Cleaner Air Oregon

Advisory Committee Meeting Summary

November 17, 2016

Meeting Commencement

Co-Chair Dingfelder welcomed advisory committee members and introduced alternates – Jae Douglas for Paul Lewis (Multnomah County) and Joel Iboa for Lisa Arkin (Beyond Toxics).

Co-Chair Powers reviewed the agenda and the information requests from last meeting.

Facilitator John Donovan discussed logistics.

Al Hooton – hard copy of 600+ air toxics?

Steven Anderson - Survey monkey questionnaire on program elements, especially on list of pollutants

Tom Wood – correction to last month's statement, two facilities in 2015 and two in 2016 for SCAQMD

Cumulative Risk and Background

Some Advisory Committee members felt they needed additional information before weighing in on cumulative risk and background.

Advisory Committee members raised several points and concerns about how the Cleaner Air Oregon rulemaking would address cumulative risk and background. These points included:

- Example of synergy? *Response: Agency staff didn't have an example ready at the time, but during a break, Dr. Patrick Luedtke, Lane County Health Officer and CAO Advisory Committee member reminded staff of these two examples of synergistic interactions in toxicology. Alcohol and acetaminophen (active ingredient in Tylenol) can both damage the liver on their own, but when taken together the damage to liver is more than one would predict just from summing the risk from either one separately. Similarly, both cigarette smoke and asbestos increase risk of lung cancer separately. However, cigarette smoking and asbestos exposure together synergistically increase the risk of lung cancer.*
- If additivity is most common and synergy is rare, are there examples of synergy that are based on very common materials or does synergy occur only for uncommon toxics? *Response: It's very difficult to predict synergy. Most of what we know about synergy is about pharmaceuticals. Also, see answer to previous question.*
- Washington models sources in a 1.5 km radius for informational purposes but does not use community sources in the permitting process.
- Is air monitoring the only way to know what is in the air due to community sources? *Response: We used community based monitoring along with modeling. Once modeling has been validated with monitoring, then it is a very valuable resource.*
- When you include multiple industrial sources and look at community emissions, there's is a risk of double counting emissions. Industrial emissions may already be included in community background so be careful not to over count.
- Who will do the cumulative risk analysis? What happens when you get information back? What does that mean for the source located in an area with high background? Will they have to close the doors until background is within some level? *Response: Cumulative risk analysis could be*

done by sources or by DEQ. In some states, the agencies supply background and community source contributions then source does risk analysis. Don't know how cumulative risk will be used yet.

- It is important to understand community sources and concentration levels. The Portland Air Toxics Solutions (PATS) analysis was one of the first in country with that detailed of an analysis. What was the rough cost of PATS? Would you want to do this regularly? Learn from our errors and improve past analysis. Go through this process to address cumulative risk. With Portland being most complex, what would it look like for other areas? *Response: - need to get back to you on cost of PATS. Took about 2.5 years from start to finish. PATS model – could do it again less expensively and less time consuming in smaller community with fewer pollutants and with current knowledge. There would be economies in repeating the that type of exercise.*
- Trying to figure out a way that is feasible for industry. Start with risk and uncertainty to public health and community because of air toxics problem we know exists. For too long, community has born 100% of the cost of uncertainty. Methodology in calculating cumulative sources, is additivity considered most health protective? Need flexibility in figuring for toxics that we know additivity, hybrid approach to include synergistic impacts? Additivity can be overly conservative but may need option to include. *Response – science on synergistic effects not advanced enough to be able to implement in regulatory setting.* How do we make sure there is room in the program to advance as science advances? *Response: Our intention is that we will have room in the program for that to occur. Don't want to get stuck in a place where we don't have a mechanism in the rules to advance as science advances.*
- As a participant of PATS, advisory committee was a stakeholder group giving voluntary options to find solutions. Ownership of why those didn't happen, AOI has to take responsibility of making a dissenting vote in the end and not agree with data and not participate. We are here today because of industrial contribution to pollution. AOI could not see any room for improvement. *Advisory Committee member response: AOI did not say those things and will share the letter submitted to DEQ.* We are here today because of PATS process.
- Clarity on community sources, including trucks? Freeways? *Response: Yes.* Do you start at a community with low levels of toxics to set a base then go from there? Start with level with high toxics and model to identify all chemicals to get real sense of what's out there. Is this a complaint driven system? *Response: No.* Is it a permitting driven system? *Response: Regulatory system.* Have we decided what would be incorporated into risk based program? Do a certain type of analysis that is different for each community, not the whole state. Historically there is more industry in certain areas. As those communities have changed, some of these areas don't have industrial air pollutants any longer. The people who were displaced have moved with different community with same high levels of exposure. Do you track hospitals visits? Tie to health outcomes?
- Comments interpreted as binary view of whether we have good science or not. Allow for gray zone. Science is never perfect but hopefully improves. Don't get into a spot where just because science is only partially in hand, that we don't make progress and don't use it as a tool to help in the beginning. This is going to be a multi-year process to refining an approach. Make sure we don't get tripped up by having incomplete science without all the numbers and make best start that we can.
- We must think about overall public health. The number one strategy is economic development to improve the economy because there is a tie between poor health outcomes and economy. As we think about regulating and looking at cumulative risk, what does that do to the economic ability to a state that may have more effect on risk than what we are talking about? Have to balance the idea of cumulative risk with economics which is a social justice issue. Provide opportunity to get out of these neighborhoods that people are worried about. Balance – not always hard science.

