

NORTH CAROLINA
ENVIRONMENTAL MANAGEMENT COMMISSION

**512 N. Salisbury Street
Archdale Building - Ground Floor Hearing Room
Raleigh, North Carolina**

**July 11, 2013
9:00 A.M.**

General Statute § 138A-15 mandates that the Chairman inquire as to whether any member knows of any known conflict of interest or appearance of conflict with respect to matters before the Commission. If any member knows of a conflict of interest or appearance of a conflict, please so state at this time.

Benne C. Hutson, Chairman, Presiding

Action Item

13-20 Hearing Officer's Report on Revision of Arsenic Acceptable Ambient Level (AAL) (514)

Chairman Hutson: Donnie Redmond is here to make this presentation. Donnie Redmond was one of two hearing officers on this. The other was Mr. Ayers and Mr. Ayers has decided to abandon Donnie Redmond for the Utilities Commission. So he's on his own.

Summary (Donnie Redmond): I'm the Ambient Monitoring Section Chief with the Division of Air Quality and as noted was the sole hearing officer for this hearing. This hearing was to address two specific rule changes. One is 2D 1104 which would revise North Carolina's acceptable ambient level for arsenic and inorganic arsenic compounds from the current annual value of 2.3×10 to the minus 7 milligrams per cubic meter to, 2.1×10 to the minus 6 milligrams per cubic meter. The second rule was 2Q 0711 which was to revise the corresponding emission rate requiring permit for arsenic and inorganic arsenic compounds from the current value of 0.016 pounds per year to 0.053 pounds per year. First I wanted to note that normally when the Division of Air Quality comes to you to revise air quality standards we're coming and we're bringing a smaller number than we had before. In ozone we're going from 80 to 75 parts per billion or for fine particles, we're going from 15 to 12 micrograms per cubic meter in order to better protect public health. With toxics and this rule particularly it's a little bit different. The standard is more of a, if a person were to stand and breathe air at the property line for a year, what level of arsenic would cause more than a one in a million increased chance of getting cancer. We're not talking about changing that standard, that one in a million chances. We're not lessening that. What we're looking at is reaffirming what is the concentration of arsenic that would give you that level of protection, that one-in-a-million protection. So it's a little bit different. We're not simply revising the rule. We're just reaffirming what is the concentration that gives us that existing level of protection. I want to relay a few numbers from the Science Advisory Board's risk assessment. Eighty-eight percent of arsenic in ambient air within North Carolina is from background. Of the emissions that are from North Carolina 92%

are from point sources. The vast majority of them are from electrical power generation at about 74% with the next largest contribution by pulp and paper mills. By fuel type 96% of the arsenic is burning coal. These numbers may be a little bit dated because they're from the 2008 inventory. They wouldn't change drastically. I'd also like to note that in the Science Advisory Board's risk assessment, they've noted that arsenic levels in North Carolina are decreasing steadily. There are 450 facilities that are subject to current rule. Under the revised rules 313 would still be subject, so about a quarter of the facilities would no longer be subject to this rule. A little bit of background on how we got here today. The arsenic AAL was set in 1990. It was based on health data that is now about 30 years old. More recently, in the past 10 years or so, the Division has done more monitoring for arsenic, more ambient monitoring for arsenic, and we noted that for most of the monitoring sites, the ambient concentration arsenic was higher than the AAL. That's a problem when your background is higher than your standard. Either there's a health problem or the AAL is inappropriate. So about three years ago the Division Director asked the Science Advisory Board to review the arsenic AAL to see if it was set appropriately or not. Throughout 2011 the SAB met a number of times to review the more current health data and such. It's been 25 or 30 years since the standard was set so there's a lot more data to evaluate. By October of 2011 they had developed a recommendation and voted unanimously to send the recommendation out to public comment. They met twice more after the public comment period to discuss the public comments that were received, and in January 2012 they voted unanimously to forward their recommendation to the EMC. In March of 2012, the recommendation was received by the AQC. This past January the AQC received a draft rule and the economic assessment. In March they requested to proceed to public hearing. It was brought to the AQC and the EMC. The hearing was held on May 14th. My approach in conducting this hearing wasn't to second guess the expertise of the SAB. My approach was to take public comment and review whether or not public comments had been considered during the SAB's review to see if there was any new data that should be further reviewed. At the public hearing there was one speaker. He was an attorney who represented a couple of facilities that were subject to the rules. They subsequently provided written comments. We received written comments from five groups. Three were industry groups, Jackson Paper Manufacturing Company, Evergreen Packaging Company and the North Carolina Manufacturers Alliance. They all agreed with the rule. Their reasons for agreeing with the rule revision included; it was based on more robust data than the original rule. This low AAL could give a wrong impression about the actual air quality in North Carolina. They also noted that this revised rule was consistent with the recent toxics program legislation. We also received comments from two environmental groups, the Southern Environmental Law Center and Blue Ridge Environmental Defense League. They both disagreed with the rule. Several of their comments included; they questioned the studies and the models that were used by the SAB. I went back and reviewed what the SAB had done before, and these comments had previously been addressed in the public hearing that was held a year and a half ago. The SAB had met twice after the public review to discuss those comments and they decided that their methods and models were appropriate for what they were doing. There were also comments that the SAB had failed to consider ingestion of arsenic when they did the review. But in the minutes from the SAB meetings they had twice talked about ingestion, once early in the process and again after the public review about ingestion whether they should have considered it. Some of the things they looked at were the primary way to ingest arsenic was through drinking water and the primary way the arsenic gets into drinking water was the natural process of the groundwater flowing through rocks; also, pesticides that

