

I concur with critiques offered by our friends from other groups challenging the 0.56 parts per billion (ppb) limit for 1,3-D, aka Telone. As a "bystander", I want to present a more local perspective, the view from the Pajaro Valley.

①
YTK

The Ohlone Monitor:

If you wonder why we're so impatient, the Ohlone Monitor is a case in point. Parents from this school, as well as 5 others, launched a lawsuit in 1999, citing environmental injustice based on disproportionate pesticide exposures to their children attending schools in largely Latino communities. The fumigant of concern then was methyl bromide, and one excuse offered for the long, drawn-out duration of the suit was the (very gradual) phase-out of that toxic chemical. It took 12 years for CalEPA to toss those parents, in lieu of a bone, a huge, bulky air monitor in a corner of the school playground, surrounded by acres of strawberry fields. By then, most of those kids were out of school, and another generation was starting. Methyl bromide use was declining. After a 5-year lapse of use, Telone (1,3-D) was moving in to replace some of its functions. By 2019, the last time we were here to talk about Telone, its use in California had increased thirty-fold from 1995 poundage.

The monitor was collecting data, but the level deemed safe was also a moving target. At Dow's behest, DPR raised the safety threshold from 0.14 ppb to 0.56 ppb. OEHHA, in contrast, lowered the NSRL (safe harbor level) from 0.1 ppb to 0.04 ppb recently. By this number, instead of occasional exceedences of the previous safe level, Ohlone has demonstrated consistent yearly averages above OEHHA's NSRL. And other monitors across the state, some also close to schools, did worse! Ohlone teachers, who are working today and couldn't join us, would tell you of their years of concern about the numbers of students they have had with asthma, leukemia, brain tumors, learning disabilities, etc.

Watsonville Has No Monitor, But We Had a Pilot:

Although it's labeled Watsonville, the monitor at Ohlone is four miles away from town, on a slope above the Pajaro Valley, facing the sea. Our valley spans two counties; our school district stretches across the county line and over the ridges on either side. The level for Telone, and other toxins recorded on that playground behemoth do not necessarily reflect those in the valley, which are, as they are in most ag communities, unmonitored. Santa Cruz County, however, is a heavy fumigant user as counties go, not on the top ten list by poundage, but by percent of total pesticides applied, over 67% (2018 data). In three years, 2019-21, over 900,000 pounds a year of the top three fumigants were applied in Santa Cruz County, the vast majority in the Pajaro Valley. Add in fumigants applied in the valley and over the river in Monterey County, and we'd easily top a million pounds, all in a funnel-shaped valley where the wind blows from the sea. How much drift are we getting--who knows?

What we got, though, was a pilot notification project. My critique of how that went is on file with DPR elsewhere. A recap of salient details: the sample size was small; 1,100 households invited, with spotty participation. Notifications were for three fumigants only, albeit the top restricted chemicals used in the county. The senior neighborhood is on the edge of town, bordered by fields, and a mile-wide perimeter was designated for advance notices. The pilot period coincided with fall fumigant season. Over six weeks, we got notifications pretty much every day, sometimes more than one, mostly combos of chloropicrin and 1,3-D, a few of K-Pam toward the end. Our neighbors found the onslaught to be overwhelming and worrisome, even though most of them failed to grasp the limitations of what information they were getting.

2
JKR

As a Fumigant, Telone Does Not Stand Alone

This hearing and DPR's approach to Telone regulation are inherently flawed. Watsonville's pilot study exposed what modeling, and even monitoring, of single chemicals do not: these fumigants, and ag chemicals overall, are not found in isolation. Yet both DPR's and OEHHA's numbers for safe levels of Telone are based on lab studies of the chemical in isolation. K-Pam and other metam salts are also carcinogens, as well as reproductive and developmental toxins and corrosives. Chloropicrin, a potent respiratory irritant, is also identified as carcinogenic, both by EPA and OEHHA, even though it has not (yet) been designated as so under Prop. 65. (It's on that long waiting list for re-evaluation.) UCLA's 2016 study pointed out that all three of these fumigants tax the body's ability to detoxify itself, increase cellular mutation, and decrease cellular repair. Combined and long-term exposures could have both additive and synergistic effects.

