

VENTURA COUNTY AIR POLLUTION CONTROL DISTRICT
ADVISORY COMMITTEE MEETING
April 28, 2015
MINUTES

Chair Sara Head convened the meeting at approximately 7:32 p.m.

I. Director's Report

Chuck Thomas, manager of the Planning, Rules and Incentives Division, began by providing a brief report. He first mentioned he was providing the director's report on behalf of Mike Villegas, Air Pollution Control Officer, who is out on business travel to attend a meeting of the California Air Pollution Control Officers Association (CAPCOA).

Mr. Thomas addressed appointments and reappointments of committee members. Everyone currently on the committee has either been appointed to a vacant position or reappointed to their position except for two people. Mr. Thomas will work on the remaining two and talk to those individuals separately. We do have a new member, from the City of Thousand Oaks, and Mr. Thomas asked him to introduce himself.

New Committee Member Iftekhar Ali introduced himself and stated he goes by Ali. He stated he is glad to be here and hopes to be some asset. He has been living in Thousand Oaks for 15 years. He retired as a chemical engineer from Chevron. He also worked overseas and now owns his own business.

Mr. Thomas continued his report by discussing Rule 42 Permit Fees, which came before the committee in February. The fee increase in the amendments to Rule 42 was adopted by the Air Pollution Control Board (Board) at the last meeting unanimously. So the new permit renewal fees will take effect next fiscal year (starting July 1, 2015).

Rule 71 and Rule 71.1 revisions, which addressed vapor recovery on the oil facility in Simi Valley, have been put on hold for the time being. Some land use entitlement issues have popped up. The oil facility was installed in 1959 before the City of Simi Valley was incorporated in 1969. Therefore the oil facility was originally all in Ventura County jurisdiction. When the City of Simi Valley incorporated, they annexed some of the land so two of the wells are in the city and one in the county.

There is some question whether the facility has a valid land use entitlement from the city. The land use issue has to be worked out first, so the rule is on hold until the city and county iron out the land use entitlement issues. Committee Member Tom Lucas noted they are taking the orange trees out in that area and he asked if there were development plans. He believes the property with the orange trees being removed is the area they considered installing the flare. No one indicated they know about development plans in that area.

Mr. Thomas then discussed the District's plans to purchase a building in Camarillo. The effort is still slowly progressing. He believes the District is approximately 2 years out from moving to the new building. There are issues to work out with the City of Camarillo regarding the building's design. Mike Villegas and the developer will be meeting with the City of Camarillo about the remaining issues in the next few weeks.

A few weeks ago a reporter from the Ventura County Reporter was in the office talking to Mike Villegas and a couple of other staff members. The reporter is working on a big article about air quality in Ventura County. The article should be coming out soon in their weekly edition, so keep an eye out for that.

Mr. Thomas discussed the American Lung Association State of the Air Report. The report is about air quality across the country including California. It comes out tomorrow, and the information is embargoed until then. They have a website, www.stateoftheair.org, which presents the information. If you look at it tonight, it says 2014 but the data is from 2013. Presumably tomorrow it will say 2015 and the data will be from 2014. Ventura County has always received an "F", even though we have made tremendous progress since the 1970's.

If you scroll down there is a link to a chart that shows the progress in air quality. You can see how much progress we have made, but they still give us an "F". Mr. Lucas noted we had the cleanest year on record in 2013 and the second cleanest year in 2014. Mr. Stan Cowen, Air Quality Engineer with the District, responded that we are still non-attainment of the federal ozone standard and if we attain the standard we might get a better grade.

Mr. Thomas continued noting we had seven violations of the federal standard last year. In the 1970's, we peaked at 184 days over the standard. Even though over the years the EPA has tightened the standard, we still only had seven exceedances county wide last year. Committee Member Joan Burns asked which areas typically do the best in the report. Mr. Thomas responded that he has not looked for that information. On the website you can enter a zip code or a state and it will pull up data for that area.

