

Air Toxics Science Advisory Committee

Meeting Minutes

First Meeting of Reconvened ATSAC

Wednesday, December 17, 2014

DEQ Headquarters

4th Floor, Conference Room A/B

2020 SW Fourth Avenue

Portland, Oregon 97201



State of Oregon
Department of
Environmental
Quality

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*DEQ is a leader in
restoring, maintaining and
enhancing the quality of
Oregon's air, land and
water.*

List of Attendees

Attending Committee Members:

Bill Lambert – environmental epidemiologist, head of epidemiology department of public health preventive medicine at OHSU, background in statistics and toxicology. Will serve as chairperson of the ATSAC.

Dean Atkinson – air measurement science, analytical chemistry, PSU

Bruce Hope – environmental toxicology, worked on original benchmarks

Max Hueftle – environmental engineer, air permitting manager, with LRAPA 16 years

Dave Farrer – environmental toxicology, OHA pesticides, workers, air and water

Kent Norville – atmospheric physics, dispersion modeler, environmental impacts, toxicology of emissions to air

Kim Anderson – environmental science, fate of contaminants, OSU

Sue MacMillan – DEQ Air Toxics Science and Policy Analyst, agency lead for ATSAC.

This was followed by introductions of members of other DEQ AQ staff who will be assisting the ATSAC with technical and other issues:

Jeffrey Stocum, Manager Environmental Solutions, Technical Services

Sarah Armitage – Air Toxics Specialist

Chris Swab – Senior Emissions Inventory Analyst

Phil Allen – Senior Air Quality Modeler

List of Handouts and Presentation Notes

- ❖ Meeting Agenda
- ❖ Powerpoint presentation: Air Toxics Science Advisory Committee Program Orientation
- ❖ Relevant Oregon Administrative Rules
- ❖ Table of 2010 Ambient Benchmark Concentrations in Air
- ❖ List of Technical Sources for Review of Ammonia, Chlorine, Methanol, Phosphine, and Trichloroethylene

9:00 am Meeting Commencement Time

Introduction

Bill Lambert, Committee chair, welcomed audience, noted that the committee values input from the public and DEQ staff. The audience questions will be taken at the end of the meeting.

Committee Administration

Sue MacMillan presented the draft ATSAC Charter and ATSAC Rules of Conduct documents and requested that ATSAC members review them and make comments at next meeting. In general, technical decisions will be made by consensus of the committee, but a voting process is outlined in case it's needed.

There is a conflict of interest provision in the ATSAC Rules of Conduct. If a conflict arises, members will tell the chair and DEQ, and it will be documented. Individuals are expected to step forward.

If there are questions on science or data, the committee will ask for consultation with DEQ staff.

Ms. MacMillan handed out to committee members hard copies of:

1. The 2010 Ambient Benchmark Concentrations table.
2. Division 246 Oregon State Toxics Program rules, which include ATSAC requirements and responsibilities
3. A Memorandum dated June 15, 2006: Process for Proposing Air Toxics Needing Ambient Benchmarks
4. A Memorandum dated October 13, 2004: Revised Prioritization of Oregon Air Toxics List
5. A Memorandum dated November 11, 2004: Explanation of Norville Ranking Method

She also presented Powerpoint talk on general ATSAC information, how chemicals will be reviewed, technical considerations, past work conducted, etc.

Discussion regarding former hierarchy of technical sources versus new proposed hierarchy of technical resources (3 slides) – Committee member asked what PPRTVs are. USEPA PPRTVs are regional screening levels to use when IRIS is too old or taking too long to update.

Question from committee: What makes WHO/IARC information new or better than other sources?

Short-term guideline (STG) discussion: Collision of science and public expectations because concentrations are less stringent for shorter-time-frame exposures than those for chronic, longer-term exposures. However, it is still useful to have STGs to compare to 24-hour exposure levels. ATSAC will return to the short term guidelines when it gets through with completing a review of the air toxics benchmark (ABC) updates.

Dr. Lambert suggested a straw proposal for next year of work. Committee will use best available information on risk for 70-year lifetime exposure. Sometimes may need to use 45-year occupational data when nothing else is available. ATSAC will consider if there are specific vulnerable populations in Oregon and Oregon-specific settings. As professionals, members may know of new publications or research that will inform benchmark decisions. Proposed benchmarks are intended to be what is right for Oregon, but the volunteer committee will not spend hours and resources doing research. Rather, available peer-reviewed criteria protective of human health will be focused on.

The Committee needs to understand DEQ's previous screening process and needs to get a new list of compounds for screening. From compounds that are detected in Oregon, the committee previously had a list of 262. Working through those in priority order resulted in 52 benchmarks.

Pollutants expected to need extra attention are: diesel particulate matter, dioxins, furans, nickel compounds, toluene and TCE.

DEQ staff identified these potential pollutants for update/benchmarks: H₂S, woodsmoke, lead, styrene, mercury, DPM, naphthalene, formaldehyde, PAH, TCE, cobalt, phosgene.

There could be public interest in: manganese, selenium, acetaldehyde, diesel engine exhaust.

It's not defensible at this point to start with the existing 52 ABCs, as those were prioritized and chosen based on earlier (1999) Emissions Inventory (EI) results. Dr. Norville recommended starting fresh with DEQ's emission inventory. The state 2011 Emission Inventory is the best starting point. Screening process could occur in February or March.

