



August 24, 2023

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By email: Aniela.burant@cdpr.ca.gov

Dear Ms. Burant,

Thank you for the opportunity to provide comment on the 2020, 2021 and 2022 Air Monitoring Network Reports. We are concerned that the presentation of air monitoring results in the annual report continues to be misleading and incomplete and have inaccuracies. We offer the following specific comments for your consideration. We urge you to revise the draft report to address these concerns, many of which were previously flagged in our [comment letter](#) dated August 28, 2020, but which remain unaddressed.

Comments on draft 2022 AMN report:

The report does not tabulate or discuss analyses and detections of unregistered pesticides appropriately

Tabulation of percentages of air samples with trace or quantifiable detections should not include those pesticides no longer registered in California in the total because these pesticides should not be in use and therefore should not be detected in the air. Four of the pesticides monitored (chlorpyrifos, endosulfan, oxydemeton-methyl and methidathion) and three breakdown products (chlorpyrifos OA, endosulfan sulfate and pp-dicofol) are no longer registered for use in California. This comprises 19.4% of the analyses between January and April and 17.5% of the analyses for the remainder of 2022. The report states that 21 of the chemicals monitored weren't detected but doesn't disclose that 6 of these compounds (28.6%) are not currently registered.

The report should include discussion of possible sources of the trace level detection of chlorpyrifos at the Santa Maria site since it was illegal to possess or use existing stocks of chlorpyrifos in 2022.

If detection frequency is used it should be based on pesticide use near the sampling site shortly prior to sampling date

Use of most pesticides is concentrated in certain months in specific geographic areas. As pesticide use varies between crops and regions, not all of the pesticides monitored for are used near all of the monitoring sites. Therefore, using the total number of analyses for all pesticides at all locations as the denominator does not provide a meaningful context.

Despite repeated feedback from our coalition over many years, DPR continues to prominently highlight the percentage of detections, including as the first item in the results section of the Executive Summary. The value of air monitoring is the ability to detect traces of pesticides that have been used, to determine whether such use results in potential exposure mitigations. It is not relevant, or even possible, to detect a chemical that was not used.

DPR's continued use of this inflated denominator, and prominent highlighting of the resulting diluted detection rate, gives the appearance of bias. It has been six years since these concerns were raised at the August 18, 2017 PREC meeting. Then Branch Chief Pam Wofford stated that DPR was conducting an uncertainty analysis of frequency of detections. Is this analysis still in process and if so when will it be completed? Detection frequency should either be calculated based on what pesticides were used in the vicinity of a specific site, shortly prior to the sampling date, or should not be highlighted.

A separate line plotted for pesticide use within several miles (or even within the county) of the AMN site within a week of the pesticide detection should be added to the temporal trend graphs in the appendices.

Why is methyl bromide being detected so frequently?

This report should discuss the plausible sources of the high number of methyl bromide detections at each monitoring site and whether local pesticide use data indicate that these could be authorized commodity, nursery or experimentally permitted fumigations or illegal use.

List pesticides added in May earlier in the report

The body of the report should explain that the 4 additional pesticides added in May of 2022 are captan, fenproxiimate, methomyl, and pendimethalin so readers don't have to wait to find this information in the Appendices on page 99.

High level methomyl detection

Tables 5-7 show that the one methomyl detection in Santa Maria was at 32.7% of the acute target level, comprising 69.6% of the sub-chronic target level and 28% of chronic target level. This detection was not recognized as the highest percentage of an acute, sub-chronic and chronic levels in the narrative for each table.

DPR's current screening or regulatory levels should be compared to other recommended levels and previous DPR recommended levels

Pesticide	DPR screening or Regulatory level	OEHHA/other recommended level	DPR previous screening or regulatory level	Difference between DPR's and OEHHA's levels
1,3 D (cancer)	0.56 ppb	0.04 ppb (Prop 65 cancer NSRL)	0.14 ppb	14 X
1,3 D (sub-chronic)	3 ppb (13 week average)	Not available	3 ppb (4 week average)*	
Chloropicrin (24 hr- acute)	73 ppb	0.92 ppb – 24.3 ppb **	-	79 X
Chloropicrin (sub-chronic)	0.35 ppb (13 week average)	Not available	0.35 ppb (4 week average)*	
Chloropicrin (cancer)	-	na	2.4 ppt (0.0024 ppb)***	
MITC (24 hr- acute)	220 ppb	7.3 ppb – 22 ppb****	-	30 X
Dacthal (24 hr- acute)	1,732 ppb	0.24 ppb*****	-	7,000 X
Captan (cancer)	-	15,000 ng/m3 (Prop 65 cancer NSRL)		
Chlorthalonil (cancer)	2,231 ng/m3	2,050 ng/m3 (Prop 65 cancer NSRL)		
DDVP(cancer)	100 ng/m3	100 ng/m3 (Prop 65 cancer NSRL)		
Malathion	-	9,000 ng/m3 (Prop 65 NSRL)		