- If you are not healthy, you cannot work. Decades long battle with people having jobs and people being healthy. We need a balance; make sure people can breathe so they can work.
- A good option if background is included in permitting process is to allow businesses to monitor at their facility instead of using one arbitrary number for the whole area.

Some advisory committee members supported the inclusion of cumulative risk and background or community sources for the following reasons:

- Cumulative impacts are an important point, environmental justice aside, to see what people are breathing. Important to have cumulative impacts as background. Air has a certain capacity to absorb. What is an acceptable value for risk? If there is uncertainty in the data, then when you look at permitting decisions, have a stricter level of risk because of that uncertainty.
- Community emissions mean background levels. Why not get background levels of a neighborhood that is less polluted and base RBCs on that area? Neighborhoods with multiple facilities would have much higher background than communities not exposed. If background level is at a certain point in impacted community, does that facility add in their emissions to background already and then background level is meaningless because the numbers change? *Response – We need to avoid double counting. Modeling data is helpful because when you use monitoring data, you don't know where the emission are coming from in those background levels.*
- There is no one background level. And the background level can be above what is an acceptable level. *Response – background is used in several different ways. We mean emissions that come from other areas, other states or globally, pollution created by natural sources – trees, volcanoes, etc. Background also means everything except the facility or source you are talking about. We like to use the term community sources versus industrial emissions but industrial emissions can be part of the background as well.* Communities look different because they have different sources of emissions. *Response: Some states calculate background concentrations in each area for each permit.* If a community has a disproportionately high exposure to toxics, the background level would be higher in this community than in another community so would that facility be able to emit more even if there is already a high level of background? *Response - In areas with higher background, there could be more stringent limits.*
- Is there a simple way to capture fugitive emissions by installing a monitor at fenceline? *Response: Yes, but there can still be technical limitations with the monitoring data including detection levels, weather conditions and other sources of pollutants in the area.* Cumulative impact assessments have been studied by Environmental Justice Task force as a beginning for Oregon being a state that endorses the use of the precautionary principle. It's better to be safe than sorry.
- The goal of the process is to add health based considerations to the permitting process. While science is a goal we want to achieve, they are not mutually exclusive. Don't want to get stuck on artificial divide. Short and long term impacts of health demand we look at cumulative risk. Comfortable looking at additivity approach. Well accepted and reasonable approach balanced with what we can know and what can be done. Cancer versus non-cancer – is there a difference in additivity and synergy for cancer versus non-cancer? *Response: Equal uncertainty with different ways to add. For cancer just add. For noncancer – look at target organ and add up risks for that target organ system. For example, PCBs and lead both target brain.* Complexity and cost consideration of adding more monitoring and modeling is a good tool. Like to see more monitoring in new permitting process. What are strategies to address limitations of emissions inventory and improve PATS and NATA? *Response: Ongoing process at DEQ and EPA. The Technical Services group develops the emissions inventory and is on workgroups to improve emission factors. DEQ contributed emission factors for wood burning. A better emissions*

inventory from sources will fill in gaps DEQ has in our emissions inventory. It is a long term continuous improvement effort.

- In an underlying health based approach that has uncertainty, good science is important. Using an analogy of health based, consider a drinking glass is what people can have in the air that is safe. If it gets too full, it will spill over. Maybe use tiers with multiple sources or a single source, depends on where you start. May need to reduce risk and could mitigate with like carbon trading. As long as glass is not overfull, then do things to tighten uncertainty. The Cumulative Risks and Background discussion paper says it's more accurate and efficient to have DEQ calculate all background concentrations. Maybe DEQ could propose background then allow permittee to challenge and bring forth data to improve science. Allow option permittee to provide better data.

Some advisory committee members did not support the inclusion of cumulative risk from multiple facilities and background or community sources for the following reasons:

- In the beginning of this process, we said were were going to use good science as the basis for the program. We don't have a technical basis to add risks of multiple air toxics together, contrary to approach of using good science. *Response: That approach is well founded in science. Cumulative risk assessment is widely accepted in cleanup programs. SCAQMD and National Air Toxics Assessment look at cumulative risk for multiple air pollutants.* There are few air permitting that do it, Washington doesn't. The federal program said to be cautious using the data because it is a rough screen. There is uncertainty in emissions inventory. *Response: In this situation, we would have better emissions inventory than NATA so that uncertainty would be a lot less.* Potential that not everything in the emissions inventory for a facility is being emitted at the same time. We have a lot of conservativeness built in to any inventory that doesn't take into account the temporal approach. Additivity takes a lot of conservancy factors and layer them up such that result is overly conservative.
- We are talking about an industrial stationary source regulatory permitting program and concerns are about what is in community. In some areas, industry is no longer there. Cumulative approach of picking background and having industrial source look at community sources is really putting on industry shoulders what DEQ tried to do with geographic approach that didn't work. If we use a cumulative approach, look at geographic program and not individual industrial sources. Cumulative approach is done in the Prevention of Significant Deterioration program when sources must model background and other the sources in area along with their emissions and end up triple counting. It takes up to a year to do this permitting process for 2 to 3 pollutants. It takes months to get background data, and you shouldn't use Portland data in Medford.
- It's difficult to look at these questions without understanding the broader program. Do not include cumulative risk for multiple air toxics from a single facility. Don't know how it would be used or how background would be calculated and applied. Do not count air toxics from multiple sources in the area because there are difficulties to hold one source accountable for other's emissions and background too. For background considerations, it's difficult to predict a factor you would multiply by, your background calculations plus whatever multiple air toxics you were looking at. Once you identify something you are concerned about on a pollutant by pollutant basis, if controls are needed, it would control more than one pollutant.