A list of the top ten carcinogens used in Santa Cruz County ag (2018 again, the most recent year that compiled data is available), show Telone as the top, with over 200,000 pounds applied. (If it were Prop 65-designated, chloropicrin would have been on top.) Next was K-Pam, followed by malathion, the only one of the top 5 **not** identified as a toxic air contaminant. Over a quarter million pounds of carcinogens were used in Santa Cruz County ag in 2018 alone. What are exposures via air, water, soil, and food? Again, we don't know.

Another fundamental flaw in DPR's approach: the focus on mitigation only. Tweaking application methods aims to allow for continued use, not phase-out. Without consideration of least harmful alternatives, risk assessment and risk management default to cost/benefit analysis. Potential crop losses are weighed against threats to human health and life.

I can't claim to decipher the complicated formulas with multiple variables that describe the changes in application methods DPR is proposing. I believe our departing County Ag Commissioner incorporated most, or all, of them in permitting fumigant applications in Santa Cruz County: TIF tarping, increased buffers, and limited acreage of fumigation plots for closer monitoring etc. And under the spotlight of the pilot project, some neighbors of fields **not** in the pilot area reported getting notifications from the grower. Still, when notices came, people worried about what they were breathing. And now that the floods have come, they worry about what's in the mud and water. What satisfies growers, PCAs and Dow may not appease or protect worker in the fields and residents of ag communities. While it may be that fumigants are unlikely to leave long-term residues, it's also true that we know very little about the types, quantities, timing, and risk factors that link chemical exposures to harm, both for humans and the environment.

Fumigants, as a category, are designed to be broad in spectrum and brief in duration. This renders them essential enablers of industrial scale farming for certain crops, notably berries, tree nuts and fruits, wine and table grapes, tomatoes, some vegetables, and cotton, all grown in California and distributed around the country and the world. In 2013, DPR launched a project to study alternatives to fumigation in the strawberry industry. 10 years later, here we are, arguing over one of those toxic tools. Yes, we want an end to un-tarped applications. We're not really here to talk about what kind of tarps, or how deep to go. We want a better way to grow food, one that values human and environmental health over productivity and profits.

Kathleen Kilpatrick, RN-NP, MN, PHN, CSN
Retired School Nurse, PVUSD

dorioktk@gmail.com

(1)

I concur with critiques offered by our friends from other groups challenging the 0.56 parts per billion (ppb) limit for 1,3-D, aka Telone. As a "bystander", I want to present a more local perspective, the view from the Pajaro Valley.

The Ohlone Monitor:

If you wonder why we're so impatient, the Ohlone Monitor is a case in point. Parents from this school, as well as 5 others, launched a lawsuit in 1999, citing environmental injustice based on disproportionate pesticide exposures to their children attending schools in largely Latino communities. The fumigant of concern then was methyl bromide, and one excuse offered for the long, drawn-out duration of the suit was the (very gradual) phase-out of that toxic chemical. It took 12 years for CalEPA to toss those parents, in lieu of a bone, a huge, bulky air monitor in a corner of the school playground, surrounded by acres of strawberry fields. By then, most of those kids were out of school, and another generation was starting. Methyl bromide use was declining. After a 5-year lapse of use, Telone (1,3-D) was moving in to replace some of its functions. By 2019, the last time we were here to talk about Telone, its use in California had increased thirty-fold from 1995 poundage.

The monitor was collecting data, but the level deemed safe was also a moving target. At Dow's behest, DPR raised the safety threshold from 0.14 ppb to 0.56 ppb. OEHHA, in contrast, lowered the NSRL (safe harbor level) from 0.1 ppb to 0.04 ppb recently. By this number, instead of occasional exceedences of the previous safe level, Ohlone has demonstrated consistent yearly averages above OEHHA's NSRL. And other monitors across the state, some also close to schools, did worse! Ohlone teachers, who are working today and couldn't join us, would tell you of their years of concern about the numbers of students they have had with asthma, leukemia, brain tumors, learning disabilities, etc.