Mr. Thomas noted the report gives Ventura County a "B" for particulates, so we are doing well with that pollutant. CAPCOA prepares a report every year titled "California's Progress Toward Clean Air". The report came out two or three weeks ago. Mr. Thomas believed he sent it out to committee members a few weeks ago, but it is available at www.capcoa.org. CAPCOA started the report about 5 years ago in response to the Lung Association report.

Finally, Mr. Thomas discussed the Board's action recognizing Mike Kuhn for his long tenure, almost 37 years, on this committee and service to the District. Advisory Committee Chair Sara Head attended the Board meeting and gave a nice statement. Mike Villegas had a lot of nice things to say about Mr. Kuhn and several Board members made nice statements about his service. Mr. Kuhn seemed to be very pleased with the recognition. His retirement leaves a vacant seat representing District 4 and Supervisor Peter Foy.

That concludes the Director's Report.

II. Call to Order

Chair Sara Head called the meeting to order at approximately 7:41 p.m.

III. Roll Call

Present

Iftekhar Ali
Joan Burns
Sara Head
Martin Hernandez

Kim Lim
Thomas Lucas
Richard Nick
Steven Wolfson

Absent

Robert Cole
Raymond Garcia (excused)
Randy Johnson
Hugh McTernan

Paul Meehan (excused)
Keith Moore (excused)
Alice Sterling (excused)

Staff

Chuck Thomas
Stan Cowen
Tyler Harris

Public

None

Representing

IV. Minutes

Ms. Head noted several committee members sent comments on the Minutes from the March 24, 2015 meeting to Mr. Cowen, who provided a revised version. Hearing no further comment, the revised minutes were approved as drafted with no opposition.

Committee Member Steven Wolfson had a question on the issue addressed at the March 24th meeting, asking if lanterns were previously on the property in question. Mr. Thomas stated the equipment was controlled with lanterns years ago but he was not sure when they were removed or deactivated. Mr. Wolfson asked if the rationale used to require the original lanterns could be used to require them again. Mr. Thomas stated he did not believe the lanterns meet the current standards. The lanterns were discussed at staff level and determined they did not meet the current control requirements.

V. Committee Comment

There was no committee comment on matters not on the agenda.

VI. Public Comment

There was no public comment on matters not on the agenda.

VII. Old Business

There was no old business.

VIII. New Business

Stan Cowen introduced himself as the project engineer for the proposed revisions of Rule 74.15.1, Boilers, Steam Generators and Process Heaters (1 to 5 MMBtu/hr). Mr. Cowen will give a short presentation including the regulatory background, rule history, process background, ultra-low NOx burner technology, proposed rule requirements, and emissions reductions and costs. Mr. Cowen noted the ultra-low NOx burner technology has been around for a while. When he was a permit engineer back in the early 1980's he permitted an Alzeta burner which was the type that may have changed the whole industry.

We are a nonattainment area for ozone so we are required by state law, the California Clean Air Act (CCAA), to adopt what we call "all feasible measures". We are adopting these revisions to Rule 74.15.1 as an all feasible measure.

We held a workshop and invited the regulated community to also attend this committee meeting. It appears they are happy with the rule since they did not attend tonight's meeting. We only needed one workshop because there was not much discussion, although we did receive some comments which we will discuss later.

Rule 74.15.1 was originally adopted in 1993 – Jerry Mason was the rule engineer on that project. It was a retrofit rule, meaning existing boilers had to be retrofitted if they did not meet the emission limit. That limit remains in effect today for existing units at 30 ppm NOx at 3% oxygen. So that limit has been in the rule since 1993. In 1995 we made a small change to the tune-up procedures. There was another insignificant change in 2000 regarding an EPA test method.

The last revision was in 2012 and Don Price was the rule engineer for that one. At that time we proposed a new limit of 20 ppm NOx for subject units between 1 and 2 MMBtu/hr heat input. The rule applies to units from 1 to 5 MMBtu/hr heat input. So the 2012 rule revisions only

covered the first increment from 1 to 2 MMBtu/hr. In addition, that limit only applies to new boilers, so it does not require retrofit to existing boilers.