BREAK

Introduction of Akash Singh

Jackie – As a reminder for committee members, the Advisory Committee is here to make recommendations, not ask questions about what DEQ and OHA are going to do. Task is to decide and make recommendations on how program should be developed and proceed.

Welcome Susan Anderson.

Diana – if we start from cumulative risk standpoint, health doesn't care where pollution is coming from. One can only get data about cumulative risk by doing a cumulative risk assessment. What is the cumulative risk assessment going to look like? Will it include background? Need to figure out overall level of risk for community. Look at individual facility but if there are multiple industrial facilities, their impact can continue to add up. So where does that stop?

Cross-Media Exposure:

Some Advisory Committee members felt they needed additional information before weighing in on cross-media exposure.

- Since we don't know what the program is going to look like for cross media pathways, the list of 660+ has bioaccumulative chemicals included. Oregon does address cross media exposure through a human health water quality standard that is highly protective of most beneficial uses and uses daily fish consumption of 175 grams /day taking into account 70 year exposure. Other elements result in conservative water quality standards that already consider pathway through relevant source contribution to include air deposition. Water aspects of consuming fish and shellfish are already highly protective. Realize that programs we are looking at for guidance may not have protective measures in place.

Advisory Committee members raised several points and concerns about how the Cleaner Air Oregon rulemaking would address cross-media exposure. These points included:

- If the cross media risk is small for overall population but affects certain populations more, may need to look at this issue for EJ communities. How does DEQ figure out who and where communities are throughout the state? How are we defining EJ?
- DEQ could come up with a short list of persistent and bioaccumulative chemicals as a start. Consider wet deposition versus dry deposition when doing modeling in Oregon. Under the wet deposition scenario, particulate matter and metals fall out quicker and closer to a source and may affect EJ communities more.
- Are there other chemical characteristics that would warrant being included in cross media pathways? If not bioaccumulative or persistent, then what? *Response: Other states don't look at chemicals that are not persistent or bioaccumulative.*
- Where the human health water quality standard has interaction is primarily driven by mercury. That may or may not be relevant to Cleaner Air Oregon. Don't want water standards to say we cannot include. What does water standard address? People affected by poor water quality are dependent on fish. Complex environment. What human health standard in water is targeted and what it's supposed to do?
- When we get to implementation, we will have options. Cross media and past risk will be important but potentially less addressable as having effect on permitting regulations and procedures than cumulative risk which will have a more systematic approach.
- In regards to cumulative risks, be cautious when making equivalence for cancer risk and non-cancer risks. Often in scientific journal, there will be notes on 1 in 1 MM or 17 in 1 MM.

Some advisory committee members supported the inclusion of cross-media exposure and/or past exposures for the following reasons:

- When you come up with RBCs, use best science and review on 3-5 year cycle but allow permittee or business association to present data to consider in the process. *Response – If we use a hierarchy of authoritative bodies, as science advances, RBCs will be updated. Cross-media exposure could include inhalation and look at impacts from water and soil.* A lot of community gardens are used for food shares so what gets into the soil gets into plants which is an issue in urban areas. Chemicals such as dioxin are inhaled and absorbed in fats in females and passed onto infants through milk. Soil is tracked into homes, causing dust exposure so include multipathway exposures.
- Connection between risk assessment and permitting? Most states that have health based permitting programs. If a source screens in, then they do risk assessment for their facility. Model actual emissions to get concentrations and figure out risk they are posing so agencies can make decisions. There is an opportunity if past exposure are factored in and permits issued today could be more protective in areas where there are demonstrated past exposures. If you can't do something with the permit, monitoring past exposures doesn't have direct impact. *Response*: *Risk assessments that are part of a permitting program would not be looking retrospectively. Because SCAQMD has been there a long time and have done iterations of risk assessments over time, they can look at past exposures.* If we begin to look at past exposure, it's critical to do something with that information and does it have an impact on current permits? For cross media exposures, if we choose option A to include bioaccumulative, persistent chemicals, are there other classes of chemicals that we would want to include without having to go all the way to including cross-media considerations for all chemicals? *Response: We know pretty well which chemicals behave this way - accumulation and persistence in environment.* In addition, are there other classes of chemicals that are used in other areas of state that we want to include in this work in terms of impact on community? Suggest including bioaccumulative, persistent chemicals and include cross-media considerations for all chemicals.
- LRAPA has a Title VI (of the Civil Rights Act of 1964) complaint filed against them for EJ negligence, so don't rust LRAPA data. Continue to look at cross media exposure pathways and impacts to sensitive populations, it even though they aren't where they should be.