Table Notes:

* **1,3 D and chloropicrin sub-chronic levels:** In 2017 DPR discontinued the practice of using a 4-week rolling average concentration to compare to chloropicrin and 1,3 D sub-chronic screening levels and began comparing to 90 day or 13 week rolling averages. This change was made after peak 4 week rolling averages were found to exceed the 4 week chloropicrin screening level at the Santa Maria air monitoring site in 2014 and 2015, and the peak 4-week 1,3-D air concentration for 2016 in Shafter reached 97.6% the 1,3-D sub-chronic screening level. DPR toxicologists claim these changes were justified because the toxicology studies used to set the sub-chronic screening levels were 90 days long for chloropicrin and 13 weeks long for 1,3-D. However, the revised averaging times have still not been reviewed by OEHHA and should be.

We raised this issue in our last comment letter on the 2019 Air Monitoring Report, but no change has been made.

****The acute regulatory target for chloropicrin** of 73 ppb used in this report as a 24 hour average exposure target level was set in a Risk Management Directive (RMD)¹ as an 8 hour average, so at the very least it should be adjusted to 24.3 ppb as a 24 hour level. Furthermore, this 73 ppb target level was set over the objection of OEHHA:

<https://oehha.ca.gov/media/downloads/pesticides/report/chloropicrinmitigationmemoehha2013.pdf> The chloropicrin TAC report² and risk assessment³, which are also supported by OEHHA⁴, include a 24 hour reference level of 0.92 ppb for protection of children.

We raised this issue in our last comment letter on the 2019 Air Monitoring Report, but no change has been made.

***** The chloropicrin reference concentration of 0.24 ppt for controlling cancer risk** to the 1 in a million level that was established in the DPR Chloropicrin TAC and Risk Characterization documents as the negligible risk level and supported in review by OEHHA and the TAC Scientific Review Panel. DPR subsequently made a unilateral decision that chloropicrin cancer data was equivocal and that an additional study was needed to assess cancer risk. The results of the first phase of this study are currently being reviewed by DPR and OEHHA. In the meantime, we are left with great uncertainty about the cancer risk from exposure to chloropicrin.

****** The acute regulatory target for MITC** of 220 ppb used in this report as a 24 hour average exposure target level was set in a Risk Management Directive⁵ as an 8 hour exposure level so at the very least it should be adjusted to 73 ppb as a 24 hour exposure target level. Furthermore, this level was set over OEHHA's objections because 220 ppb was the "no effects" level in a toxicology study, leaving no margin of error. The DPR TAC report⁶ and risk assessment⁷ established an 8 hour reference level of 22 ppb for protection against irritation to the eyes and respiratory system which should be adjusted to 7.3 ppb as a 24 hour target exposure level.

We raised this issue in our last comment letter on the 2019 Air Monitoring Report, but no change has been made.

******* USEPA recently released a Dacthal risk assessment** with a recommended exposure limit of 0.001 mg/kg/day to prevent severe developmental effects.
(0.001 mg/kg/day)(69 kg/adult)/20 mg/day inhaled = 0.00325 mg/m³ or 0.24 ppb.

¹ <https://www.cdpr.ca.gov/docs/emon/pubs/chloropicrin/directive.pdf>

² DPR Toxic Air Contaminant Assessment for Chloropicrin. February 2010

³ DPR Risk Characterization Document (For chloropicrin exposure of Workers and the General Public) November 2012

⁴ https://www.cdpr.ca.gov/docs/risk/rcd/oehha_comments.pdf

⁵ <https://www.cdpr.ca.gov/docs/emon/pubs/mitc/dirctv120202.pdf>

⁶ DPR Toxic Air Contaminant Report for MITC. August 2002

⁷ DPR Risk Characterization for MITC. July 2003

DPR Risk Characterization for Metam Sodium. July 21, 2004 <https://www.cdpr.ca.gov/docs/risk/rcd/metam.pdf>

Highest sub-chronic MITC level was 9.9% (not 1%) of screening level In the narrative for Table 6, the highest sub-chronic level of MITC (0.099 ppb) was incorrectly described as 1% of the screening level but correctly shown as 9.9% of the screening level in Table 6.

