Air Toxics Science Advisory Committee

Meeting Minutes

Jan. 21, 2015 ATSAC Meeting

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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.

Introduction

The second meeting of the 2014-2015 Air Toxics Science Advisory Committee was held in Conf Room EQC-A, 10th floor, HQ, 811 SW Sixth Ave., Portland, on Jan. 21, 2015, from 9:00 am to noon.

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Attending Committee members included Bill Lambert, Ph.D; Dean Atkinson, Ph.D.; Kent Norville, Ph.D.; David Farrer, Ph.D.; Bruce Hope, Ph.D.; and Max Hueftle. Kim Anderson, Ph.D., was absent due to a personal emergency.

Attending Oregon Department of Environmental Quality staff included Sue MacMillan, ATSAC lead for DEQ; Sarah Armitage, Air Toxics Specialist; Jeffrey Stocum, Air Technical Services Manager; and Phil Allen, Senior Air modeler.

Committee Administrative Issues

Approval of Dec. 17, 2014 ATSAC meeting minutes: Unanimous approval by Committee.

Committee discussed draft Rules of Conduct provided by Sue MacMillan.
Add General Topic #1 to Rules of Conduct.

> During first ATSAC meeting (Meeting #1) held on September 23, 2004, there was a discussion about sending in comments or proxy votes on issues if a Committee member could not attend a meeting. It was decided that if there was to be a yes/no vote, then a member who agrees with the majority can communicate that to the chair and it will be counted. A member who has a minority view must be present to state their reasons for this view and to cast a vote. With this proviso, the ground rules were adopted.

Ms. MacMillan agreed to add above changes to Rules of Conduct. Bill will then review revised Rules of Conduct. Otherwise, Rules of Conduct were approved as-is by the ATSAC.

General Topic #2 – All meetings will be public.

> In 2004, it was determined via DEQ consultation with the DEQ Assistant Attorney General that the ATSAC was not subject to Oregon's Public Meeting Law, but ATSAC decided to make all of their meetings public in order to maintain open communications with the public.

Ms. MacMillan handed out a list of past technical decisions made by previous ATSAC to current ATSAC members, can discuss as needed.

Ms. MacMillan told audience that she would add to the ASTAC website some pdf files originally sent to ATSAC members to facilitate toxicity reviews for ammonia, chlorine,

methanol, phosphine, and trichloroethylene. A handout was available to the audience already listing all of the links to references that DEQ provided to the ATSAC, but that actual pdf files of technical articles, which were also reviewed by the ATSAC, needed to be gathered and put on the ATSAC website, as well.

Discussions of Review of Toxicity Information

Ammonia: Dean Atkinson and Kent Norville
Kent: Ammonia is a colorless gas, strong odor, respiratory irritant, sources: fertilizer operations, refrigerant, degreaser, household use in aqueous state, control agent for power plants, diesel engines.
Washington ASIL for ammonia = 200 ug/m3, 300 ppb. Study of 52 workers with long-term exposure in industrial setting: high and medium (or maybe low?) exposures were assessed The No-Observed-Adverse-Effect Level value obtained was used to derive RfC. Primary study used by many agencies; newer studies confirm this, but the new studies are not as comprehensive as the earlier study that they're based on.
Dean: Contradiction between California's Office of Environmental Health Hazard Assessment and the U.S. Environmental Protection Agency's Integrated Risk Information System database, due to significant figures, EPA looks to raise the value to 300 ug/m3. So our standing Ambient Benchmark Concentration of 200 ug/m3 is very protective. Recommendation: Do not change.
Kent: What's time frame for IRIS approving new values they're considering?
David: It depends. Can take a long time.
Bruce: If the chemical and the change to its toxicity are not controversial, may be as short as a year.
Sarah Armitage stated that no particular concern exists with Ammonia in regard to Air Toxics modeling. But it's present at some of our (Oregon) facilities.
Bill: Diffused set of sources, as Kent was describing. Wondering about things like hot spots.
Sarah: No hot spot concerns for ammonia at this time.
Kent: Accidental releases, large quantities is what I've worked with. But if higher value is approved in IRIS, at that point ATSAC should recommend higher value.
Bill: Summarized discussion:

ATSAC recommendation is to retain current ABC for ammonia of 200. Waiting on various deliberations and publications from EPA. But until then, retain standing ABC of 200 ug/m3 for ammonia. Unanimous approval by Committee.