Ms. MacMillan and other DEQ staff committed to providing the ATSAC with a list of chemicals identified in the 2011 EI for Oregon, including respective emission rates (i.e., pounds of chemical

emitted per year). This process may not be completed by the January 21, 2015 ATSAC meeting, but very likely to be available for the February 2015 ATSAC meeting.

Question from Dr. David Farrer: Can the benchmarks address current-use pesticides? So far, chemicals which have a quantifiable risk/available toxicity information via the inhalation pathway, are present in the air long enough to be monitored, or are included in the Emission Inventory, are the ones which have been identified as being in need of review for ABC designation. However, pesticide half-lives are short and they are difficult to monitor. There are a few pesticides in the current benchmarks.

There are new technologies and sensors that can detect pesticides but many (glyphosate) would not stay in the air/are not stable. Many of the carrier ingredients in pesticides are not known. More monitoring is expected.

Once ATSAC completes its review and updating of the air toxics benchmarks, it may want to consider adding short term guidelines for pesticides that do not have benchmarks. ATSAC needs to stay within the program scope, but a defensible STG methodology could be applied to any chemical.

ATSAC will put the pesticide issue in the parking lot. Whether ATSAC does further work on pesticides would follow a policy/program development decision by DEQ.

BREAK

Plan for Review of Benchmarks

Plan for reviewing benchmarks: Every 5 years ATSAC will review benchmarks – this is consistent with the federal process for updating NAAQS.

Process used by ATSAC previously:

- teams with pollutant assignments
- leads research and present
- committee discusses
- committee reaches consensus

We expect to review 20-25 compounds over the next 6 to 8 meetings, and diesel may take two meetings.

To get feet wet with chemical review process, committee could start on a few easy pollutants.

The Committee requested that Ms. MacMillan provide materials previously compiled by the ATSAC for each compound, any new or revised toxicological information, and consider previous thought process, and provide it to the Committee.

Need list of chemical to consider for review for next meeting. Also need a current EI and current monitoring data.

Examples of easy non-carcinogen compounds for planning purposes: ammonia (Kent Norville, Dean Atkinson), chlorine (Bruce Hope, David Farrer), methanol (Dean Atkinson, Kim Anderson), phosphine (Max Hueftle, Kim Anderson), TCE (David Farrer, Bill Lambert).

For next meeting:

- Introduction of topics
- List of pollutants
- Reviewers present information
 - Reminder that deliberations and discussion occur in meetings, ATSAC members cannot have discussions as a whole over email.

- Committee discusses

Process of reviewing pollutants: Who has looked at it, what did they say, how did they do it?

Ms. MacMillan will send links and PDF files for existing materials related to toxicity of the chemicals being reviewed.

Much of discussion can depend on uncertainty factors, and keep in mind that different agencies use different factors.

Template:

- How is the chemical defined? Basic characteristics of chemical.
- Sources inventory in Oregon, modeled and monitored data (to be provided to ATSAC by DEQ)
- What's known about the chemical from the Oregon Emissions Inventory, including Hot spots (to be provided to ATSAC by DEQ)
- Population sub- groups which are Vulnerable/Sensitive to the chemical
- Does the chemical cause multimedia impacts? (i.e., not just air impacts)
- Existing knowledge about cancer Unit Risk Estimates (UREs)/Inhalation Unit Risks (IURs); toxicological impacts; non-cancer Reference Concentrations (RfCs) in air
- What is the toxicological endpoint (cancer vs. non-cancer, non-cancer target organs, target effects) of each toxicity factor being considered for a specific chemical?

-What are the physical limitations/toxicological attributes of the chemical? (e.g., short half-life? Only toxic under certain conditions? Quickly metabolized in a living system?)

-Any highlights of the technical information reviewed for a chemical

Next 5 compounds should be about 180 minutes of work, 30 minutes to discuss each one.

Committee requested that DEQ present an overview of the Portland Air Toxics Solutions work, especially lessons learned on how DEQ used the benchmarks in PATS to make decisions.

Action Items

Ms. MacMillan to provide Committee members with links to websites and pdf files of relevant toxicity literature at least one week prior to next meeting in January 2015.

Ms. MacMillan will create draft meeting minutes for Meeting #1 and distribute to Committee for review.

DEQ staff will begin work on collation of 2011 Emissions Inventory data for the Committee.

Sarah Armitage, DEQ, will determine best meeting date to present an overview of PATS to the Committee.

Q&A -- Audience

Public Comments – Jim Lubischer, WA County pediatrician concerned with child blood lead levels. 85% of toddlers have detectable lead. Average is 2, CDC safe level is 10. But there is no safe level, no threshold and lead is a serious health issue. Oregon could be at the forefront of a more protective lead standard. How can the public submit information for ATSAC consideration and assistance?

A: Direct these materials to staff and they will make available to the committee.

Public should have at least several week's advance notice on what ATSAC will address at the following meeting because the

Title of Your Program/Workgroup

committee will discuss its plans and DEQ will record.

Miki Barnes, Oregon Aviation Watch – will ATSAC consider ways to eliminate exposure?

A: ATSAC does not do policy or risk management work. Their job is getting the best health and scientific information to support benchmarks and recommend health based levels. See the ATSAC website on how it works and the relationship to risk management. The ATSAC work is about setting targets and the DEQ's work is about how to reach the targets.

12:00 pm Meeting Adjournment Time

Next meeting scheduled: 9:00 am to 12:00 pm, January 21, 2015 @ DEQ HQ, 811 SW Sixth Avenue, Portland, Oregon 97204 (10th floor, Conference Room EQC-A)