

**AIR QUALITY ADVISORY BOARD
REGULAR MEETING
MONDAY, AUGUST 18, 2014**

DATE: MONDAY, AUGUST 18, 2014
LOCATION: Community Room, 215 N. Mason Street
TIME: 5:30–8:00 pm

For Reference: Tom Moore, Chair 970-988-4055
Ross Cunniff, Council Liaison 970-420-7398
Melissa Hovey, Staff Liaison 970-221-6813

Present:

Tom Moore, chair	Derek Esposito, ESAB
Rich Fisher	Myma Hansen, Larimer County
Tom Griggs	Doug Ryan, Larimer County
Gregory Miller	Lew Gaiter, County Commissioner
Jim Dennison	Steve Johnson, County Commissioner

Absent:

John Shenot
Dave Dietrich

Public:

Cathy Kipp, PSD School Board
David Trusk, PSD School Board
Kevin Duggan, Coloradoan
Valerie Vogeler, CAAT
Kevin Pass, CAAT
Laurea Ogden, CAAT
Bob Harr, CAAT
Shelby Robinson, CAAT
Connie Marvel, CAAT
Steve Allen, CAAT
Paul Cooper, CAAT
Julie Pass, CAAT
Bryan Simpson, CAAT
Karen Hare, CAAT
Patti Johnson, CAAT
Hilary Freeman, CAAT
Julia MacMillan, CAAT

Staff Present:

Dianne Tjalkens, Admin/Board Support
Lucinda Smith, Environmental Services Director
Mary Pat Aardrup, Volunteer Coordinator
Emily Wilmsen, Public Relations Coordinator
Bruce Hendee, Assistant City Manager/Chief Sustainability Officer

Staff Absent:

Melissa Hovey, Staff Liaison

Councilmembers Present:

Ross Cunniff
Bob Overbeck (arrived 6:37)

Invited Guests:

Howard Gebhart, ARS, Inc. (consultant)
Joe Adlhoch, ARS, Inc.
Dave Stewart, Stewart Environmental
Michael Lee Jones, chair ESAB
Jeremy Deuto, ESAB
Joe Wilson, ESAB
Richard Alper, ESAB
Cassie Archuleta, ESAB
Kimberly Karish, ESAB
Evelyn King, ESAB

Tim Troup, CAAT
Lucy Troup, CAAT
Ken Ball, Martin Marietta Materials
Jerimy Runner, Martin Marietta Materials
Walt Wright, Martin Marietta Materials
James Sharn, Martin Marietta Materials
David Lemesany, Martin Marietta Materials
Patrick Costello, citizen
Gregory Eckert, citizen
Kathleen Mineo, citizen
Sandra Kuhn, citizen

Jody Kuhn, citizen
Phil Volger, citizen
Matt Zoccali, citizen
Mike Prusnick, citizen
Tracy Evans, citizen
Deborah Secor, citizen
Vincent Papalio, citizen

Tom Hock, citizen
Janice Lynne, citizen
Nancy York, citizen
Scott Overly, citizen
Eileen Skaflen, citizen
Kina Blunt, citizen

**JOINT MEETING OF THE AIR QUALITY ADVISORY BOARD
AND THE LARIMER COUNTY
ENVIRONMENTAL AND SCIENCE ADVISORY BOARD**

Call meeting to order: Lucinda Smith called to order at 6:00pm.

Ross Cunniff: Questions and concerns have come up around this air permit. The two boards will convene jointly then give recommendations to the County Commission and City Council independently. There will be opportunities for public to speak at the Council meetings and Commission meetings, as well as to give comment at the state level.

Doug Ryan, Larimer County Environmental Health: ERAB was charged with reviewing the air permit and giving a recommendation to the County Commissioners. This is an opportunity to review the consultant report to help the boards understand the technical nature of this report. The Environmental and Science Advisory Board will not take formal action today. September 2, the board will present formal comments to the County Commissioners.

Tom Moore, Chair of AQAB: Tom reviewed the agenda.