Some advisory committee members did not support the inclusion of cross-media exposure or past exposures for the following reasons:

- How would past exposures be used? If we tried to quantify past exposures, could be seen as punitive measure in permitting going forward. Ask for more clarification on how they would be quantified and be used?
- There is so little going into waterways, let water quality regulations deal with cross-media exposure. LRAPA has been doing air toxics monitoring so data is based on actual monitoring and NATA modeled cancer risk. The cancer risk in Lane County is 37.7 in 1 million. Industrial sources are 0.8 in 1 MM or 2%. Vaccine has 2 in 1 MM for deadly disease. All cancer risks are based on total population that includes past exposure and sensitive populations. If we look at multiple constituencies and use risk assessment, have rules that deal with water that already include past exposures in risk assessments.
- Adding in cross media exposures can be duplicative of other agencies and can bog down program in complexity. In CA, this is a negligible component. IF we want to get the biggest bang for the buck, do not include cross media. For past risk, we have no clue on how to do that. What is point of it? If risk assessments are done over the years, people should be looking at them. Exercise in futility to look at past exposures.

Pollutant Scope

303 air toxics on the list of 600+ have RBCs. Discussion at first advisory committee meeting focused on whether to use 52 ABCs or EPA's 187 HAPs. At the end of the meeting DEQ said that we could use a larger list as some other states have done.

Some Advisory Committee members felt they needed additional information before weighing in on pollutant scope.

- We don't know what chemicals are emitted in Oregon or the sources of these chemicals. Lindane? Coke oven emissions? Hard to look at list and know what to include without knowing what sources emit in Oregon.

Some Advisory Committee members supported the inclusion of a longer list of pollutants for the following reasons:

- If we are trying to develop health based set of rules, it doesn't make sense to have fixed list of chemicals. The kinds of industry that come to Oregon will change and emissions will change. Need framework to consider those things and of course regulate those with RBCs but doesn't make sense to fixate on 52 or 187. It's well known that the chemical industry puts out 300 new chemicals every year. Need flexible framework.
- How does DEQ intend to create list? The ATSAC process is too cumbersome. One consideration of list is how Oregon decides to use authoritative bodies that do exhaustive work to compile the list. Our list should be as inclusive as possible. Don't duplicate effort and just index with OEHHA.
- We're putting together a program with 660 pollutants. We can garner RBCs in the future. As industry changes, and we use more updated scientific data, don't see necessity of focusing on 660 chemicals for regulations.
- Is there a mechanism to put together a controlled approach for one of these chemicals that doesn't have an RBC that ties it to human health? Is there a technique to do that? *Response: No. Could use default toxicity factor that we have recommended against.* Seems that we shouldn't do anything with chemicals without RBCs. DEQ and OHA must do defensible work to establish RBCs but that seems outside scope. We don't need to know everything about a chemical to regulate it. The precautionary principle needs to be kept in place.
- Helpful to see what chemicals have RBCs and see databases. See the list of air toxics as tiered approach. If a chemical is not being emitted, then it's not being regulated. List chemicals because there is potential for hazardous health effect. Science is moving toward RBCs.
- Affirmation for CA program that works - a tailored, comprehensive program. Do we emit those other chemicals? Try to get this information and eliminate uncertainty of unknown exposures. There was no mechanism to figure out what was being emitted in the past
- We all want certainty so build a bridge. Using the most chemicals we have information on and then industry has certainty so people won't get poisoned. There was no RBC for hexavalent chrome so that's where we ended up here.

Some Advisory Committee members supported the inclusion of a shorter list of pollutants for the following reasons:

- Seems like the list of 52 air toxics with Ambient Benchmark Concentrations derived by ATSAC are toxics produced in Oregon and ones that we should be worried about. Don't spend a lot of time on chemicals we don't have in Oregon. Confused on list that shows where RBCs come from. Many chemicals don't have RBCs so why focus on chemicals that don't have RBCs in permitting? *Response: We do want to focus on what is important in Oregon, including EPA's 187 hazardous air pollutants and ATSAC's benchmarks. We also looked at how SCAQMD uses a larger list for information gathering purposes in case ongoing science develops more RBCS and a shorter list that have RBCs for permitting. The larger list of air toxics comes from neighboring states and Oregon's multi-media air toxics focus list.*
- ATSAC process does have value in order to add new chemicals to the list. That's the process agreed upon and that's what business community agrees to. Why add other chemicals without RBCs? How will the RBCs will be used in the permitting program?
- Would prefer focused list based on science that has level of data needed to make decisions. If this is the list that DEQ asks for input from industry, with the broad nature of some chemicals, it's not a no-cost exercise to figure out emissions. Might not be a zero sum game on a chemical if no one emits it. If you look at multiple pathways and background, you could still have something in the background that reacts with another chemical. You might emit something and it still has a regulatory effect on the facility. The pollutant list is basis of future regulations and we need to get list right but we need to consider as an evolving list. How to add chemicals if needed and some chemicals aren't emitted. Tailored to state with on and off ramps.
- Whatever the list is, one of concerns is if you spend time on 10 pollutants that you know emission factors, you spend time on the other 90 pollutants to determine. DEQ could use published emission factors that sources could use. Then source wouldn't have to spend tremendous resources to determine emissions for pollutants they can't find emission factors for.

Public Input:

Carroll Johnston: (Salem) personal story highlights advisory committee task: When there is exposure to toxics, you don't get do-overs. Was in Vietnam in 1967 and exposed to dioxin and agent orange. Agent orange sprayed on jungle to expose enemy and leveled jungle to grassland. Ruined lives for decades. Tumor on back and asthma and there were also many deaths. Thousands of Vietnamese children born with birth defects. Horrible effects of dioxin continue to occur today. Industrial and other sources of dioxin in Willamette Valley. Task is very important but the laws of chemistry and biology are unforgiving. We need to get it right this time.