Watsonville Has No Monitor, But We Had a Pilot:

Although it's labeled Watsonville, the monitor at Ohlone is four miles away from town, on a slope above the Pajaro Valley, facing the sea. Our valley spans two counties; our school district stretches across the county line and over the ridges on either side. The level for Telone, and other toxins recorded on that playground behemoth do not necessarily reflect those in the valley, which are, as they are in most ag communities, unmonitored. Santa Cruz County, however, is a heavy fumigant user as counties go, not on the top ten list by poundage, but by percent of total pesticides applied, over 67% (2018 data). In three years, 2019-21, over 900,000 pounds a year of the top three fumigants were applied in Santa Cruz County, the vast majority in the Pajaro Valley. Add in fumigants applied in the valley and over the river in Monterey County, and we'd easily top a million pounds, all in a funnel-shaped valley where the wind blows from the sea. How much drift are we getting--who knows?

What we got, though, was a pilot notification project. My critique of how that went is on file with DPR elsewhere. A recap of salient details: the sample size was small; 1,100 households invited, with spotty participation. Notifications were for three fumigants only, albeit the top restricted chemicals used in the county. The senior neighborhood is on the edge of town, bordered by fields, and a mile-wide perimeter was designated for advance notices. The pilot period coincided with fall fumigant season. Over six weeks, we got notifications pretty much every day, sometimes more than one, mostly combos of chloropicrin and 1,3-D, a few of K-Pam toward the end. Our neighbors found the onslaught to be overwhelming and worrisome, even though most of them failed to grasp the limitations of what information they were getting.

20
KTK

As a Fumigant, Telone Does Not Stand Alone

This hearing and DPR's approach to Telone regulation are inherently flawed. Watsonville's pilot study exposed what modeling, and even monitoring, of single chemicals do not: these fumigants, and ag chemicals overall, are not found in isolation. Yet both DPR's and OEHHA's numbers for safe levels of Telone are based on lab studies of the chemical in isolation. K-Pam and other metam salts are also carcinogens, as well as reproductive and developmental toxins and corrosives. Chloropicrin, a potent respiratory irritant, is also identified as carcinogenic, both by EPA and OEHHA, even though it has not (yet) been designated as so under Prop. 65. (It's on that long waiting list for re-evaluation.) UCLA's 2016 study pointed out that all three of these fumigants tax the body's ability to detoxify itself, increase cellular mutation, and decrease cellular repair. Combined and long-term exposures could have both additive and synergistic effects.

A list of the top ten carcinogens used in Santa Cruz County ag (2018 again, the most recent year that compiled data is available), show Telone as the top, with over 200,000 pounds applied. (If it were Prop 65-designated, chloropicrin would have been on top.) Next was K-Pam, followed by malathion, the only one of the top 5 **not** identified as a toxic air contaminant. Over a quarter million pounds of carcinogens were used in Santa Cruz County ag in 2018 alone. What are exposures via air, water, soil, and food? Again, we don't know.

Another fundamental flaw in DPR's approach: the focus on mitigation only. Tweaking application methods aims to allow for continued use, not phase-out. Without consideration of least harmful alternatives, risk assessment and risk management default to cost/benefit analysis. Potential crop losses are weighed against threats to human health and life.

I can't claim to decipher the complicated formulas with multiple variables that describe the changes in application methods DPR is proposing. I believe our departing County Ag Commissioner incorporated most, or all, of them in permitting fumigant applications in Santa Cruz County: TIF tarping, increased buffers, and limited acreage of fumigation plots for closer monitoring etc. And under the spotlight of the pilot project, some neighbors of fields **not** in the pilot area reported getting notifications from the grower. Still, when notices came, people worried about what they were breathing. And now that the floods have come, they worry about what's in the mud and water. What satisfies growers, PCAs and Dow may not appease or protect worker in the fields and residents of ag communities. While it may be that fumigants are unlikely to leave long-term residues, it's also true that we know very little about the types, quantities, timing, and risk factors that link chemical exposures to harm, both for humans and the environment.

Fumigants, as a category, are designed to be broad in spectrum and brief in duration. This renders them essential enablers of industrial scale farming for certain crops, notably berries, tree nuts and fruits, wine and table grapes, tomatoes, some vegetables, and cotton, all grown in California and distributed around the country and the world. In 2013, DPR launched a project to study alternatives to fumigation in the strawberry industry. 10 years later, here we are, arguing over one of those toxic tools. Yes, we want an end to un-tarped applications. We're not really here to talk about what kind of tarps, or how deep to go. We want a better way to grow food, one that values human and environmental health over productivity and profits.

Kathleen Kilpatrick, RN-NP, MN, PHN, CSN
Retired School Nurse, PVUSD

dorioktk@gmail.com