may end up being in well water. That the concentration of arsenic was much higher in groundwater than in surface waters. So the SAB had considered whether they should study ingestion. They decided that they did not need to do that. There were also comments from the environmental groups about we shouldn't undertake this change while the state toxics program was being changed through the recent legislation. The staff within DAQ who would be working on both of these processes did not think that it was going to be a problem to do them concurrently. Some comments from the environmental groups also were that we should consider background or the SAB should have considered background levels when they were reviewing the arsenic AAL. That would be beyond the scope of this rule change, and in fact, it's probably beyond the scope of the toxics program. It probably would require regulatory or legislative change to incorporate any background levels in arsenic or in any toxics review. There was one item that gave me some pause and this was an item that was brought up by numerous groups. This is the fact that EPA is starting its own review of arsenic and they're early in the process. Environmental groups suggested that we should wait for EPA to finish their review. Industry groups suggested that we should not wait. EPA is early in this process and they're looking to finish it by 2016. So I considered what might be the different outcomes of EPA's review. Worst case depends on your perspective. But it could be that EPA's reviewing a lot of the same data that the SAB did, may come to similar results and conclusions. It could be that EPA's review gets delayed. It's not uncommon for EPA to be late or to miss deadline. Sometimes technical work takes longer than they expect. Sometimes there's a legal challenge that derails the process and sometimes there's funding issues, and resources get shifted around to higher priorities or whatever. I believe EPA will pursue this in good faith but that doesn't mean that there's any certainty that we would have a review by EPA in 2016. If we moved ahead now and EPA did come up with something significantly different, then we could adjust later. If we wait, if we say we're going to wait until EPA does their process, it could be that 2016 could come and go and there's no sight of when this process is going to be done; so there's that risk.

I recommend approving the revisions based on a number of factors. One is it's not a relaxation of health standards. By definition the new rules are equally protective of public health. Arsenic concentrations are trending down in North Carolina. The largest sources of arsenic in North Carolina are still subject to this rule. If needed, we could revisit the process when EPA finishes their review of arsenic. That completes my remarks.

Chairman Hutson: Thank you Donnie Redmond. Commissioner Deerhake, this was considered yesterday at the Air Quality Committee; if you could report on that recommendation.

Ms. Deerhake: This was not an action item. It was a summary of the hearing officers' report so we did not, as a body take action. I personally have comments but will wait for your open invitation for that.

Chairman Hutson: I'm going to open it for questions of Donnie Redmond or other discussion, or any motions that may want to be made. I'll open the floor.

Mr. Smith: I have one question of Donnie Redmond, and it's related to the ingestion point. Do I understand you to say that there's no atmospheric deposition of arsenic like we see with mercury in the surface waters, I mean?