Ann Nesse – Include in endpoint, inform public about toxics in environment. Things for sale in grocery stores that you don't want to put on your yard. Lack of knowledge between agencies and public. Print and distribute information about emissions regularly.

Heath Curtis, - Oregon Forest Industry Council – Technical Workgroup wasn't designed to come to consensus positions, had mingling conversations. Not fair to say that group said anything. Characterize work of TWG accurately. The work of advisory committee could be stylized similarly so have to actively disagree.

Chris Canote – Lives within ½ mile of precision Castparts and child attending Roosevelt High School, within blocks of Bullseye. We need to consider that people move around throughout their day. EPA NATA found that Portland is the worst American city for respiratory distress in country. Regulate strictly to a higher standard rather than surrender to weaker standard. Did not agree to toxic exposure, did not accept. Program element 14 -

Substitution of less toxic chemicals. Yes! Require pollution prevention plan at some level of cancer risk, chemical analysis to substitute less toxic chemicals. Highest standard applied throughout the state.

Lucinda Heights – forest grove – Hillsboro air and water. Canvasser and neighborhood organizer. Science teacher. Going door to door starting in May within one mile of source, taking information on health impacts neighbors have been experiencing. Should be OHA job. Public says isn't DEQ or government taking care of this? Naivete in public presuming monitoring is happening everywhere. People want to know they will be safe or as safe as possible. Not willing to take risks. Hears about health impacts and even death from exposure. But this hasn't been happening. Governor said at start of CAO, need more stringent standards to protect public. People's health is proof that there is something going on. We need confirmation of industrial tracking, unannounced inspections. Community groups be allowed to monitor and immediately verified to keep people healthier and safer.

Setting and Administering Allowable Risk

Some Advisory Committee members felt they needed additional information before weighing in on setting and administering allowable risk.

- What should the bottom line be when a business would not get a permit, at what level? Other states use 100 in 1 million. Without knowing the full scope of program, what the conservatism and safety factors that have been built in, it's very difficult to answer.

Advisory Committee members raised several points and concerns about how the Cleaner Air Oregon rulemaking would address setting and administering allowable risk. These points included:

- Getting unit risk estimates is challenge for compounds.
- Clarification on Program Element 15: If a facility installed TBACT, they could have a higher allowable risk level. The reasoning for allowing higher levels is because there is not much more that the facility could do to control emissions since the emissions are controlled with best available technology. In this case, the requirement would be technology based and not health based.
- Many people believe that cancer clusters are caused by the environment. People see risks that are of their own volition much differently than those that are not voluntary. While you may be able to stay out of a rainstorm to avoid lightning, there are situations with industrial emissions where people cannot avoid exposure.
- Slide 33 showing the Venn diagram of the balance of allowable risk: recognize that impacts are not equal. Differentiate between the environment and access to insurance. Any background on this would be helpful. (Steven A. Schroeder, M.D. - New England Journal of Medicine article)
- The 1 in 1 million extra case of cancer. If we are talking about a background rate of 1 in 3 that is 333,333 in 1 million. If there is a facility that is emitting at 1 in 1 million, the rate becomes 333,334 in 1 million. *Response: Correct*
- Problem with looking at cumulative risk and these topics separately. Setting an allowable risk on a per-facility basis makes sense but we need to really look at nearby sources. There is an impact to the neighborhood which needs to be taken into account.
- Clarification for acceptable risk for the risk levels being defined within the systems they work in: In the Louisville air toxics program, they accepted the differentiation and had determined a global acceptable risk level for all contributing sources, that was their goal of the program. They had allowances per voluntary compliance, but they still had an efficacy rate of 95% of meeting their global goal. The system was modeled around the NAAQS standards where we have a global goal and all sources contribute proportionally. How do other acceptable risk levels for different pieces of equipment or facilities live within that global goal? *Response: In that type of situation, the RBCs would be like the NAAQS so the airshed concentration can't go above those levels. Whoever is contributing to that has to commensurately reduce their emissions to reach the*

overall goal. The RBCs are set at some allowable risk level for a chemical so you still would need to decide what allowable risk level is, and RBCs would be the tool to help ensure that levels are met by permitted sources.