Public Comment:

Kevin Pass, CAAT—Kevin asked if any board members knew the safe dose of benzene for a 12 year old. He said the Petroleum Institute said it is zero for adults. We don't know what will happen with these emissions. The industry says we are safe. The tobacco industry did the same. In the time it took to discover the dangers of tobacco, many people died. We did the same with lead in petrol. Would it take health problems developing among the children at Lincoln Middle School to prove the safety hazards of benzene? We should have CO₂ monitors at the site and VOC monitors at the middle school. The current method of determining if it is safe to go outside is that teachers smell the air before recess. The Boys and Girls Club is used year round. If the production was over 500,000 it would be a large producer with stricter regulations. In June, July and August they produced enough to be a major producer if extrapolated over twelve months. If we cannot stop the permit, let's look at good safety measures. We need the plant checked by the County every month and regular monitoring.

Mike Prusnick, citizen—Sometimes the government tells us something is safe and it is dangerous, sometimes the opposite. This is a complicated issue. The job of the government is to protect the people. Do we err on the side of safety? Can you explain the plan is safe in a way the common citizen can understand? We may not be able to stop the air permit, but our elected officials can vote with the power of their purse by not buying asphalt from this plant.

Presentation on Martin Marietta Materials Asphalt Plant Draft Air Permit

Howard Gebhart, ARS, Inc., presented findings from his review of the draft air permit and supporting documentation issued by CDPHE on August 4, 2014 for this facility.

Howard gave an overview of what ARS was hired to do: review the draft air permit and support materials. His analysis is limited to issues within the context of the air permit. Outside the context of the state air permit, it was also requested by both boards that he assess potential public health impacts of hazardous air pollutant emissions. He showed a map of where the plant is located and a schematic of the batch plant. He explained how the asphalt is manufactured and how particulate matter is captured in the process. The emission controls at the plant are the baghouse, a recycle/recapture point for exhaust air on the product conveyor to destroy VOCs, and condensers that has been installed on the liquid asphalt tanks. He showed a graph of criteria pollutants emission data in tons per year at the plant at the maximum annual production of 475,000 tons. There are stack, fugitive, and other emissions. Particulate matter, NO_x, SO₂, CO and VOCs are measured. The state has told him that based on their review of other permits and stack testing data, the AP42 number is not valid, which is why they allowed a higher number in this permit. The state has also quantified emissions for other hazardous air pollutants, including benzene, ethylbenzene, and formaldehyde. He feels the wrong number was applied in the permit in one section and he has asked about numbers for HCl, Quinone, and Acetaldehyde. There is no documentation of these pollutants. The state also omitted hexane and xylene. For modelling, the state modelled carbon monoxide emissions. They use an AERSCREEN model that is very basic. The maximum CO emissions are modelled at 160 pounds per hour. The emissions are then added to background CO (based on the Fort Collins monitor). The Building Down Wash is also considered and includes the lime silo, asphalt storage silos, and baghouse structure. The worst case results from the Building Down Wash scenarios give the model output. He showed that the predictions from the model are significantly below the standard for a 1 hour period. For the lime silo, the 8 hour model is just below the standard, but the other two combinations have a greater margin of safety. The conservatisms are the building configuration, 0.9 8-hour scaling, propane versus natural gas use, and the CO background. When wind comes from north or south, the lime silo has an effect. When the wind is from the east and west, the lime silo is to the side and will not have an effect on winds, turbulence, and dispersion. In reality the worst case result is a condition that probably does not result in real life. For the 0.9 8-hour scaling to be possible, the emissions would have to be consistent over 8 hours. The conditions are also different under propane than for natural gas. The CO background number comes from an area with more traffic, so it is higher than the area and gives a margin of safety. He is fairly confident the actual CO numbers will be significantly below the standards. The Hazardous Air Pollutants (HAP) modeling analysis was extrapolated from Air Pollution Control Division (APCD) CO modeling data, and three receptors. He analyzed a residence near the trailhead parking lot, a residence on Stone Crest Drive, and at Lincoln Middle School. He was able to determine the worst case result for each area. He is not a toxicologist, so he is relying on the EPA standards to compare model results. He discussed acute impacts. Formaldehyde is the only pollutant that comes close to the standard, but is still under the "safe concentration threshold." He explained the chronic impacts (annual exposure), in which the concentrations predicted are below the safe concentration thresholds. The pollutants marked in asterisks on his PowerPoint presentation are known carcinogens. He has a number of comments on the draft permit. There are errors in the HAP emissions. The permit lacks consideration of other Martin Marietta Materials (MMM) sources (aggregate, mining, etc., operations that occur to the west). To be complete those emissions need to be considered. Would those cause it to be a major source? Most likely they would not change the conclusions, but these must be included to be true and accurate. The operating and