Donnie Redmond: From what I read from the SAB minutes was the groundwater concentrations were much higher than the surface water.

Mr. Smith: I understand that. My question is a different one than that and that relates to the atmospheric deposition.

Donnie Redmond: I don't know. That's beyond my expertise.

Mr. Phillips: That was related to my question whether the SAB had looked at any studies of atmospheric deposition to reach the conclusion. Evidently that was not a significant concern. Is it fair to say that they reach the conclusion that atmospheric deposition would not be a significant concern, and in terms of increasing the individual exposure?

Donnie Redmond: I don't recall all the reports that they reviewed. But they did discuss whether they should review ingestion and they decided that they did not need to. I don't know the exact process and discussions but they got to that point.

Mr. Phillips: So is it fair to say that....what I know about arsenic comes from Agatha Christie mainly, what I read these last couple of days. But is it correct, or your understanding that the primary source of taking in arsenic is ingestion?

Donnie Redmond: Yes sir, through drinking water.

Mr. Phillips: Ok. The studies on which the SAB reached its conclusions considered only inhalation?

Donnie Redmond: I believe so. Yes sir.

Mr. Phillips: Ok. And they did not look at any studies of the rates of atmospheric deposition and migration from atmospheric deposition in take groundwater?

Donnie Redmond: I don't know if they did or not. I just read that they concluded it's not something that they needed to look at for this rule. I don't know all the details of how they came to that conclusion.

Mr. Phillips: Right. Well I guess those factors, then create a good bit of concern on my part about whether it would be adequately considering the potential, if you're increasing the ambient level of arsenic by the factor nine which I've read, but I don't know if that's accurate. I think it's something like nine, ten or eleven. Therefore, you would have some greater amount of atmospheric deposition but that is not been considered, and the conclusion that this does not actually increase the risk of exposure.

Donnie Redmond: I think their goal was just to reaffirm that one in a million for inhalation, what was the appropriate air concentration for that.

Mr. Phillips: But I would think we would be concerned about ensuring that we're not increasing the risk over one in a million. If we're not looking at atmospheric deposition and increased exposure through ingestion, that we really can't be sure we're not increasing the risk of one in a million.

Donnie Redmond: I wasn't going to second guess their methods. I read that they did consider it. They're the experts in this, their expertise. They did not think they needed to consider that. At public comments period the issue was brought up. When I went back and reviewed the SAB had discussed it. It wasn't like, we forgot about that. They had discussed it and decided it wasn't something they needed to pursue.

Ms. Bailey: There were a couple of things that you were saying and I was looking at the summary. I understand that this is part of the permitting program with how you look at facility emissions in the air plus the absent point sources. That's part of what we're looking at in here, right?

Donnie Redmond: Yes ma'am. If their emissions are over the TPER, this level, then they have to demonstrate that they do not violate the AAL, typically through the modeling or whatever.

Ms. Bailey: Right. And so you said a few different things. So there's one part of it is that you said you remembered the ambient air quality in the monitors throughout the state, arsenic is below that level?

Donnie Redmond: The concern is that at our ambient monitors the arsenic has been above the AAL. So that was the reason for looking at this in the first place. This AAL has been around since 1990; it's only been the last ten years or so that we've done more extensive monitoring and it was discovered that the arsenic in the air was higher than that AAL. That was is it a health problem or is it a problem with the AAL? That's when the director asked the Science Advisory Board to use their expertise and tell us if this AAL was appropriately set. They reviewed the health studies. They recommended a different AAL that would be equally protective of public health.

Ms. Bailey: Ok. Then it says here DAQ is determined that there aren't any facilities?

Donnie Redmond: Well for arsenic there are 450.

Ms. Bailey: That's what I was looking at. So there's a quarter of them that aren't going to be or going to be taken now.

Donnie Redmond: Right.

Ms. Bailey: But what kinds of facilities are they that are not going to be subject to the review.

Donnie Redmond: The largest facilities are still going to be in, the power plants and a lot of those. I'm thinking some of the concrete plants and asphalt plants that would drop out because of their emissions would be below that threshold. So they wouldn't have to do the modeling any

more. Because their emissions are below the TPERS from the previous model, the standard is based on if your emissions are this rate, below this rate, then you are not going to exceed that concentration at your property line. So if emissions are low then the assumption is it would also be low concentration. I'm not sure if that's clear or not.

