

Science Advisory Board Subcommittee: Climate & Atmospheric Sciences
10/18/10

Attendees:

Serpil Guran	NJDEP
Dave Robinson	Rutgers
Bill McMillin	CH2M Hill
Maurie Cohen	NJIT
Philip Hopke	Clarkson
Tony Broccoli	Rutgers
Greg John	NJDEP
Melinda Dower	NJDEP
Greg Pope	Montclair State
Olga Boyko	NJDEP
Peg Hanna	NJDEP
Alex Polissar	NJDEP
Ravi Patraju	NJDEP
Marjorie Kaplan	NJDEP
Mike Aucott	NJDEP
Christine Schell	NJDEP
Mark Chopping	Montclair State
Linda Bonanno	NJDEP
Charlie Pietarinen	NJDEP

Introductions

Presentations will be posted on web

1. Christine Schell's presentation re adapting to climate change

What are key vulnerabilities for SAB to work on, how can science help with policy?

2. Ravi and Serpil's presentation re green energy and efficiency

Document to be reviewed will discuss life cycle analysis and other aspects of biofuels, this issue is essentially a placeholder because document is being developed -6-12 months for 1st draft to SAB

3. Olga's presentation re air toxics possibly to be added to NJDEP hazardous air pollutant list: e.g., n-propyl bromide

Phil commented that a residual risk analysis should suffice if toxicity values are available. This committee should do a cross walk with the public health committee and also with those working with emerging contaminants and with water. He also commented that we could take the risk assessment from PERC and just substitute n-BP, and that we'd need some type of NESHAP analysis.

Tony Broccoli- label HAP, toxic and potential to cause problems.

4. Peg's presentation on the priority issue regarding diesel retrofits- BENMAP and modeling

Charlie commented that we need to be cognizant of what is the added value for the extra efforts and expenses.

5. Charlie's presentation on monitoring

Modeling can control before and after e.g., meteorology, but not so with monitoring: you can't control real world variability. He also noted that monitoring to confirm reduction of emissions and monitoring to confirm reduction of exposure are very different tasks; because exposure reflects aggregated emissions from many sources, the difference after retrofitting might be too small to measure.. He also mentioned that there are no unique markers for diesel that could be measured.. Black carbon was discussed as a possible surrogate although it comes from any combustion source.

Phil commented that he agreed that using an emission factor and a simple air model is a much easier way of showing an effect, and that he has seen ultrafine reductions from EPA's recent rule in Rochester, and that rail yards are stationary, DOT road construction equipment is movable. He also emphasized that it will be difficult to get exposure estimates. Aerosolized soil material further complicates measurements.

Tony commented that there may be a way to monitor effects of the retrofits in a controlled situation the results of which could then be extrapolated to the real world. Charlie wondered if this might actually amount to a fairly large project.

The role of the SAB re this question was discussed. Charlie made it clear that DEP does not have the resources to do sampling and other field work, but can do literature searches. He also said that if he were to put together a proposed plan for addressing this issue that could then be reviewed by the SAB, that it would be helpful up front to have some guidance as to what should be included in that plan.

It was generally agreed that work will proceed on this issues through subcommittees, and that the full standing committee would meet on a quarterly basis at a location to be chosen

Subcommittee representatives were selected as follows:

Climate change: adaptation- Christine Schell, NJDEP

Tony Broccoli, Dave Robinson, Robin Leichenko, Mark Chopping, Greg Pope, Maurie Cohen, Bill McMillan, Alan Robock (expected to be included)

Air Toxics: Olga Boyko, NJDEP

Joann Held (expected to be included), Phil Hopke

Olga will put together short inventory of what information is out there.

Green Energy Lifecycle Analysis- Serpil Guran, Ravi Patraju - NJDEP

Mark Chopping, Maurie Cohen, Greg Pope, Bill McMillin, Phil Hopke

Diesel Retrofits Offroad Construction- Peg Hanna, Linda Bonanno; NJDEP
Phil Hopke, Joann Held, Paul Lioy. Linda will set up conference call within the next month.

Subcommittee- to report back to full committee

Each subgroup will form own logistics

Meeting was adjourned.