We received comments on the 2012 rule revision from the California Air Resources Board (ARB). ARB is our state government oversight agency along with EPA at the federal level. ARB suggested strongly that we turn it into a retrofit rule, based on the South Coast Air Quality Management District (South Coast) Rule 1146.1. That rule has limits of 12 or 9 ppm NO_x instead of 30 ppm NO_x, depending on whether it is an atmospheric or forced draft unit. Atmospheric units are limited to 12 ppm NO_x and forced draft units are a little lower at 9 ppm NO_x. That is a retrofit rule that was amended by South Coast in 2008.

Don did a cost analysis and showed the retrofits were very expensive. Ranging from \$12 to over \$1,800 per pound of NO_x reduced. Even at \$12 per pound, it is four to five times higher than we generally propose as a reasonable cost. One of the things we consider to determine if a measure is feasible and reasonable is it has to be cost effective. We don't adopt or change rules that aren't cost effective. So we only added the 20-ppm NO_x limit for the smallest new boilers and not the 9 or 12 ppm limit.

We told ARB we would come back and revisit the rule after 2014. So that is why we are here today. Now it is 2015 and we are trying to make good on our written response to ARB.

CCAA Section 40914 is our rule revision authority. We are required as a nonattainment area to reduce emissions by 5% annually or adopt all feasible measures. Since 5% of the emission inventory is just out of the question, we focus on all feasible measures. We have used the all feasible measures requirement as our authority for any rule change for a long time.

Normally, we look at other districts, such as South Coast or the San Joaquin Valley Air Pollution Control District (San Joaquin) or even some others. They are adopting rules ahead of us. They adopt a rule and implement it for a few years. Then we contact them and ask them how it is working. They will have a database of variances and notices of violation, etc. that will indicate levels of compliance. We will actually talk to sources too. In the past I did a rule for pleasure craft coatings. South Coast adopted a limit for bottom paint that just was not working at all. I talked to a Newport Beach harbor master and he said the paint did not work worth a darn.

Mr. Thomas stated that no air district in the state has ever been able to meet the CCAA requirement for 5% per year emission reductions. So everybody does the all feasible measures alternative.

So we are proposing this revision based on the implementation in other districts and because the technology is widely available. Many vendors provide the burners, especially for new sources.

The units subject to this rule provide heat and steam for factories, food packing, oil and gas production, hotels and naval facilities. In this size range there are about 27 units out there, and

the permitted emission inventory is about 20 tons per year. We require APCD permits for all of these units so we have a pretty good handle on the inventory. It includes portable LPG (propane)-fired units and also heaters used at asphalt batch plants.

Process heaters in oil fields are common. Oil well dewaxing units are portable units. Oil field heater-treaters are used to break up oil-water emulsions. So there are quite a variety of sources that use this kind of combustion equipment.

The technology includes pre-mixing of air and fuel prior to the combustion/flame. The flame is contained in the burner to provide more uniform, lower flame temperature. They also run at lower excess air so there are actually some energy savings as well. Another kind of ultra-low NOx burner is called a radiant burner. This is the type developed by Alzeta, but now they are made of metal instead of ceramic so they are more durable.

Regarding the proposed rule requirements, Don Price conducted the cost analysis three years ago and things have not changed much in the following three years. We don't believe the \$1800 per pound NOx cost has changed much, so we are proposing this rule instead of a retrofit rule. ARB has not commented on the rule so we are assuming they are OK with it. For new and replacement boilers and steam generators, the table presented in the slide will be the emission limits.

It depends on the type of fuel. Different gaseous fuels have different limits. The 12 and 9 ppm limits are right out of the South Coast and San Joaquin rules. The landfill gas and biogas rules are also from the South Coast rule. The LPG limit is based on manufacturer test data. Normally when they manufacture boilers, they can burn natural gas or propane, so we use a 20-ppm limit for propane fuel. Two additional limits on produced oilfield gas at 15 ppm and 12 ppm were based on comments we received from the Western States Petroleum Association (WSPA). WSPA proposed the limits and we did not have any test data, so since they were in the range we were looking at we accepted their proposal.