Chairman Hutson: Ms. Burleson do you have something to add to the questions that are pending?

Joelle Burleson: If I may, I think that there are a couple of key points that I might be able to provide a better clarification on relative to the program, not necessarily specific to the question that Ms. Bailey just asked, but to some of the previous points. If you're satisfied with the answer I would be happy to do that.

Ms. Bailey: I am satisfied with the answer, but actually I feel like I can't vote on this based on the sources that would be exempt because you mentioned concrete and asphalt. Those are my company's interests.

Chairman Hutson: If you can make the choice to recuse yourself, that's your decision.

Ms. Bailey: I think I will have to recuse myself. I didn't realize that until just now.

Chairman Hutson: No problem.

Ms. Burleson: The two fundamental points regarding the program is that when the SAB is developing an AAL they are setting an inhalation risk and acceptable risk for inhalation from ambient exposure, and it's an incremental value. So they typically are not looking at deposition and impacts from other sources. They may use studies based on ingestion if inhalation values are not readily available in the data to develop an inhalation value that would represent a one in a million risk typically for carcinogen. But they're not looking at a multimedia standard when they're setting that. I think another key point is that the AALs are not the same as national ambient air quality standards. They are incremental values that individual facilities through the permitting process have to demonstrate that they can meet when they come through to make changes, or when the Division looks at them as a whole facility wide for that pollutant. So I don't know if that helps any or clarifies things, but I just thought those were key points that might bring a little clarity to some of the questions that have been asked.

Ms. Deerhake: I have two or three points but just to respond to the atmospheric deposition. I do want to point out that in the article that was cited by the hearing officer in the report. It's not in the record but it's my understanding we can discuss this article, peer review article. There is a statement that many of the epidemiology studies have reported as significant those response relationships between arsenic concentration in water and incidents of lung cancer, and other cancers. So there is that inhalation link and that lung cancer is the end point for this. I just wanted to raise that real quick. My remarks are reflecting multiple questions, interests and concerns about this. When the committee decided to proceed to public hearing or hear the requests to the Commission to public hearing, around that time we also received information that EPA was about to embark on a review of inhalation risks. So I notified the staff and the staff did

put the announcement as part of the hearing officers' announcement at the public hearing, so that the public was aware. The fact that EPA is beginning an inhalation risk review and I'm saying this is secondary information that they may be moving toward a standard that probably will go in the opposite direction of North Carolina's action today. It does give us pause. It's told the hearing officer, he himself gave himself pause about this. But I do believe that this is going in the wrong direction for today. We should wait and see what EPA's actions are. Its two and a half years. We need to weigh the expense of having relief for the industry vs. the public health. That leads me to the comment about the fact that there is a high background level of arsenic in the state and the fact that because there is a high level and there have been no health effects shown, that we shouldn't be concerned about that. I think that's not a scientifically based statement. It's a subjective statement. There has not been a formal state study of the ambient exposures and the health effects. We do not know whether the public is suffering from these higher levels or not. While setting arsenic AAL and the TPER is higher the AAL is still calculated to represent the same risk increment and the same level of health protection as before. That was a statement from the hearing officer. I disagree, in that, the method that was used to calculate the health effect or the one in a million goal is strictly a method, a statistical method. There really, in my understanding and I did read this article that was cited and it was peer reviewed afterwards. But this article was co-authored by the consultants who came for the SAB and introduced this new method of calculating. Both they, Texas co-author are using the same basic health effects studies that date back to the thirties and forties, the epidemiological studies. It's actually not new subjects being exposed to this pollutant. It's actually a new method of calculating the risks from their exposure, and it's the methodology that was peer reviewed. The co-author, as I said was a member of the Texas Commission on Environmental Quality. They used Texas incidents of lung cancer to help build and input data to this calculation. The SAB used North Carolina incidents of lung cancer as input to the calculation of the same methodology. Again, it's a methodology that was proposed. It's not new epidemiological studies. It's the methodology that's in question here today that we are being asked to support a new methodology that, in turn leaves 25% based distinctly of the regulated industry from the reporting and permitting obligations. So I ask that the Commission consider that. It's the methodology that's being decided upon today, not the evidence of new health effects data. There was also a statement that the AAL was overdue for review. I agree and have proposed a proponent of periodic review of AALs, that they do need routine review. However, in this case as I said I don't believe there is a new health data. I respect the agency and the SAB's review of this, but I do agree that there should be at the introduction and consideration of atmospheric deposition, and its cumulative effect on lung cancer and incidents. I believe I will stop there. I will say, though one more thing is that Texas appears to be the only state that has used this new methodology. There are other states that have air toxics regulations. I would be interested to know if they are moving toward doing that too. Again, we will be one of two states that have tried this new methodology. Thank you.