maintenance plan will include information about how MMM will operate the plant to stay within the permit. He would like the state to make that a more public process in which the boards can participate. In regard to MMM Control Equipment, MMM has included equipment at this site that is not legally required. He would like to see these controls included in the permit as a legal obligation. Fort Collins is in an ozone non-attainment area. Since the controls have already been added to the plant, they are documented as reasonably available controls. Also, the permit should be explicit in requiring testing on both fuels used at the plant. All the modelling on HAPs is dependent on the modelling data. He suggests the emissions testing include quantification of at least some of the HAPs so we can conclude that the modelling is accurate.

Comments/Q & A

- Michael Lee Jones asked why CDPHE uses AERSCREEN instead of Air Mod. Howard explained that AERSCREEN is a simplified version of Air Mod. Many times the state will start with AERSCREEN and if shows a potential problem they will run Air Mod. This is a pass/fail model.
- Evelyn asked out of all conditions what would be most important and what would be value add of including in the permit. Howard said the most important thing is making voluntary controls legally enforceable requirements and requiring testing of both fuels.
- Richard Alper asked if it is okay for the state to include other conditions to the west. Howard said on contiguous property, same company control, etc., it should be included. A lot of aggregate materials used at the asphalt plant come from the facility across the street. It is a support facility. In his view they have to look at everything together.
- Richard Alper asked how old the preliminary risk based screening report is. Howard said he used the most recent EPA tables available, which are as new as 2012. He will include an appendix in the report.
- Richard Alper asked if Howard has an idea of the differences between the Laurel/Mason CO monitor and where the plant is. Howard has not looked closely at how the state has gotten the number. CO is a traffic driven pollutant. The monitor is a block away from College. There is more traffic there than on North Taft Hill Road where the plant is located, but he cannot give a quantitative estimate. He would concur with the state that is a conservative estimate for the site it is applied to.
- Evelyn asked if he would expect any change in the health impact based on not going with his suggestions. Howard said whether the state would include testing for emissions when they have nothing to compare the answer to is unlikely, but perhaps this is something the board and MMM could work out as a voluntary item.
- Rich Fisher asked about upset conditions. Howard said typically upset conditions are exempted. If they are properly reported, the emissions could be higher for that short term event and not be a violation of the permit. Rich asked the duration of an upset that is permitted. Howard said if there was an upset the plant has an obligation to mitigate. Things like power failures are likely causes of upset; however, a power failure would probably shut down the equipment as well as the pollution controls. He is unsure of a kind of upset that would lead to a higher level of CO emissions.
- Tom Moore said a background term on the HAP was not included. Howard said he does not have the data to make such an assessment. He assumes the background to be very low. He does not think adding the background would change the outcome significantly.