Chlorine: Bruce Hope and David Farrer
Sue put up on the overhead screen a table that Bruce and David created, for the Committee to look at as it discussed information.

Bruce: So this is the older version of my summary table. I am also showing you chlorine dioxide, although I'll explain later why it's not a concern. Chlorine is a yellow, irritant gas. Early warfare agent. Not encountered unless a spill occurs. Household products contain chlorine; as do swimming pools. Water treatment facilities use it in liquid form. Look at chronic exposure to ammonia. Oregon Inventory of chlorine emissions has not been looked at yet by Bruce. Molecular chlorine doesn't last long, just seconds in water to a few minutes to hours in atmosphere. HCl (hydrochloric acid) is formed, and this is

DEQ-DC1

the primary cause of irritation and injury. Level at which you can smell chlorine (i.e., its odor threshold) is much higher than a protective level.

Vulnerable populations: Chlorine irritates respiratory tract and lungs. Bad for asthma, people with existing compromised respiratory health conditions are very vulnerable. Children have higher ventilation rates than adults (resulting in more exposure), so children are also a vulnerable population. Cal EPA identified chlorine in its list of 17 chemicals; Cal EPA's Toxic Air Contaminants are considered particularly harmful to children.

Inflammation of tissues follows on the heels of initial irritation caused by inhalation of chlorine.

Cal EPA 2000 Reference Exposure Level was used for existing ABC (0.2 micrograms per cubic meter [ug/m3]). This criterion was obtained from a 1995 study using rats. But an older (1987) study used monkeys. Monkeys more similar to people than rats. Incidence rate of vassal lesions based on low-level exposure. Physical effects of long-term exposures. Different calculation technique produced about ½ the concentration of current ABC. A protective level of 0.1 ug/m3 is currently recommended by the Agency of Toxic Substances and Disease Registry. Uncertainty factors for both the 1987 and 1995 studies result in a total of 30; so both studies have similar levels of uncertainty.

David and Bruce talked, and recommended changing to ATSDR value of 0.1 ug/m3. Although the monkey study is older, the type of analysis, the fact that mammals more similar to humans were used, makes us recommend 0.1 ug/m3. Similar to ATSDR's 2010 Minimal Risk Level value (0.15 µg/m3).

David: Monkeys tested with lower dose than rats, and still saw an effect; so an additional level of protection.

Bruce: Chlorine dioxide toxicity information is presented for informational purposes. Reaction products of chlorine dioxide are what people are actually smelling, when they think they're smelling chlorine – particularly in swimming pools. EPA Regional Screening Level risk-based numbers are in the same ballpark, so an important confirmation of use of the lower level, i.e., 0.1 ug/m3.

David: RSL would also be 0.1 ug/m3, using rounding, so it confirms recommendation. Bill summarized: Short half-life environmentally, but moist epithelial contact will start the irritant/inflammation process. There is a high biologic relevance of monkey study to human response. We didn't have RSLs back in 2004. But current RSL can actually trigger regulatory action, so our congruency makes sense and is defensible. I like the recommendation for the ABC by Bruce and David.

Bruce: RSLs are now standardized by EPA nationally; wasn't true earlier.

Bill: Yes, RSLs have been reviewed at the national level; good to use.
Kent: OEHHA folks opted for rat study, because of certain concerns with the adequacy of the monkey study. Can we address this?

DEQ-DC1

David: OEHHA selected the rat study over the monkey study because the rat study had many more animals per dose group and it lasted a full 2 years (the approximate life span for rats). But I felt more comfortable with the monkey study because they tested a lower-dose and monkeys are much more similar to humans. We're looking at annual averages, so the 1 year exposure in the monkey study was long enough for ATSAC's purposes of developing an ABC.

Bruce: Adjustment for lung volumes and breathing rates is a lot closer to humans (for monkeys) than rats.

David: Another reason to go with the monkey study: OEHHA study, which used rats and mice… When you look at auxiliary information, female rats were treated 3 days per week, while males were treated for 5 days per week. This is a complication when compared to the other study, and presents additional uncertainty. Numbers for the OEHAA REL (rat) study and the ATSDR MRL (monkey) study are similar via rounding, too.

Bill: More environmentally relevant dose used in monkey study. Nasal lesions: are these a broader endpoint than hyperplasia? More specific endpoint. Nasal lesions as an umbrella covers other effects like hyperplasia, and is thus a broader endpoint. Lesions interpreted as adverse effects in monkeys – another reason for observing lesions which are interpreted to occur after hyperplasia becomes observable. Also, monkey has longer life span, so it would take a longer time for effects to actually show up. May cloud interpretation of results.