Ms. Pickle: Commissioner Deerhake answered many of my questions including whether any other states in the country were using the methodology that North Carolina is proposing. As I understand we would like confirmation from staff that the only other state in the country utilizing this methodology to get to a higher AAL which would result in increased arsenic conditions or allow increased arsenic conditions within the state is Texas. Is that true to your knowledge?

Donnie Redmond: That's my understanding. Yes.

Ms. Pickle: It says in the hearing officers' report the SAB conducted a risk assessment. Did they conduct an actual risk assessment of arsenic within the state? Or did they simply review exposure levels and data related to health effects from arsenic?

Donnie Redmond: I wasn't involved in the process. I'm not sure what they did. As I cited and my purpose wasn't to second guess what they were doing but to look to see if there were things that should have been included that weren't.

Ms. Pickle: I think we've covered multiple questions but we will just reiterate I don't see any evidence that all exposure pathways were evaluated for a likely increase in arsenic emissions within the state and considering within the hearing record itself on page 454, when it looks at populations with potentially high exposures. It talks about exposure pathways from all environmental media including soil, water and air. Because of the likelihood of high exposure for general population near sites where arsenic is produced or used or disposed of, it's hard to imagine without an adequate risk assessment or an exposure pathway evaluation that we have adequate understanding of the likely or possible risks to the general population.

Dr. Peterson: I've got two questions. The first is a process one. Are the conclusions and recommendations of the SAB subjected to peer review in the final process of their presenting that to our Commission and other similar bodies?

Donnie Redmond: It went to public comment. I don't know if it's peer reviewed or not.

Dr. Peterson: Well public comment is a lot different. I'm thinking of people like Linda Birnbaum. She may be on the SAB. She's one with the EPA Environmental Health Division who has helped us before with not heavy metals, as I recall, but with organic toxic compounds. So that's a little bit of a concern. It's certainly something that we could do if we felt that we were making a major change in methodology on our own and solicit that sort of peer review with independent agents. The other question I have is the following. I think I know the answer because of what you said that this was looking at the inhalation and that was the major issue that was guiding this. You also said that surface waters have lower concentrations of arsenic than groundwater. I always flip back to our obligation for protecting human health by protecting fish tissue. My question is since arsenic and mercury have a lot of similarities in the general table of elements and in their behavior and they both have a toxic affect, I wonder whether there's any interaction between arsenic levels and mercury levels such that if arsenic goes up in fish and mercury stays the same, is there still more net toxicity if having increased arsenic ingestion by fish that shows up in the tissues that are eaten by people? And I don't know that. I'm not trying to be, you know proposing gasterly? things but it seems like a reasonable question based on the chemistry and biology of this situation.

Donnie Redmond: Is that a question for me?

Dr. Peterson: It is.

Donnie Redmond: I don't know.

Dr. Peterson: I would offer that it would be useful given the changes that will occur, especially if it's high as nine fold to tenfold and as Dickson was suggesting, that's something that we ought to look at it before we make it even more difficult for municipalities to discharge because they would have to lower mercury even further if that were the outcome. As I said I don't mean to put a scare in this, but it seems to me the topic of appropriate consideration.