- There are potential beneficial impacts to push industry, when possible, to innovate. When FDA changed fridge temperatures, many food providers were out of compliance and pushed suppliers, who changed. Don't just stand back. This is an opportunity for innovation, but there really should be time for industry to comply to allow for that innovation.
- Need to give facilities time to get to whatever number ends up being. There is concern from labor force. What to do if applying BACT and it's not enough?
- The Albany mill that was next to I-5 is now shut down. There is nothing DEQ can do about emissions from cars and trucks on I-5. If those types of cumulative risks must be considered, then that mill, if still operating, would have to go out of business because there is nothing that they can do about background concentrations from I-5. *Advisory Committee member response: As a land use planner, need to consider where these businesses go. The land uses change over time.*
  Why would the industrial source have to be shut down? Why not shut down I5?
  Advisory Committee member response: Have to look at who is benefiting and who has impacts. Industries have never been shut down but have had limited industrial expansion. Response: Land use is very important. Put on bike rack. Need to explore this in Oregon. Advisory Committee member response: On the land use side – there is a reason why sources are next to transportation, to reduce vehicle miles traveled. Cost on social justice and driving up cost of land and housing.
- South Coast has 838 in 1 million background cancer. In Oregon the statewide background risk is 38 in 1 million and is 53 in 1 million in Multnomah County.
- Screening technology should be based on environmental justice areas – might look at mitigation. How high will we go? If above that, then look at tradeoffs (DEQ and community).
- EPA drinking water standards based on consumption, sensitive populations, etc. The discharge is set on fish consumption rules and follows arsenic through the food chain, based on Native American consumption of fish. We are putting water back in rivers cleaner than we give people to drink. There are over one hundred chemicals on that list, including endocrine disruptors. Limits are based on modeling. Permit rates are then set below what people can drink. Better understanding of human health in water regulations might be helpful. Question: if water is polluted, doesn't it make sense to allow much less discharge?
- After you have done screening and technology, there needs to be mitigation.
- In the permitting process, take acceptable risk into consideration but how long is this? For example, an area could be out of attainment for three days out of the year. But if industry has to put on huge controls for three days, the regulations should consider this. Allow industry to close on those three days versus putting on $7 million scrubbers.
- If we are talking about a health risk paradigm, risk needs to be determined at fenceline and in community. NAAQs is the method for this. Are we going to do this or are we looking at an industry driven technology based program? Are we predetermined on one path? *Response: In SCAQMD, if you are over 25 in 1 million, sources need to develop a risk mitigation plan. They have 3 years to reduce the risk to below 25 in 1 million. If there are extenuating circumstance such as no control technology available, the facility can ask for an extension beyond 3 years. We have not determined the approach to take, but it will be health based. For criteria pollutants, air standard is for all sources. But Cleaner Air Oregon is really about permitting industrial facilities. So if you are in an area where there are woodstoves, etc., this program has been limited to industrial sources.*
- For hazard index or 2 or 5, is this a doubling of effect? Or more? *Response: the hazard quotient is a sum of all the hazard quotients from multiple chemicals.*

- Temporal issues should be considered. For the $PM_{2.5}$ 24-hour standard, an area is out of attainment if there are exceedances of the standard for three days out of a year. In setting risk for toxics, set an allowable level for industrial sources. In the proposed rules, allow emissions based on an exposure over a lifetime. For the most part chronic based on an annual average.
- Connection between program element 14 (allowing higher risk levels) and cumulative risk makes sense. The most useful kind of recommendation would talk about allowable risk in different settings and then how should we incorporate cumulative risk in different allowable risk levels.
- Need a chart that defines TBACT, LAER, and MACT with standards and examples– what standard do sources need to meet? Also add BART to the chart.

Some advisory committee members supported setting an initial allowable risk level for the following reasons:

- One in one million is already used for cleanup. Using this same level would keep this consistent for DEQ.
- Use a three tier screen. 1 in 1 million and hazard quotient of 1 makes sense. The screening level needs to take into account community sources and nearby sources. Then whole facility should be allowed up to 10 in 1 million. Then if risk is over 10 in 1 million, look at mitigation within and outside facility.
- Initial screening levels of 1 in 1 million makes sense. Lower than acceptable risk from flu vaccine. Until you resolve cross media and background, it's difficult to determine allowable risk. In water, drinking water for arsenic is 10, but discharge limit it 1. This doesn't make sense and we need to come up with numbers that make sense.

Some advisory committee members did not support setting and administering higher allowable risk for the following reasons:

- Concern with the allowance for higher risk. Financial incentives should be discussed during implementation.
- Need to make sure that the risk to public health is considered. Doesn't matter if risk is from new or existing facilities.
- Conservative screening levels are important. Having considerations such as on slide 39 which shows how SCAQMD uses ranges of cancer risk targets is very important. Not sure if the numbers on the slide are where we should end up.
- Should we set different allowable risk levels for EJ communities? If there is any inclination to allow a higher risk level, this would not comply with DEQ's obligations under Title VI to avoid disparate impacts.

Some advisory committee members support setting and administering higher allowable risk for the following reasons:

- When screening sources, some differentiation is needed if source is doing the best they can and also for existing versus new sources. In some cases, sources cannot change existing equipment. If we don't allow higher risk from existing facilities, we are ensuring some businesses will not be able to comply and will go out of business, with a resulting impact on community, including health.
- New sources can meet more stringent standards.
- Might be ok to have higher risk if there was a ratchet effect for something that needed control in the future.

- Under any program if a source is doing the best it can, they should be allowed to be in business.
- Establish background. If you know what the background is, industrial sources should not be allowed more than 10 in 1 million or a Hazard Quotient of 5. If there are many facilities in an area, they can't go over 10.
- Clarify earlier remarks – cumulative risk assessment so that an environmental justice community that already has a higher cumulative risk doesn't have even higher risk.
- With pollution control technology, you can get to 99.97% controlled. That is the limit of technology. If an industrial source is putting that technology in place, and they still can't meet the standard, there isn't another technology that could help.

Roundtable:

Diana Rohlman – Treat this process in an interactive manner. It was good to revisit pollutant scope. Will turn in written comments on Monday 11/28.

Steven Anderson – Thanks rules committee. Important to state with what's in the air right now and how much more do we add to that? Draw the line where we say no more. May need other ways besides technology to achieve this goal. Look at airshed and address EJ issues. Draw the line before the glass overflows. Allowances for technology, but we need a place where industry shuts down or implements a mitigation strategy. If we cannot meet the levels, we should work with other agencies, such as ODOT to achieve goals.

