



Department of Pesticide Regulation

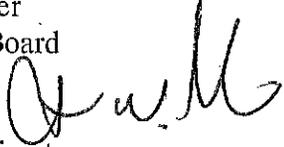


Brian R. Leahy
Director

MEMORANDUM

Edmund G. Brown Jr.
Governor

TO: Richard Corey
Executive Officer
Air Resources Board

FROM: Chris Reardon 
Chief Deputy Director
916-445-4000

DATE: January 30, 2015

SUBJECT: PROPOSED TOXIC AIR CONTAMINANT MONITORING FOR 2015

In September 2010, the Department of Pesticide Regulation (DPR) submitted a request to the Air Resources Board (ARB) for monitoring to be conducted pursuant to Food and Agricultural Code section 14022(c) for the following pesticides (DPR, 2010) and to be continued in 2012 through 2014 (DPR, 2011, DPR, 2013 and DPR, 2014):

- 1,3-dichloropropene
- Methyl bromide

In 2013, new restrictions went into place for the use of 1,3-dichloropropene and methyl bromide products combined with chloropicrin. Additional fumigant monitoring was requested to determine the impact of new labels approved in 2012 on ambient air concentrations. Ambient air concentrations measured in DPR's Air Monitoring Network indicate that 1,3-dichloropropene is still detected at levels of concern and therefore imply a need for continued monitoring. Although use of methyl bromide is decreasing, DPR is still monitoring possible chronic level exposure. The monitoring should continue at the same three sites monitored in the previous years. In particular, monitoring should continue at the Rio Mesa High School in Oxnard by request from the school.

In 2014 DPR also requested monitoring for the following pesticides:

- Chloropicrin - chloropicrin is a toxic air contaminant (TAC).
- Mancozeb, and the breakdown product ethylenethiourea (ETU) - Mancozeb is a TAC.
- Chlorpyrifos and chlorpyrifos oxygen analog - Chlorpyrifos is a potential TAC.
- Metam sodium or metam potassium breakdown product methyl isothiocyanate (MITC) - MITC is a TAC.

ARB conducted ambient monitoring for the fumigant chloropicrin at the same three sites as the other fumigants during the high fumigant use months of August, September, and October. Concentrations measured in 2013 from DPR's Air Monitoring Network exceeded the health screening level for subchronic exposure, indicating a need for additional evaluation. Also, DPR



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will implement more stringent requirements for chloropicrin in 2015 to reduce acute exposures. DPR requests monitoring chloropicrin again during the high fumigant use months of August, September, and October in 2015 to measure the effect of the new requirements for acute exposure and provide additional data for subchronic exposure.

In 2013, DPR requested that ARB develop a method to measure the fungicide mancozeb (a federally listed hazardous air pollutant-TAC) and its breakdown product, ETU. Mancozeb is a broad spectrum fungicide that is used on many crops, turf, and ornamentals. The breakdown product ETU has been classified as a possible human carcinogen by the U.S. Environmental Protection Agency (1987). Previous monitoring conducted by ARB (Kollman, 2002) measured only mancozeb concentrations. DPR is requesting additional monitoring of an application to assess concentrations of ETU associated with mancozeb applications and develop mitigation measures, if necessary. The recommendations for dates and locations of monitoring are available (Fan, 2014).

ARB monitored an aerial application site for chlorpyrifos and the chlorpyrifos oxygen analog breakdown product in 2014. DPR is currently working on mitigation measures to control off-site movement of chlorpyrifos from the application site. The data collected by ARB from the aerial application will be an important part to characterize drift from an aerial application. DPR is also attempting to characterize off-site drift from orchard-blast applications in tree crops. DPR request that ARB conduct monitoring of an orchard application of chlorpyrifos. DPR will assist ARB in locating a cooperative grower.

In addition, DPR requests that ARB monitor an application of metam sodium or metam potassium using the spray blade soil cap method. This monitoring should occur in early 2015 or late 2015. Data is needed to substantiate the emissions assigned to the method and measure the effectiveness of buffer zones. DPR will assist in locating a cooperative grower.

Based on preliminary assessment of the toxicology data, DPR requests the following quantitation limits:

- Chloropicrin: 0.03 ppb (current ARB quantitation limit)
- Mancozeb: 0.08 ug/m³
- ETU: 8 ug/m³
- Chlorpyrifos and chlorpyrifos oxygen analog: 0.03 ug/m³
- MITC: 0.5 ug/m³

Both the ambient air monitoring and application-site monitoring will likely require field sampling on weekends or holidays. DPR requests that you authorize overtime if it is necessary. Thank you for your consideration of this request. If you have any questions, please

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feel free to contact me, or David Duncan, of my staff, at <david.duncan@cdpr.ca.gov> or 916-445-3870.

cc: George Alexeeff, Ph.D., Director
Office of Environmental Health Hazard Assessment

Dr. Michael T. Benjamin, ARB Division Chief
Michael Werst, ARB Branch Chief
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David Duncan, DPR Environmental Monitoring Branch Chief
Chuck Andrews, DPR Associate Director

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