Ms. Deerhake: I would just respond to both of the last two comments by Commissioners. I compare the text of the peer review oracle to the SAB report and it appears that there's a lot of very similar text in conclusions drawn. So my speculation, I should say speculation is that the SAB relied heavily on the same input that the people who proposed the new methodology to the SAB used to build their report. The basic difference is that the SAB used North Carolina lung cancer incidents data as opposed to in this report. They used Texas incidents data.

Mr. Smith: I decided yesterday at the Air Quality Committee that I was going to say something and today, since it wasn't an action item on the Air Quality Committee. I don't say this by way of trying to persuade anybody to a position, but mostly to try and explain myself for having been silent on this question all along its process and now deciding to speak. As this has worked its way through the Air Quality Committee and went out to public hearing, and so forth, I paid some attention to it, but not detailed attention to it. I now realize or realized yesterday that I was assuming that this was another one of those examples in which the science had gotten better and that we needed to change our regulations to comport with improved science. It began to dawn on me yesterday at the Air Quality Committee that's not the case here. This is something different. I listened carefully to Mr. Redmond's presentation yesterday and realized that I needed to do some homework that I should have been doing earlier, but I didn't. But the one thing that I walked away from, there's two things I walked away from yesterday satisfied about. One was not convinced by Mr. Redmond's good layout of reasons why we should not stand aside and see what EPA does and this very same process, rather than charge ahead like we're considering doing. The other thing I came away convinced was that I needed to do some study; so I did that, a fair amount yesterday and some last night and this morning. My conclusion, and then I'll give you my reasons is I can't support either of these motions. I don't see any reason for the waiver of the 30 day rule. I think it's not called for.

Commissioner Hutson: Commissioner, excuse me. There is no waiver on this one. This one is for just whether or not to accept the hearing officers' report and adopt the rule.

Mr. Smith: Great. I feel a little better. Secondly, I don't think we need to be taking the action that we're doing. The SAB, as I understand it is an advisory group for us, not a decision making group for us. I trust them because they're scientists as you all very well know. I'm not. But I'm not in a position to say the SAB got this one wrong. But I'm certainly not convinced that they got it right at this point. It's not because the science got better. It's because they changed the methodology and I'm troubled. I tried to ready about that methodology in the last 24 hours. None of that leads me to the conclusion that I should be satisfied with that change in methodology. If we didn't change the methodology I don't think we'd be talking about changing this standard, even though it's 30 years old. So that's one thing. I'm not satisfied that the SAB

got it right but I'm emphasizing that I'm not saying that they got it wrong because I don't want Reggie on me about that quite yet. Secondly, I think its way premature for us to do this. I think we should see what the EPA does. Third, I'm not at all satisfied that the lack of consideration of the question about atmospheric deposition and the question of ingestion should have been put aside. I'm not at all satisfied that's the case. So for all those reasons I can't support this.

Mr. Tedder: I have some similar concerns listening to some of the discussions yesterday. I think Donnie did a great job trying to get us the information. I do trust the SAB evaluation but I do have a few questions. I think what I would probably prefer myself was that we table this if possible. I'd like to do some more evaluation to get some more answers before we actually vote on this one way or the other. So I'm actually making a motion to table.

(Mr. Morse seconded.)

Chairman Hutson: Motion by Commissioner Tedder, seconded by Commissioner Morse to table consideration of this matter until the September meeting. We would postpone consideration of this matter until the September meeting. So it's a motion to postpone further consideration of matter until the September meeting. It's been moved and seconded.

Mr. Morse: Would it be appropriate during this period of time for the Commission to ask our Water Quality Division, our Water Resources Division to step in to this discussion and give us their recommendations and their thoughts as to this type, what impacted the arsenic levels would have and their understanding of water quality? Would that be appropriate?

Chairman Hutson: Don't know if appropriate if the right word or not. I don't think it would be prohibited for us to do that, would it?

Frank Crawley: Well this is a rulemaking quasi legislative process that you're getting indulged in and certainly information gathering is primary consideration at this Commission before it makes a judgment decision.

Chairman Hutson: I just asked counsel. We could continue to collect information and make that part of the record that would support if we decided to adopt the rule.

Frank Crawley: Think you can do that.

Mr. Tedder: Just as a follow up I think just the fact that Mr. Morse mentioned the question, that's obviously information that we could try to gather and also staff be advised that this is what we ask at the next discussion concerning water quality.