Laura Seyler – The pragmatic point of view that takes into consideration ambient air quality and the health of Oregonians. Good path forward and consider thoughts of others. There is a possibility of double or triple counting emissions, so be careful about that. Manage the list of pollutants to eliminate duplicates. Address cumulative risk within the facility and within an area so not to double count emissions.

Susan Anderson – Role is to synthesize key issues, whether it's cumulative risk, environmental justice communities, cross media exposure pathways - how do these things come together and how do they affect cities, especially larger urban areas? Potential in some places that maybe we reach some kind of a lid in certain areas of the city. What are the jurisdictions? Talk with some of the other larger communities in state.

Akash Singh – Thankful to be here. Glad to hear about environmental justice. Local and state efforts must take up slack from the federal government, especially in regard to marginalized individual who are at greater risk than ever before. We may become a beacon of environmental leadership our country needs now. Scientific lens must be placed over chemicals processes, especially when it comes to cancer risk. Hesitant to use cancer risk for diesel particulate to represent all classes of pollutants. Cancer risk in area A, even for the same pollutant, is not necessarily the same in area B. More concrete we make those aspects of the program going forward, it will be better for us to find easier answers for specific diseases and pollutants. This program is considerably complex. Look at health of every Oregonian as being of paramount importance. Program needs to be most flexible in regard to public health. Certain industrial processes will phase out so it does not make sense to give more weight to industrial concerns over public health. Paramount concern of public health will not change even though industry will change.

Jay Bozievich– Counties are delegated with public health and economic development. The advisory committee is charged with industrial air toxics regulations. Bring in to scope of industrial air pollutants. We need to look at fiscal and economic impact. We need a program that is reasonable in size. If we make applicability in areas too tight, it will explode the process. DEQ is already overwhelmed with current permitting process. Ramona has been waiting for 3 years for DEQ to write maintenance plan for PM2.5. Look at what's here in Oregon and what matters. Limit the list. Limit the applicability. Use an iterative process. Continue to add to the process like the Clean Water Act of 1971. Think about what we can do to

have more immediate impact in underrepresented communities that are overly impacted. If we go way too big and way too fast, it won't do anyone any good.

Ramona Quinn– let's not go too far and regulate some of our industry out of existence, especially in EJ communities. Without industry, people won't have jobs and that will make the problems worse. Keep industry and health in forefront. Keep things sensible.

Mike Freese – working from different perspectives but trying to be constructive. There are reasons why businesses are in Oregon and why people live and work here. High value for environmental protection is part of that. Hard to do when you feel your job is at stake. Strike balance with reasonable regulation. Reasonable conversations today. Hard to engage if people don't want business in state. Here to address a narrower scope of the Portland Air Toxics Solutions. That demonstrated we need to look at every potential issue that might be the cause of air toxics but we are only looking at industrial emissions. We are not looking at land use debate. One of public comments that the Technical Workgroup said that was portrayed in presentation is misrepresented. One thing that was never asked is consensus. Several people agreed on multiple statements but not one that entire TWG took a position on. Concerned with what will come out of this group. Not sure if we can achieve reasonable regulation for business. Starting to worry as how this is presented to EQC, how everyone's answers will be portrayed.

Joel Iboa – Thanks for volunteers working for clean air but we especially need it for most vulnerable. Many people are working class and feel the economic benefits of industry but also the effects of pollution. DEQ is not quite ready to address some of these issues. Portland Clean Air released study that up to 95% of usage does not get reported as hazardous air pollution through any agency. Thought DEQ required accurate reporting of air toxics. We don't have a reporting system. Urge us to look long and hard at how we are moving through process. Do it right the first time rather than go back and do again.

Lee Fortier – Thanks to chairs and staff. Landfill has toxics emissions but they are what the public brings to us. People still throw toxics into garbage even though they have toxics collection events. We want sanitary landfills and to continue to provide a public service.

Gordon Zimmerman – Intrigued by tiered approach. Encourage us to look at that as guidelines. Because of the complexity, each has to be dealt with individually in the context of airshed. Sat through 15 elements, want get through implementation. Goal is to maintain and protect public health, design flexible program and get to a common place and achieve great results.

Maura Fahey – Allowable risk of 1 in 1 million and hazard quotient of 1. There should be a hard ceiling where a permit should not be issued. Cumulative risk should be incorporated into that. If DEQ is going to consider setting different risk levels in inner city communities, ceilings should be lower and based on who is living in the community. Encourage committee members to be proactive in making comments. Very complex process but Governor directed DEQ/OHA to develop risk based program.

Tom Wood – here for an Oregon industrial stationary source permitting program. Has worked with many sources in state. Welcome reasonable program. Find out air toxics and identify ways to reduce. Live and work in communities so willing to cooperate. If we look at cumulative risk, then manage entire airshed. It is beyond control of facility to change woodstoves and autobody shops. How to get a program to get industrial source to control air toxics and leave other airshed issues in DEQ's hands.

Jessica Applegate – With the whole notion of background level, we have institutionalized pollution. One in 3 cancer risk and still trying to figure out how much we can get away with adding more air toxics in our airshed. Stephen Hawking said we still have 1000 years left on this planet. Less molecules of air toxics in the air is better from industrial air toxics. Industry is going to have to pay for some of this, just a fact in light of Measure 97. We don't know what we are going to put into the air without an emissions inventory. Need material balance to account for emissions. Cannot make decisions without emissions

inventory. As far as the process, it is better to take the program elements piece by piece rather than grouping them together for discussion.

