techniques.
22 Pheromone baited traps were placed throughout the State of California to monitor the moth
23 population and distribution. Isolated populations in Napa and Oakley were treated using ground
24 equipment with *Bacillus thuringiensis kurstaki* (Btk) (USDA Environmental Assessment, 2007, p2,
25 para 2). This is a bacterial product that attacks the early larval stages of most lepidopterans.

26 5. There is ample evidence that many pheromones and semiochemicals (the synthetic
27 counterparts of pheromones) possess significant toxicity for aquatic species. This suggests that aerial
28

1 spraying carries an increased environmental risk given the difficulty in confining the spray to the
2 target area.

3 6. In summary, and as more fully explained in my attached report, the USDA and EPA
4 documents I reviewed are filled with contradictory statements regarding the toxicity testing of
5 pheromones, inappropriate extrapolations from irrelevant toxicity studies, and are suggestive of a
6 poor understanding of basic pharmacological and toxicological principles.

7 7. In my opinion, since the decision to use aerial spraying as the method of application
8 appears to have been made entirely on economic grounds, the decision should be revisited given the
9 lack of adequate evidence for its safety in the long term. Either ground-based methods of
10 application should be employed or an adequate chronic toxicity study should be conducted. Ground-
11 based technology has the added advantage of posing less risk to the environment.

12 8. Finally, I have recently reviewed the toxicology of the “inert” ingredients provided to
13 me and found that: i) some have been shown to be skin irritants in animal studies; ii) no information
14 regarding respiratory toxicity or absorption is generally available; iii) no carcinogenicity studies
15 have been performed on some; and iv) I was unable to find inhalation toxicity studies for any of the
16 inert ingredients. This further supports my conclusion that this product should not be aeri ally
17 sprayed as intended at this time.

18 I declare under penalty of perjury under the laws of the State of California the foregoing is
19 true and correct and that this Declaration was executed on this 29th day of October 2007 at
20 London, Canada.

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DR. RICHARD PHILP