Mr. Morse: My understanding of this discussion is we've had it. That's one of the concerns that I take on about the ingestion issue, especially with water quality and I'd like to know what our Water Resources Group thinks. I'd also, maybe would it be important for us at the next meeting in September to invite the Chairman of the advisory group to come speak to some of these questions that need, but not have the answers to but maybe they could shed additional light

on to whether or not they actually did look at this issue, that they didn't think it was an issue. Could we get somebody from that Commission here?

Chairman Hutson: Director Holman, could you respond to that question, please?

Sheila Holman: Yes. Thank you. Chairman Hutson that was one recommendation I was going to make. I think it would be helpful to have Dr. Thomas Starr here to help with answering some of these questions. I apologize that we didn't think of that before today and obviously didn't anticipate the level and scope of questions that came up. But I think that deferring the decision and having Dr. Starr here as well as gathering additional information is a good path.

Ms. Pickle: I'm curious as to how we're going to proceed to gather additional information. We had asked the Science Advisory Board and their review of the AAL to do that. It's truly just a process question. Where are they going? Are we giving them the direction to look for additional information and to come back? Or is the motion more for us to review the record more than we have in front of us? What are the sources of potential additional information and are they prepared to get us that information in advance of the September meeting? I have a concern about whether or not the additional time is going to turn, what rocks are we overturning? What rocks are we turning over in the upcoming two months that would provide additional information?

Chairman Hutson: Mr. Tedder you made the motion. Are you going to respond or Commissioner Morse? Either one of you.

Mr. Tedder: My intent is that I want to find more information myself, actually go back and review some of the information that the SAB evaluated and their findings. I think it's great to have someone from the SAB here to explain some of the requests that we had today, what was reviewed, what was not reviewed and make our decisions from that as opposed to asking the SAB to do additional work at this time.

Mr. Morse: It was not my intent to ask the SAB to do additional research. I'm curious as to the questions that we asked the director this morning as to whether or not they looked into this information and we don't know. My basic questions would be repeating those questions and seeing what the response is. Did they look at ingestion and if they decided that it was an issue, why did they decide it was not an issue or did they do studies on it? Did they do any comparisons? Were there any studies inside that they used, not to create new information?

Chairman Hutson: Other comments or questions?

Dr. Peterson: If it's not to create new information on which we make a decision I don't know why we're delaying. Secondly, it certainly doesn't address the issue of what's the urgency and why don't we wait until 2016 and have the EPA process in hand. Admittedly, we can't count on it being done by that time, so that's a concern. I'm not sure; please explain it a little bit more. I've never attended an SAB meeting. Are they constituted to have the expertise to examine ingestion of materials such as having metals through diet and through water uses? I had thought they were largely focused on air issues but I'm ignorant.

Donnie Redmond: I haven't attended one of their meetings either but they do have a charter that defines the qualifications, PhDs. in this, PhDs in that, medical doctors. I don't know specifically about that.

Dr. Peterson: It's possible that we're asking them a question that goes beyond what they typically analyze and address. If that's true or even if it's not true it strikes me that there'd be additional information we'd be hoping to get by their attendance or by something...

Mr. Morse: I'm not suggesting that can't lead into that request. But I think initially we're asking questions of an organization that's not here to represent themselves, and that has a lot of importance to me as to how I'm going to vote on this decision.

Sheila Holman: Thank you Chairman Hutson. I can provide some specifics from the Science Advisory Board charter relative to the membership. "There needs to be minimum of one doctoral level epidemiologist or public health scientist with strong background in bio-statistics and then one doctoral level toxicologist or public health scientist in the private sector who has at least five years of experience in the study of risk assessment. A minimum of one doctoral level toxicologist or epidemiologist employed by either the state or federal government who has at least five years of experience in risk assessment. A minimum of one doctoral level scientist having a minimum of five years of experience in exposure assessment to toxic air pollutants and a minimum of one licensed medical doctor whose current practice is in the field of occupational or environmental health or pediatric medicine." There are a total of eight members.