Patrick Luedtke – bias as a physician when seeing people's health. Struck with experiences as occupational medical physician. Patients exposed to a variety of things. The body can only be damaged a certain amount. Struggling with balance, people need jobs to put food on the table but needs to be done safely in robust and sustainable way.

Kathryn VanNatta– Aspirational goals for resulting regulatory program is for people to be happy because I hear unhappiness. How do we address it and give people assurance that industry cares and that industry will do the right thing in trying to reduce air emissions that affect public health? As we work towards this goal, not all will agree on every aspect of the program. Daunting to not take whole program and instead look at each aspect of program. Without a framework, it's hard to see conclusions and for people to have faith that program will result in net environmental benefit on the ground. Must be science based then will need to make policy decisions. Entrust that right policy decisions will be made. Needed oversight and feedback loop. Current program doesn't work because not fully funded so program couldn't be implemented. Need to create program that we can live within the bounds of. Regulated industry needs regulatory certainty, they need to understand what is required, clear expectations for planning on capital investments. The pulp and paper industry makes very large investments so need certainty to make investments at a facility that will be there for a very long time. Create a program that creates certainty and is effective.

Jae Douglas – Glad to hear focus on public health. Even conversation on background looking at whole communities, being dealt with forthrightly and sincerely. Daunting to moderate 3 public meetings for Bullseye, fear and frustration of agency to answer questions. Bullseye's situation showed we have a gap and this advisory committee shows sincerity to correct that program. Very aspirational to help, was told to never waste a good crisis. New industry should be kept to lower standards, higher for existing industry and 3-year compliance plan. Achieving reasonable regulations is possible. Look to RI, WA, CA, NJ and NY that have been able to achieve health based standards and not drive industry out of business. At DEQ, such a big job, air land water, cleanup, big job. DEQ needs untethered to look at whole situation, diesel particulate on roadways, at the tail end of land use. Want to see DEQ untethered.

Huy Ong – Thanks for audience. Thoughts on current political climate, poor, people of color, urban, LGBTQ. Preparing for huge environmental impacts and direct increase to EJ communities. We can be leader in the country. People have strong values. EJ community needs to hold the advisory committee accountable to these values. Put people's lives in the forefront, not industry. Here to address justice. Opportunity for this leadership is very different than national landscape. Be mindful of jobs and EJ communities. Jobs in EJ communities are very racist because that is the only jobs they can get. What are the pathways to a better economy? Don't want people to lose jobs. Dignity is often tied to work. Here for justice and be held accountable to community.

Mary Peveto – At Cleveland high school last spring, sudden awareness of problem with air toxics. Talking with people in SE Portland, I was brought to tears when people showed me their testimony because it sounded like what I said 10 years ago. In the ensuing months, hope and optimism to get changes we need. Talk about pollution prevention and continuous improvement program. Heard no from legislators in Salem. Optimistic that we have impetus for mechanism of true collaboration and innovation. After working 7 years, tremendous amount of what can be done. Ask for more credibility. That innovation should be available to all communities, not just those that have resources to get in front of elected officials. Push industry to innovate. Economy is based on innovation. Thanks for collaboration. Continue to be optimistic. Look at the 19% reduction in carbon emissions we have achieved. We can make it happen.

Josh Hall – Thanks to all. Concerned with scope of program. May be so broad that we don't have impact we are trying for. As program gets built, start putting pieces together and focus. Agreed with Steven and start with 1 in 1 million and hazard quotient of 1. Most programs allow for a little flexibility and tiered system and ways to mitigate if needed with public health interest at the forefront.

Al Hooton – Many thanks for all. Three priorities in goals for work: drive to heath based structure for regulations after we establish a model template. EJ focus and recognition and real progress is important goal. Thirdly maintaining employment opportunities to support industry to do the right thing to achieve health based outcomes. Some people today think these goals are in conflict. I believe good progress and social improvement is possible. Moving from goals to implementation, be sure to take incremental approach. Some pieces that we have uncertainty about. In areas of certainty, be specific. In other areas that we don't have certainty to get it right the first time, it's important to recognize and implicitly build incrementalism into recommendations. Make sure we have the freedom to learn over time in areas of uncertainty.

Claudia Powers – Thanks for all not on committee. Thanks to committee and carefully considered comments. Homework done by all shows by work in committee. Oregon is special. Will come up with terrific set of recommendations on new air toxics program that will be fair and workable. Key is that advisory committee willing to talk about issues that are most important to them. Get info out on table and build bridges. Understand concepts you may not have thought about.

Jackie Dingfelder – Thanks to all. Impressed with level of commitment and time of advisory committee. Very complex issues and not everyone is an air quality expert. We have a wide variety of experience, mutual understanding and learning. Typically agency writes rules and comes back but this is unique process. Fair, environmental justice, public health – balance. In three weeks we will talk about implementation. We want a fair, effective program that provides certainty but also needs to address resource challenges. Please take time to read materials before December meeting for good discourse. Process suggestions will be reviewed.

John Donovan – 11/28 comments due. 12/8 meeting here in Ambridge. Meeting materials will be sent out right before meeting.