- Tom Moore said a conservatism is that the numbers are based on the plant running at full capacity for 8 hours. Howard said the 8 hour average is based on 400 ton per hour and running on propane. Other conservatisms are worst case meteorology. All the worst case assumptions persisting for 8 straight hours is an unlikely event. If the plant was running on natural gas for part of the time, the emissions would be lower, even if running at full capacity. It is unlikely to have conditions that would lead to higher emissions.
- Rich Fisher asked about point source and fugitive emissions. Howard said the state does not model fugitive CO, only particulates. Rich said in the real world we have stack emissions (principally CO). The fugitive emissions will not all come from the stack. Howard said in the table where it says “stack” those are from the baghouse. Fugitive emissions include outside storage of materials, wind erosion, traffic emissions, etc. Fugitive emissions have a higher ambient air impact than stack emissions. The stack is 20 to 30 feet tall. Rich said the impact point for fugitive emissions is different than stack emissions. Where the emissions occur is not addressed in the analysis. Howard said the location of the maximum impact of particulate is not the same as the CO. However, the other emissions from the stack would occur where the CO does. Rich said if a source is well controlled, a lot will be from mobile emissions from trucks. Howard said CO regulations for stationary sources do not include truck traffic emissions. They are not regulated in the air permit. Rich said if one was concerned about hazards of air pollution, it is a different animal. Howard reiterated that this permit does not include emissions from vehicles entering and leaving property, only the stack.
- Jim Dennison asked how the HAP model gets from acute to chronic. He asked for help to understand the calculation. Howard said 1. For acute exposure the emission rate is for 400 pounds per hour operation. For chronic impact, the emission rate is 475 tons per year (the maximum). It is a lower emission rate that is applied based on maximum allowable capacity that is averaged over the year. 2. Similar to the way they adjusted 1 hour to 8 hours, there is a 10% adjustment factor in chronic versus acute. It is also a conservative assessment.
- Jim Dennison asked if he thinks background formaldehyde will be negligible with respect to the models. Howard said formaldehyde is an urban pollutant created by combustion, including vehicles. He does not have data to show what the background formaldehyde would be. Howard can do more work around this topic.
- Jim asked if it became a major source, over 500 tons per year, how much more significant would the emissions controls be, comparatively. Howard said he is unsure what the production threshold would be. If a major source permit was issued, it would require “best” control technology, not “reasonable” control technology. MMM would have to demonstrate the technology was not feasible or cost effective at this site if it was used successfully anywhere else in the country.
- Jim Dennison asked if when the state issues the permit they could require more controls. Howard said in this permit, the legal requirement is reasonable control technologies. Fort Collins is in an ozone nonattainment maintenance area, so this is the standard.
- Jim asked if there are other RACTs (reasonable available control technology) that should be included in the permit. Howard said the state in this case has not met its burden to demonstrate that the AP42 number is not RACT. The state could look at a lower CO number as RACT. There are other asphalt plants with lower CO numbers, but this could be a factor of altitude or other factors.

Meeting adjourned at 7:24pm.

**AIR QUALITY ADVISORY BOARD
REGULAR MEETING**

Call meeting to order: Tom Moore called to order at 7:38pm.

Present:

Tom Moore, chair
Rich Fisher
Tom Griggs
Gregory Miller
Jim Dennison

Staff Present:

Lucinda Smith, ____
Dianne Tjalkens, Admin/Board Support

Staff Absent:

Melissa Hovey, Staff Liaison

Absent:

John Shenot
Dave Dietrich

Councilmembers Present:

Ross Cunniff

Public:

Karen Hare, CAAT

Public Comments:

None

Member Comments:

None.

Review and Approval of July 21, 2014 minutes

Rich moved and Tom Griggs seconded a motion to approve the July 21, 2014 AQAB minutes as presented.
Motion passed, 5-0-0.

AGENDA ITEM 1: Discussion of MMM Draft Air Permit and Consultant Presentation

AQAB board members discussed the draft air permit for the Martin Marietta Materials asphalt plant and developed recommendations on comments to submit to CDPHE for Council approval. The board determined to form a subcommittee for additional review and discussion.

Tom Moore said there is quick turnaround needed to get a recommendation to Council. The subcommittee can meet via phone and a recommendation drafted by the committee can be voted on via email.

Comments/Q & A

- Rich volunteered to draft a memo to Council and all members agree to contribute edits. Tom Moore asked for member comments to help draft the memo.