David: But histological exam done for sacrificed monkeys at end of study.

Bill: Lesions tend to be forerunners of cancer.

Bruce : Not a carcinogen, but ongoing tissue damage may help to make this happen.
You don't know you're being adversely exposed, smell-wise.
Suggested recommendation: Change current ABC for Chlorine to 0.1 ug/m3. Brings ABC into line with ATSDR information.

David: Does ATSAC have a standard method of rounding? Should we ID one?
Bruce: No real policy, but I rounded all former ABCs to one significant figure (sig fig). I let the Excel software do it. ATSAC never really weighed in on this issue.

David: We should round to one significant figure/significant digit. Otherwise, with a greater number of sig figs, it implies precision that's not there.

Sue: Bruce, how did you perform your rounding in the past with the ABCs? So with a value of 0.05, did you round up or down?

Bruce: If we had a value of 0.150000, we rounded to 0.1. If 0.150001, then we rounded to 0.2. When we calculate an ABC from a Unit Risk Factor for a carcinogen, a lot of meaningless decimal places can be generated. So we need a rule to keep that from happening.

DEQ-DC1

Bill: We (the Committee) will do the rounding for each chemical when necessary, and discuss as a committee.

Bruce previously provided notes with each ABC explaining rounding.

Kent: So we've opted to go with the lower of the two values for chlorine, even though both studies had Uncertainty Factors of 30. The values of 0.1 ug/m3 and 0.2 ug/m3 do not have a big difference toxicity-wise, but may be big in terms of resulting regulatory requirements.

Dean: In most cases, all else being equal between two critical studies, we chose the higher value. But that's not true for chlorine, which we discussed earlier this morning.

Kent: I disagree. Other information, obtained by consensus, differs.

Bruce: One study was performed using monkeys, the other using rats. Two very different critical studies, in other words. We're not deciding between two similar studies, where all things are relatively equal.

Kent: But different agencies chose different studies for a reason. OEHHA considered info before they finally chose the rat study.

Bruce: If we were comparing two different rat studies, this would be a different discussion. Fundamental biology differs. May want to revisit this issue when two truly similar studies are being compared. Choosing a higher number means you're choosing a number that is more likely to have effects, which sounds bad. But it's less *uncertain* to be closer to a likely effect level. It's what we did originally. We (the former ATSAC) didn't want to choose the lower number so as to avoid being over-protective, too conservative. So, we're not going to default to lowest number when perhaps a UF of say, 100, was used arbitrarily and can't be supported.

Kent: We're choosing from a range of protective numbers for chronic exposure, in some cases.

Bill: The old rule about choosing between two similar studies of non-cancer effects did not apply if there was greater than an order-of-magnitude difference. But this is a situation where recognized scientific bodies reviewed existing information, and the monkey and rat studies are within an order of magnitude of each other. In the past, we've had two numbers that were close and both were protective, and we opted to take the higher one, all other things being relatively equal. So higher number has more confidence (less uncertainty) associated with it, in ATSAC's view.

Vote: Kent abstained, other five members approved recommendation (0.1 ug/m3) for ABC for chlorine. Kent didn't feel ATSAC applied same requirements to this decision as they did in past with other chemicals. Kent will go back and look at information, because he still maintains that OEHHA made an informed decision to use the rat study.

Bruce: Remember, OEHHA decision is now 14 years old; OEHHA probably doesn't update its values as often as it could.

DEQ-DC1

Bill: Let's go with recommendation, although we respect Kent's viewpoint. Keep this in mind for the next time this comes up with another chemical, and we can review again how we made our decision about the chlorine ABC.

Methanol: Dean Atkinson and Kim Anderson

Dean (Kim not present): Methanol is a colorless, very volatile liquid used widely in industry. Existing 4,000 ug/m3 ABC is based on an OEHHA REL value. When this was set, no RSLs were available as a point of comparison. Current RSL is 20,000 ug/m3. Methanol has developmental effects, such as reduced brain weight in rat pups.
New (2010) EPA draft guidance suggests IRIS will revise value to 2,000 ug/m3, which is a factor of two lower than our standing ABC. Pretty sound argument. Previously, all the endpoints used were not true inhalation endpoints, but were taken from ingestion studies (where models were used to get MeOH blood concentrations --- a lot of controversy with this protocol). Better model (the Benchmark Dose Model) still used a UF of 30. – so another borderline case. If we don't make the change now, we almost certainly will in the future. I recommend changing ABC to 2,000 ug/m3. This (?) guidance came out in 2011. So, another borderline case. If we don't make the change now, we likely will in the not-too-distant future. No cancer endpoint. All information is based on non-cancer endpoints. I recommend moving to the lower value of 2,000 ug/m3 for MeOH.