Mr. Lucas asked how many units we are talking about, knowing that homeowners associations have boilers. Mr. Cowen responded that these are for new or replacement boilers over 1 MMBtu/hr heat input. Probably 30-40 boilers will be subject to these limits when they are installed. It is not a lot, which is why the emission reductions we are getting are only about 9 tons per year. It is significant but not as much as we would like.

Previous to this proposal, we were only regulating natural gas-fired units. With this proposal, we are expanding it to different gaseous fuels – landfill gas, biogas, propane and reduced oilfield gas. The reason for this is to be consistent with the other air district rules. But we had to propose an exemption based on this change to fuel applicability.

The existing limit from 2012 of 20 ppm will remain the same. It has only been three years, and we don't like to change rule requirements and limits any more often than every five years at the least.

One of the comments from WSPA was they want to have us reduce compliance costs. One way we do that is by reducing the number of source tests, from every two years to every four years. So we cut the number of source tests in half. We can do this because they are still subject to annual screening using a handheld analyzer. It is a much less expensive test than getting a source test van that costs thousands of dollars to run the test. The van is bigger than the boiler sometimes. The proposed reduced testing is just for new or replacement units.

This was also one of the reasons we revised the rule in 2012. We changed the testing requirements for the 1-2 MMBtu/hr units to every four years with the addition of the annual screening. We do require a full source test every four years because the portable analyzers are not perfect – they have to be calibrated and they are not as accurate as the full source test.

Mr. Ali asked what the source must do if the annual screening fails. Mr. Cowen stated if it fails, they have to fix the unit and then they can run the screen test again. They are not required to perform a full source test unless they cannot meet the limit by screening. We have a whole new system of enforcement. We give them a certain amount of time to fix the unit. If they don't or can't fix it in a certain amount of time then we issue a violation notice.

Ms. Burns stated since the portable units are not as accurate, the facility could choose to run a full source test every year. Mr. Cowen agreed and states some companies do that because they appreciate the accuracy. Another change is adding a deadline for the screening test of the anniversary date of the last source test. So that makes it more enforceable. If the rule states it must be done by a certain date then we have something to stand on.

We also added a new exemption for existing portable oil well dewaxing units. Since we changed the applicability to different gaseous fuels including propane, one type of portable source that runs on propane is unable to meet the existing 30-ppm NOx limit. They are old pieces of equipment that are grandfathered and the retrofit cost is still too expensive at \$9.50 per pound. The permitted emissions are less than 0.3 tons per year, so it is not a major source.

There is also a new recordkeeping requirement to keep an annual log. We believe most sources already do this – they keep a record of the NOx readings and the date they test it, etc.

In addition to the ppm limits, we are adding limits in pounds MMBtu. We are doing this because if the source has high oxygen in the stack due to dilution, your correction factor goes up exponentially and your accuracy goes down exponentially. So the pounds-per-MMBtu limit is a more accurate way of measuring emissions in this case. We are citing an equation from the South Coast protocol 1146.1. One of the EPA comments which is addressed in the latest version of the rule I provided tonight dealt with this requirement. It said "March 2009 or later" and EPA

wanted us to take out the words “or later” because it is not approvable by EPA. They can’t approve a method that is unforeseeable in the future.

The other EPA comment was they wanted a definition of the newly exempt sources, the oil well dewaxing units. So we have a new definition in section G.11.

The other big change is the definition of “process heater”. We are clarifying it to exclude a number of different processes to make it align with the South Coast rule 1146.1. The new definition excludes a number of different sources because they have unique properties. South Coast has a separate rule titled “Miscellaneous Sources of NOx” and that is the next rule I am working on. This rule will apply to furnaces, dryers and maybe incinerators. We will use the San Joaquin rule instead of the South Coast rule in that case because it is a little bit friendlier.