- Tom Griggs said he does not feel technically qualified to comment on Howard's report. He would like to listen. He said Howard mentioned gaps and mistakes in the draft permit. He would like those addressed.
- Jim is concerned about the CO values. In the report of the 1-hour acute, the plant adds two times more and is putting you at 99% of the limit. If the level is 1% under the limit the permit gets approved. He would like more time to get more information. Upset conditions affect acute values. If values doubled in an acute condition, you could put someone in the hospital. He would like to request more time, since the state has incorrect and missing information. He is also concerned about benzene. He would like to see for himself why the number is so low. The formaldehyde is over 50% of the legal limit and doesn't include background. It deserves more study before the City says it is comfortable with this. He would like Howard to get the additional information he is asking for and would like to see the questions about the RACT resolved and have resolution about the values there. The formaldehyde is a significant risk at over 50% of the limit.
- Greg said Howard's report is persuasive. The written documentation is informative as well. Council might be the appropriate forum to ask more questions of the state. We can ask them to ask more technical questions. He agrees with Howard's technical comments in the presentation, and suggests using it as the basis for the board's comments to Council.
- Rich said looking at the 99% mentioned in the modelling, the purpose of the model that has been used here is not to represent real life, but to set an emission limit. It is a beginning point to determine whether you need more analyses or meteorology. They assume worst case for any direction. If it had failed, they would have gone to the next model, which most likely would have shown they would be okay.
- Jim said if they use up 99% or even 50% of their increment, he feels we should be asking for more RACT. Suppose the true output would not triple the CO, but double it, it is still significant. That is rationale for taking a hard look at the RACT issue. Rich said that is a comment that could be challenged at the state level. That comes back to AP42 numbers, which would bring the limit down. Jim said that would cut the number of tons they could produce.
- Jim asked when the state gives it decision. Lucinda said the comment period ends September 3. Jim asked when the board received the information they needed to form an opinion. Lucinda said there is a 30 day comment period. Jim asked the City's view on the matter. Lucinda said she appreciates Howard's report, and thinks it makes sense for staff and the board to look at each point in the report and carry forward those comments, and look at if there is anything additional to recommend. It is unclear what the state will do with this. They may not address the comments. They just have to make sure the permit meets state requirements. Additional monitoring or stack testing could be requested through the permit or negotiations directly with MMM. Staff would support a strong set of comments that protect air quality.
- Greg asked how the voluntary emission controls that MMM already utilizes are they best enforced. Lucinda said requiring them in the permit would be a clear way to enforce those. Negotiation could get additional monitoring.
- Tom Moore said the permit engineer sees the equipment already installed, so that would fall on the permit side, but more monitoring on HAPs is an ask. The state does not have the authority to do that. Formaldehyde is not zero at that location. If we are concerned about scaling, we should find a

background value on that pollutant. They should look at all the sources and other source activity that has nothing to do with the stack. That should be in the permit. There are trucks and other equipment on the other side of the road. Under any windy condition that moves.