Bruce: How does exposure occur?

Dean: Inhalation is a major exposure route: MeOH gets inhaled. Ingestion results have uncertainty in regard to air exposure. Would be surprised if high levels of MeOH exist in Oregon in air.

Bill: Indoor exposure much higher than outdoors. Largely an indoor concern. At these levels, no narcosis, no susceptible groups which are relevant.

Max: MeOH is one Hazardous Air Pollutant emitted in large quantities from wood products facilities including resin/adhesives manufacturers. For as much as it is emitted, it doesn't show up on our (LRAPA's) monitors in concentrations greater than the benchmark.

Dean: MeOH *is* very water-soluble.

Kent: Emissions Inventory listed emissions rate for MeOH of 8,000 tons/year, statewide. Should stay with our ammonia approach, where we said we'd discuss it again later if raised; don't change ABC now just to be proactive.

Bruce: So now we're leaning toward changing ABCs to provisional numbers. Maybe we should wait.

Dean: Since 4,000 ug/m3 is very protective, I'm OK with leaving as-is.

DEQ-DC1

Bruce: Me too. This committee has always leaned toward using established values. Guiding principal is to work with protective levels already established by scientific/regulatory bodies.

Bill: Particularly because of pending changes in toxicity information for various chemicals, ATSAC should perform more frequent reviews of the ABCs, maybe again in 3 years, not 5, especially in regard to finalization of provisional criteria. We should stick with 4000 ug/m3 for a MeOH ABC, in order to stay consistent with our ammonia decision.

Recommendation: Leave the ABC for methanol at 4000 ug/m3. Unanimous.

Phospine: Max Hueftle and Kim Anderson

Max (Kim absent): Phosphine is a fumigant for crops and tobacco, meth labs, semi-conductor manufacturing. Probably is a concern for Oregon citizens. Phosphine is a respiratory irritant. Broad spectrum of toxic effects. Existing ABC is 0.3 ug/m3, based on study using mice, by Barbosa. Reference values from IRIS and OEHHA haven't changed. Last ATSAC didn't accept 0.8 ug/m3 value from previous OEHHA decision, based on questionable UFs. 2010 ATSDR Heath Consultation – no chronic reference numbers. Little change in toxicity information, so I recommend keeping current ABC.

Sarah, Sue: We've heard no concerns from the public about phosphine.

Bill: Did you look at issues surrounding UFs?

Max: Yes. Max recited UF factors used and their basis. Certainly some high UFs were used. Maybe go over previous deliberations from previous ATSAC?

Bill: No, if there's no new evidence, we don't have to go over old deliberations. There's no clear substantiation of the rationale behind the use of the UFs by California. We have to consider the defensibility and relevance of criteria already vetted and published by other agencies, for the protection of Oregonians. We may have already considered the high UFs in setting a different limit, but records are not clear.

Bruce: Yes, the question is: Are there NEW studies, or former studies where new UFs have been applied? That's what we need to focus on.

Bill: I read the materials provided by DEQ. Didn't see any useful new information for phosphine.

Kent asked if we wanted him to read off the UFs for each study. Committee said yes.
IRIS UFs – Dean read the UFs out loud. No Modifying Factors MFs were used.
OEHAA UFs– Dean read the UFs out loud.

Dean: Major difference: IRIS had problem with database uncertainty.

Bill: This issue falls directly to the point of: <u>all other things being equal, we have two different interpretations</u>. Database UF is a judgment call.

DEQ-DC1

Bruce: OEHHA picks a study, and then applies UFs (doesn't really pull database considerations into their protocol). EPA looks at more parameters.

Dean: OEHHA says EPA uses 0.3 ug/m3, based on the Barbosa study, with a MF of 3.

Bruce: So the two values (0.3 ug/m3 and 0.8 ug/m3) vary by a factor of 3.