Captan and malathion are Proposition 65 listed carcinogens

On page 17, captan and malathion should be added to the list of carcinogenic pesticides being monitored. Both are listed as carcinogens under Proposition 65 and Safe Harbor NSRLs have been set:

<https://oehha.ca.gov/proposition-65/general-info/current-proposition-65-no-significant-risk-levels-nsrls-maximum>

Tables of historic air concentrations

The tables of historic air concentrations at each site are useful but the tables should list captan, fenproximate, methomyl and pendimethalin as “not measured” rather than not detected (ND) prior to 2022.

High percentage of trace detections of dacthal needs further analysis

The high percentage of trace detections of dacthal at the Santa Maria and Watsonville sites is concerning in light of EPA’s new risk assessment findings. An updated analysis of dacthal use in proximity to these sites should be conducted.

Operation of Oxnard and Santa Maria sites by county CAC staff

We appreciate the time and effort that Ventura and Santa Barbara CAC offices are devoting to operation of AMN stations but have some concerns that growers could inadvertently get information about monitoring dates when they visit to the CAC offices or have other contact with CAC staff. Are safeguards in place to prevent this from happening?

Additional Comments on draft 2021 and 2020 AMN reports:

The reports do not tabulate or discuss analyses and detections of unregistered pesticides appropriately or account for local pesticide use patterns in calculating detection frequency

See comments on 2022 draft report. Possible reasons for trace detections of methidathion, endosulfan sulfate and oxydemeton methyl should be covered in the report since these pesticides were no longer registered in 2020 or 2021.

When only one day a week is monitored, one or two high concentrations are of great concern

The report states that the exceedance of the 1,3 D sub-chronic screening level in Shafter was due to “one high concentration” and that the exceedance of the chloropicrin sub-chronic screening level in Oxnard was due to “two high concentrations in July of 2021”. When monitoring is only conducted once a week it will not capture all high concentrations and may not capture the highest concentration in any given week, so one or two high concentrations can be in the midst of a week or more of high exposures.

DPR’s current screening or regulatory levels should be compared to other recommended levels and previous DPR recommended levels

See comparison table in comments above on 2022 draft report. We remain extremely concerned that chronic levels of exposure to 1,3 D at all AMN sites exceed the OEHHA NSRL and that levels of exposure are higher averaged over 2020-2022 than for previous time periods.

We note that the highest 24 hour chloropicrin concentration of 2.6 ppb (measured in Oxnard) in 2021 exceeds by 2.5-fold the 0.92 ppb reference level for protection of children that is in both the TAC report and DPR risk characterization.

Since the 2021 and 2020 reports were prepared in 2023 they should list the screening levels and regulatory levels in place in 2023 in all relevant tables and graphs. Levels in place in 2021 could be mentioned in footnotes. For example, the 55 ppb acute screening level for 1,3 D should be listed in Tables and graphs in place of the previous 110 ppb level which could be referenced in a footnote.

Captan and malathion should also be listed as proposition 65 designated carcinogens

See comments for 2022 report.

Dacthal was detected in 2021 at trace levels in about a third of samples in Oxnard and two thirds of samples in Santa Maria, and with one quantifiable detection in Oxnard. We note with special concern that dacthal was detected in over 90% of samples collected in Chualar between 2018 and 2020. While the highest 24 hour sample was 0.003 ppb, which we calculate to be 1.25% of the exposure level EPA now recommends (see table earlier in comments), the level could be much higher for people who live or work next to broccoli or cauliflower fields.

Comments on Monitoring of 1,3 D In Merced and Fresno counties: Results for 2022 Volume 6

It is inappropriate for the introduction to an air monitoring report to begin with a statement that “this soil fumigant plays a critical role in agricultural industries by protecting crops from nematodes and soil borne disease”.

In section 3.2 we strongly disagree with the conclusion that the exceedance of the DPR regulatory target for lifetime exposure is largely due to a single high level detection of 111 ppb in October of 2018. Table 6 shows that average single year exposures exceeded DPR’s cancer regulatory level of 0.56 ppb in 2017, 2018 and 2021.

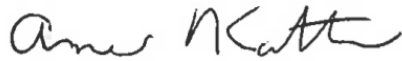
We suspect that the reduction in 1,3 D air levels in 2022 compared to the previous few years was related to decreased planting of new orchards due to the extended drought. DPR should do an analysis of 1,3 D use by year surrounding each monitoring site compared to 1,3 D air levels.

It would be accurate to say that the estimate of lifetime 1,3 D exposure at the Parlier and Delhi sites decreased from 2021 to 2022 but it is not accurate to say that cumulative lifetime exposure decreased.

Conclusion

We urge you to carefully review these comments and correct the errors and omissions we have pointed out. It is unacceptable that the issues we have raised repeatedly in our previous public comment letters continue to go unaddressed. Please contact Anne Katten if you need clarification on any of these points.

Sincerely,



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Jane Sellen and Angel Garcia, Co-Directors
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