- Rich said the citizens are concerned about the HAPs. When you look at the other side of the road, it is a dust issue. You can address the dust issue. This is outside the City, but we could try to persuade the County to be interested in dust control.
- Tom Moore said if you control the dust over the whole area, you are keeping the hazardous materials that collect at ground level from moving around. This doesn't fall neatly in the air permit. The City could ask for a fugitive dust control program at the site.
- Jim said the fugitive emissions are significant. Tom Moore said they contain more than dust.
- Jim asked about PAH (polycyclic aromatic hydrocarbons) associated with the baghouse. Tom Moore said you could do testing to find that out. Jim thinks that should be determined.
- Tom Moore said for the memo there could be items that fit neatly into the permit and other items that the board could suggest Council consider as a City request.
- Rich said if he were a citizen who lived near the plant he would be as concerned about the trucks going up and down the road. They probably are not covered in a way to reduce emissions. The City is putting asphalt everywhere. The machine that puts it down on the road is not a trivial source.
- Jim said he read that the people who put down asphalt are not at a significant risk.
- Rich said you have a well-controlled single point source, but it is being put down around town and when it heats up in the sun it volatilizes.
- Tom Moore said the City buys 50% of the product sold by that operation. The City has an analysis that says it is alright to buy that much. Lucinda said staff did a qualitative TBL (triple bottom line) analysis before the annual contract for asphalt was updated. Tom said the City could choose to not buy as much from this plant, but then would have to buy it somewhere else. There could also be a surcharge to guarantee a lower emission rate. If we want to make recommendations that actually change things, we need to think outside the permit box.
- Lucinda said what is urgent is getting comments in on the air permit and then staff can look at longer term processes to make a greater difference.
- Tom Griggs said one of Howard's comments was to ask for a longer public review process. Tom Moore said he thinks they will say they are in compliance with the 30 day review period. We should be focused on the things we know can reduce or cap emissions in the context of the permit.
- Jim asked if MMM is looking at expanding, or if the level is going to remain the same. Karen said the last permit issued was for 600,000 tons annually. This permit had to be lower because it became a stationary site. Tom said historically they have not been going much over half of their limit, approximately 300,000 tons annually. Karen added that they only run 6 months of the year. Jim said the issue is not apt to get much worse as they are not increasing capacity significantly.
- Jim asked if there is consensus on asking to recommend delay of approval of the permit. That is one thing Council could act on. Tom Moore said we don't know when the permit will be issued anyway. Jim would like another cycle of public comment after a corrected version of the permit is released. Rich said if you can demonstrate that the draft permit is seriously deficient and others say the same thing the state might have to pay attention. We should not feel constrained in what we advise Council to do. Jim asked if they plugged in the AP42 emission factor, what the result is. Tom Moore said it

would lower the cap. Jim asked if that would lower the amount they can produce. Rich said the demonstration that they are actually compliant with the permit is not clear. The only way you know they are attaining those limits is by doing stack testing which is expensive and only done every year or two. Since you are on a rolling average in a sensitive area, you could ask for more frequent testing. However, how the enforcement is applied is determined after the permit is issued. Tom Moore asked that the operating and maintenance plan be part of the permit. At minimum we could ask to be part of the process.

- Rich said the permit will be issued. The question is under what conditions will they operate, and how will they keep the control devices working properly? Trust but verify. You may put other conditions on such as not operating on the weekend or at night. Those permit conditions make this issue tenable for the residents.
- Jim said if there is better RACT that might be able to be achieved. Can Howard tell us what other RACT options are available? Tom Moore said they are not required to do anything, but are being given a pass as RACT. The engineer didn't ask the existing controls be specified in the permit. He doubts you will get beyond what it already there. Rich said this is why Melissa sent out the list of what exists in other states. Tom Griggs said we should not be trying to comment directly on the permit itself because it is a forgone conclusion. Rich said he is not saying that.
- Jim suggested reiterating Howard's comments, exploring the RACT question, and asking for some reasonable requests for verifying. Tom Moore asked if we should ask for more time since there are errors or determine a list of items for the permit.
- Greg said we point out the deficiencies and make suggestions. Tom Moore said if we offer all these things to improve the permit, we may get them, but if we don't hold up a stop sign to say correct your errors before further action is taken on the permit, we won't get it.
- Rich suggested crafting the memo to say to hold the process until corrections are made, and include suggested changes to the permit if the state chooses to proceed.

Greg moved and Jim seconded the following motion:

The board will develop a recommendation to Council that will ask the state to reissue the draft construction permit due to significant error. In addition the board will point out the items that are of most concern in the permit itself based on the technical report from ARS.

Motion passed, 5-0-0.

AGENDA ITEM 2: Selection of Representative for Bicycle Advisory Committee

Not discussed.

AGENDA ITEM 3: Bicycle Plan Recommendations

Not discussed.

Adjournment

Meeting adjourned at 8:36pm.

Approved by the Board on September 15, 2014

Signed

A handwritten signature in black ink, appearing to read 'D. Tjalkens', written over a horizontal line.

Dianne Tjalkens, Administrative Clerk II

9/29/2014
Date