Bill: And the Barbosa study was used for both decisions. So, we will pick higher of the two choices: 0.8 ug/m3 by OEHHA would be the number to choose.
Max: May 2005 meeting notes. What about hierarchy of database choices?

Bill: Both OEHHA and ATSDR have strengthened their processes and are a lot more sophisticated now than they were earlier. We used to really question ATSDR criteria, and even OEHHA criteria to some extent (during earlier ATSAC meetings, that is).

Bruce: There is a reason for the reference source hierarchy – our greatest faith is typically in the IRIS values.

Bill: But OEHHA now has a proven track record.

Bruce: Some agencies seemed to slap UFs on to get things moving.

Bill : On the other hand, EPA IRIS takes a LONG time to publish their values.

Sue: Hierarchy is for general reference, but importance of the various results is up to ATSAC to determine.

Recommendation: 0.8 ug/m3 as ABC value for phosphine. Unanimous.

Trichloroethylene (TCE): David Farrer and Bill Lambert

Sue provided copies of draft table of summary of information provided by David.

David: TCE is a chlorinated solvent. Colorless liquid, very volatile. Dissolves in water, can migrate to groundwater. A lot of oral studies are available for TCE.
0.5 ug/m3 is the current ABC for TCE, based on the 1990 URE from OEHAA (2.0 x10-6 was the basis of the URE.) Since then, a lot more epidemiological studies have become available. TCE is carcinogenic to kidney; also causes non-Hodgkins Lymphoma and liver cancer. Factor of 4 to account for additional cancer types was added to original slope factor based only on kidney cancer.

Bill: Critical, new epidemiological study since previous decision on TCE – 2006 and 2010 studies. Study of occupational workers in France (Charbotel, 2006). Renal cell cancer – TCE exposure documented for this group of workers. Far superior to the Nielsen 2003 study, which used a very large number of workers, but calculated standardized incidence ratios using the general population as a reference, and job exposure stats to characterize risk – so, there was a high degree of uncertainty with the Nielsen results. So, the 2006 Charbutel study is the principal study used by IRIS. Has a

DEQ-DC1

steeper cancer slope estimate. Moore study– central Europe –biomarkers used to examine exposure and outcomes. Found congruency with Charbutel study. Involved glutathionase transferase as a step in the pathway toward development of kidney cancer.

David: TCE also causes similar cancers in animal studies. There are also non-cancer endpoints for TCE, so an Inhalation Reference Concentration (i.e., an inhalation RfC for non-cancer effects) was developed, based on consideration of a 21-day window for fetal cardiac malformation in rats. Obviously, we want to protect against fetal cardiac malformation, but use of the more-stringent Inhalation Unit Risk (an IUR for cancer effects), rather than the less-stringent RfC, will also be protective against the non-cancer risks.

Same slope factors and same target risks used by EPA and ATSDR, but two different results:
0.24 ug/m3 ATSDR MRL
0.048 ug/m3 EPA RSL

For its RSL, EPA assumed 26 years of exposure out of a 70-year lifetime. This resulted in higher number for the RSL than ATSDR's MRL. Dividing 10^{-6} by the IUR means more or less constant exposure over a lifetime. We're looking at whole state of Oregon, so it's plausible that someone would be exposed for a lifetime in Oregon. Would like to use the 0.24 ug/m3 number listed by ATSDR. Rounding would bring that number to 0.2 ug/m3.

Bruce: Simplest to assume lifetime exposure. Cleanup site perspective – the RSL would be appropriate for clean-up sites with a more limited exposure duration. (Exposure basis 26 out of 70 years, 350 days/yr).

David: Yes, I agree. With something like vapor intrusion, you'd only be exposed for a limited time.

Max: Rules say lifetime but don't assign a number of years to lifetime.

Bruce: RSLs can be used as additional information. We're basically using the RSL to give us a risk-based perspective on what might be a protective value.

David: Both studies use target risk of 1 x 10^{-6} and both use the same URE.
Recommendation for ABC: 0.2 ug/m3 for TCE.

Bill – 0.2 ug/m3 recommended as new ABC for TCE, based largely on new epidemiology studies on highly exposed workers, and new molecular biology methods have shown causal relationship with cancer as an outcome. Kidney cancer (liver and NHL covered). Unanimous approval by ATSAC.

Next meeting:
Will need approximately 20-30 minutes for Sarah Armitage presentation of Overview of Portland Air Toxics Solution (PATS). Chris Swab and NEI results will require approximately 30 minutes.