Chairman Hutson: Other questions? I have one question that while I'll support the tabling motion is when EPA goes through its re-evaluation, will they be looking at ingestion pathways through groundwater, surface water and the like. The reason I raise that question is that federal EPA does not set groundwater quality standards and I want to know what is within the scoping of what EPA would do because we may be waiting in a couple of years for a standard to come out that still doesn't address the serious concerns that were raised by people today of multimedia exposure? So that is one area outside of my expertise and I agree with Commissioner Smith. The last time this was presented EPA had already said a number should go higher based on the science when we did the 1-1 DCE groundwater standard. They had done an IRIS updated toxicological evaluation. My question is if we wait and get answers; get a number that answers the concerns and questions that were raised today.

Mr. Smith: I don't have a response to what you just asked but what Dr. Peterson asked I have this additional information. The SAB's former name is the Secretary Science Advisory Board on Toxic Air Pollutants and it is chartered the Board's primary responsibility is to assist potential human health effects associated with the North Carolina Toxic Air Pollutants and recommend a range of AALs likely to safeguard against adverse health effects. So it appears that its air focused in its charter.

Ms. Deerhake: I will add that in recent years they've also been asked to support evaluation of groundwater standards from the toxicology standpoint. And then I'll just add at EPA they're charged typically with integrated risks information system and the panels of the SAB that lead to data that's put into that system. They typically divide their work into developing an inhalation

unit risk factor and oral or ingestion unit risk factor. They're not charged with developing emission standards. It's just the basic risk factor.

Chairman Hutson: Which leads some other questions I have. What is EPA doing? Because what was described was the development of EPA evaluating the AAL as opposed to what you just described as an IRIS type toxicological evaluation.

Ms. Deerhake: They evaluate the risk factors on which the emission numbers are based.

Dr. Peterson: This might be a question for Marion because she's so well informed or Steve also. Did this group contribute or create our risk numbers associated with mercury ingestion in fish by pregnant women and other sensitive groups in the population? In other words, all that information that we've had, it seems technically sound and I just wondered if this is the group that created that?

Ms. Deerhake: The North Carolina SAB?

Dr. Peterson: Yes.

Ms. Deerhake: I don't think so.

Mr. Phillips: Yea, I was wondering who did that. I was going to observe to really evaluate this we need to get evaluation from that angle as well, because it's not only talking about the water. We're talking about the food chain.

Chairman Hutson: Other questions or comments? If not, I'll call the question on the motion. The motion is to postpone consideration in this matter further until the September meeting subject to providing more information and having at the September meeting representative of the Science Advisory Board to address questions that we have. All those in favor of the motion signify by saying "I". Opposed? The motion passed. The matter for further consideration is postponed until the September meeting. There was one opposed.

Donnie Redmond: Thank you.

Chairman Hutson: For the September meeting I would encourage Commission members to forward to me or Director Holman questions or other information in addition to what was identified today that you would like to see addressed in this matter. I prefer we do that sooner rather than later because it will take some effort to respond to some of the questions that are out there. So if you can get those questions, now that this has been us by a week from tomorrow, the 19th, it would be preferred. I'm not going to preclude them after the 19th. But the sooner we can get them in, the better.

Ms. Bailey: I just wanted to let the record show that I recused myself.

Commissioner Hutson: The record should reflect on this matter that Commissioner Bailey recused herself in, I take it, that recusal will be going forward on further consideration of this matter?

Ms. Bailey: Yes.

Chairman Hutson: Ok.

Mr. Morse: Part of my recommendation or one of my requests is that we go ahead and get Division of Water Resources involved and have them also give us their opinion to the questions that have been raised today, their thoughts on inhalation.

Chairman Hutson: Ok. Between Director Holman and me we'll make sure that gets to Director Reeder.

Dr. Peterson: I'm not convinced it's in Water Resources purview what you asked. I think it's in Water Quality purview, so I want to make sure. Mr. Reeder doesn't seem to be here and I don't know. I saw Dianne but nobody is sitting up at the table for Water Quality. I thought that I ought to speak to make sure this gets passed to Water Quality.

Mr. Morse: Do we still have a Division of Water Quality? I thought that it was all combined. That's why I referred to Water Resources but I'm basically talking Water Quality. But I wanted to be correct in the nomenclature.