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Re: Docket No. EPA-HQ-OPP-2009-0298

**Pesticide Experimental Use Permit; Receipt of Application; Comment Request**

We respectfully urge EPA to deny Dow AgroSciences request for an Experimental Use Permit (EUP) to use sulfuryl fluoride as a pre-plant soil fumigant.

As EPA knows, we, together with the Environmental Working Group and Beyond Pesticides, have submitted formal Objections to each and every Final Rule on the first-time use of sulfuryl fluoride as a post-harvest food fumigant. EPA has still not responded to the Objections submitted in 2004 and 2005, nor to the Petition for a Stay in June 2006. On two occasions, at the request of EPA, we submitted a consolidation of our Objections, the most recent submitted in November 2006.

In good faith we entered into a mediation process with EPA in 2008. This effort has sadly proven to be a waste of our time and effort as can be verified in EPA's new Human Health Risk Assessment dated May 28, 2009, and available at <http://fluoridealert.org/sf/hra.may.2009.pdf> to which we will be submitting comments in August.

It is not wise, fair, or scientific for EPA to issue this EUP to Dow based upon the serious and substantial issues raised in our Objections that EPA has yet to respond to. The following summarizes some, but not all, of our unanswered concerns:

1. The Health Risk Assessment that EPA used as a basis to approve the safety of sulfuryl fluoride as a post-harvest fumigant was based on the MCLG (Maximum Contaminant Level Goal) of 4 mg/L fluoride in drinking water. While we had urged EPA to wait until the National Academy of Sciences completed their review of this standard, EPA chose not to wait. In March 2006 the NAS report stated that the MCLG of 4 mg/L was not protective of human health, thus negating the safety of EPA's HRA for sulfuryl fluoride.
2. The EPA was forced to redo the health risk assessment twice after interventions from FAN which showed that infants were already exceeding the safe reference dose (dosage) of 0.114 mg per kg bodyweight per day, and thus no new source should be permitted. Rather than acknowledging this, the EPA TWICE raised the reference dose for infants. First, to 0.571 mg/kg/day and then to 1.14 mg/kg/day. The latest safe reference dose for infants is now TEN times higher than the safe reference dose for adults. Such a contention not only defies common sense and basic toxicological principles but also the mandates of the Food Quality and Protection Act (FQPA), which requires that an extra safety factor be applied to protect infants and young children from pesticide residues in risk assessments because of their known extra sensitivity to toxic substances during early development. Thus, if anything the reference dose should have been set lower for infants than adults, not TEN times higher!
3. The requirement of the FFDCA that EPA, in establishing pesticide tolerances, must consider the "aggregate" exposures of humans to fluoride. The main point here is that many Americans are already exceeding EPA's established RfD, which in and of itself is a violation of FFDCA, as amended by FQPA, and that adding more exposure via the food supply is further violation of the law.
4. EPA's unusual waiver of an inhalation developmental neurotoxicity (DNT) study as a condition

for approval. However, there is a need for both an inhalation and oral DNT. There are now 23 studies linking high fluoride exposure with lowered IQ in children. Several of these studies were published in Chinese and have been translated after we submitted Objections. However, we did submit these studies to EPA in early 2009.

5. The many procedural errors that hampered the tolerance issuance process. Failures to allow fair opportunities for public participation, to issue health risk assessments in a timely manner, to place numerous important documents in the public record, and to wait for the completion of the NRC report, all constituted violations of the Administrative Procedure Act.

6. The new EUP from Dow is for use of sulfuryl fluoride as a soil fumigant. The EUP contains no details of the ultimate intended pesticide usage. However, based on the range of food crops and the request to use SF as a soil fumigant, it is quite possible that Dow is hoping to market SF as a replacement for past uses of methyl bromide (MB) in soil fumigation. Dow is already marketing SF as a replacement for MB for post-harvest fumigation in food processing and storage facilities. This new use of SF implies a potential huge increase in use of SF. Before MB use was curtailed due to ozone depletion concerns, soil fumigation represented 85% of its usage, with only 15% used in post-harvest fumigation [1].

It is also possible that soil fumigation with SF will require more pounds per acre than MB. When both these factors are combined, they suggest that this new use of SF could easily lead to a 10 to 50 fold increase in total release of SF to the environment compared to present usage.

Recent scientific studies have determined that SF is a highly potent greenhouse warming gas, and quantitative measurements assessing its potency have increased so that it is now considered 4000 times more potent than benchmark CO<sub>2</sub> [2, 3]. By our calculations, the potential increased release of SF into the atmosphere if SF is used in soil fumigations could be the global warming equivalent of several dozen large coal fired power plants.

As one of the lead researchers of the recent study said: "Unfortunately, it turns out that sulfuryl fluoride is a greenhouse gas with a longer lifetime than previously assumed," says Mühle. "This has to be taken into account before large amounts are emitted into the atmosphere." He goes on to say it is best "... to try to head off potential dangers as early as possible". [3]

The EPA OPP does not seem to have addressed this issue at all in their past reviews of SF or in any requirements concerning the EUP. The potential for increased global warming from SF must be reviewed by branches of EPA specifically involved with global warming, and not left to OPP which does not have expertise in this field. We request that no EUP be granted without a full review of the potential for SF to contribute substantially to global warming. It makes no sense to start down the road of registering a new use for a chemical which has such a high global warming potential without very careful consideration of the consequences.

Sincerely,

Paul Connett and Chris Neurath

## REFERENCES

[1] Editors of California Agriculture (1994) After methyl bromide: No easy answers, *California Agriculture* 48(3):7-9. DOI: 10.3733/ca.v048n03p7. Online at: <http://ucanr.org/repository/CAO/landingpage.cfm?article=ca.v048n03p7>

[2] Mühle J., et al. (2009), Sulfuryl fluoride in the global atmosphere, *J. Geophys. Res.*, 114, D05306, doi:10.1029/2008JD011162.

[3] Chandler, D. (2009) New greenhouse gas identified: Early detection may permit 'nipping it in the bud', *MIT Tech Talk* 53(18): 5. Online at: <http://web.mit.edu/newsoffice/2009/techtalk53-18.pdf>

*2004 Objections: <http://www.fluoridealert.org/epa-sf.htm>*

*2005 Objections: <http://www.fluoridealert.org/epa-sf2.2005.pdf>*

*2006 Petition for a Stay: <http://www.fluoridealert.org/pesticides/sf.petition.june.2006.pdf>*

*Nov 2006 – Consolidated Objections.*

*<http://www.fluoridealert.org/pesticides/sf.nov.2006.submission.pdf>*