DEQ-DC1

The ATSAC will need to consider ALL air toxics that Oregonians are exposed to, so need to look at latest emissions data, approximately 150 air toxics, not just the 52 ABC chemicals. Reevaluate, rank, get down to about 50, then streamline further.

Chemicals to review at February ATSAC meeting:
Hex Cr, Co, Lead, Mn, Nickel.
- Hex Cr: Max and Dean.
- Co: Bruce and Kent.
- Lead: Bill and Dean.
- Manganese: Bill and Kent.
- Nickel and Compounds: Kim.

Kent will have to call into Feb meeting. David will be out of town.

Audience comments

Dale Fiek: Impressed and pleased with ATSAC looking at all air toxics. He stated that's it's very clear that Intel and other air toxic emissions do meet emissions rates, but there's no way to convert those limits to human health exposure risks without huge effort and related expense.
Talked about hexamethyldisilazane (HMDS) – apparently a topic for upcoming Intel meeting. California threshold: 100 lbs/year. But Intel emits emissions that are orders of magnitude higher. Quoted an article, Intel vs the village, in New Mexico. Emphasized that carbon tetrachloride is a precursor chemical to phosphine, and Intel uses this.
Sue and Sarah: Told Dale he was talking about phosgene, not phosphine. Assured him that phosgene was on the list for consideration.
Dale Feik: Has researched other extremely hazardous substances from Intel, obtained information from Fire Marshall, citizens' right-to-know agency. He wants ATSAC to consider looking at this list. He has family next to Intel, he's concerned. Experts have told Dale to tell his relatives to move, more than 5 miles from Intel. Dale also wants synergistic effects need to be considered.
Bill Lambert: Told Dale to write Sue MacMillan a letter. He explained that the ATSAC is limited in time and subject scope. So DGME may or may not be something that ATSAC will filter into reviewing. Also very aware of synergistic concerns, and that ATSAC needs to keep this issue in mind as the Committee deliberates.
Dr. Jim Lubischer: Physician from last meeting, concerned with Lead. Wanted to know if he could submit information to the ASTAC, and if yes, would it actually be considered?
Bill Lambert explained that the ATSAC typically gets their review materials 2 weeks in advance of next meeting. Requested that Jim give his information to Sue MacMillan. Bill told Jim that he'd already seen the technical references that the ATSAC primarily depend on, and so cautioned Jim to adjust his expectations in regard to assuming how much the ATSAC will be able to use his documents. Bill also asked Jim to identify key reports that he thinks are most important before he gives the information to Sue, because the ATSAC won't spend time going through volumes of material.
Dr. Lubischer: Stated that a proposed rule had just come out, to keep Lead level same as in 2008 by the Administrator. He plans to point out problems with 2008 report.
Gregg Lande: NW Portland resident. In regard to TCE, Gregg wondered if the ATSAC will consider multi-media exposure for the ABCs.
Gregg also knows that the ATSAC will deal with short-term exposures later, but might want to ID these as you go through ABC chemical review.

DEQ-DC1

Kelly Mullick from Intel: Asked how much precedence does ATSAC give to newer studies? The Committee chose the higher of two numbers in two cases, but chose the lower number on one. What's your protocol?
Bill Lambert stated that Ms. Mullick had made good observations, and explained that the ATSAC is looking at older records to remember some of the previous process decisions.
Bruce Hope pointed out that consistency was a gradual process in 2005/2006. Bill said that with this new ATSAC, we're also still in the process, and acknowledged that she was right about today's apparent inconsistency with the choice of the chlorine ABCC, but also stated that the ATSAC will revisit this as its moves forward. The ATSAC uses its expertise to make judgment calls among various studies and agency criteria. So the ATSAC will be moving toward the consistency Ms. Mullick asked about over the next few months.
Kelly Mullick: How often will you re-review chemicals?
Bill: The requirement in rule is every five years, but the Committee should probably be doing reviews more frequently than that.
Ms. Tonnie Cummings -- Air specialist with the National Park Service. She asked if the ASTAC will only be looking only at chemicals that are monitored?
Sue explained about the Emissions Inventory and how that's used to choose which chemicals to assess, but that chemicals of concern to the public will also be considered.
Ms. Cummings: Wanted to know if what's decided here at these ATSAC meetings influences what will be monitored?
Sarah Armitage: Responded by saying that yes, if DEQ is technically able to monitor a chemical and if it's a health concern, ATSAC decisions can influence monitoring choices.