We are also excluding from Rule 74.15.1 emission control devices that are combustion related, such as afterburners, vapor incinerators, thermal and catalytic oxidizers. These are common emission control devices for VOC or ROC organics in the county. Most of these are relatively small units. The South Coast miscellaneous source rule restricts these as well, but we will probably stick to the dryers and furnaces at this time. That will be a more interesting rule project because we will likely have an audience for that one. It will probably be a retrofit rule so some sources will have to spend money up front.

If there are NOx limits in permit conditions for existing equipment excluded by the proposed revision to the definition of process heaters, they will still be subject to those limits. These conditions are based on the NSR rule so there shouldn’t be any back-tracking due to this exemption.

We have gone over most of the EPA comments already. They asked for limits on the different gaseous fuels – landfill gas, biogas, etc. – based on the South Coast rule and the furnace manufacturers. They wanted us to examine the exemptions from the rule, so we just limited it to one source type, two existing process heaters (the portable oil well dewaxing units).

The WSPA comments were also mentioned earlier. We had a consultant for WSPA attend the workshop. They asked us to reduce the source testing frequency for new or replacement equipment, which we did as a cost-saving measure. They also proposed limits for produced oilfield gas as a fuel for their process heaters.

Mr. Wolfson asked why the landfill gas limit different from the natural gas limit. Mr. Cowen responded that the fuel is not as consistent. The methane content is lower, and it is a lower quality fuel. For NOx emission controls you need a uniform fuel to keep the air-fuel ratio at a certain point. With the fuel changing all over the place it is hard for the control system to keep up with the fuel and as a result you can’t keep the NOx emissions as low.

We are looking at 9 tons NO_x per year upon unit replacement, but it will take some time to reach that. It is not a large reduction but still significant. It's cost effective; with an incremental cost of \$10,000 for ultra-low NO_x burners the emission reductions cost \$2.30 per pound. The South Coast has a market-based approach to NO_x control called RECLAIM. What this means is they can over-control a source and get credits. They can trade the credits and it is a pretty complex system which we don't have in Ventura County because we don't have the manpower or accounting capacity. The credits right now are running about \$2.50 per pound. So if someone chose to do so, they have the option of buying credits for that amount in the South Coast.

Mr. Cowen summarized his presentation and opened the meeting for questions. Ms. Burns asked if Mr. Cowen did any kind of evaluation of which exemptions will actually apply in Ventura County, such as the tent dryers. Mr. Cowen stated that there are no sources in Ventura County for some of the source categories added as exemptions. They were added as exemptions just in case a new source is located here and they were listed in the South Coast rule.

Ms. Burns also asked for clarification about the other rules in South Coast that address the exempted sources, and how we will address these sources if we do not yet have a rule. Mr. Cowen responded that the permitting section will address them. New sources are required to install best available control technology. She also asked about LPG and the idea that many rules lump LPG in with natural gas. Mr. Cowen stated more rules are making a distinction between them because they don't combust the same way. LPG is a little higher NO_x emitter.

Committee Member Kim Lim asked if rental boilers would be subject to this rule and if they are able to comply. Mr. Cowen stated if it requires a permit from us it would be subject. The new rental boilers should be able to comply. Mr. Lim stated he has seen brand new rental boilers running at 30 ppb NO_x. Mr. Cowen stated rental boilers would need ultra-low NO_x burners to comply.

Mr. Ali asked about the time frame when we can meet the requirements. Mr. Cowen stated they can be met now. In the South Coast they are meeting the limits with existing boilers and it is much easier to meet these limits with new boilers that are designed for the ultra-low NO_x burners. The rule is effective in January 2016 for new or replacement units.

Mr. Ali made an additional comment about how the numbers are presented in the rule. In some places, the numbers are written out with all the zeros, while in others the units are used to represent millions with "MM". He suggested it might be better to be consistent, and then in the glossary or definitions define the term "MM" for the units. Mr. Cowen noted the tables have limited room, but he will try to find a way to make them consistent.

Committee Member Martin Hernandez asked how the cost of feasibility is determined. Mr. Cowen stated there is a standard cost analysis we use. It is based on capital cost, operating cost and maintenance cost. A certain lifetime is assumed for the equipment, maybe 10 years or whatever is appropriate. We also assume an interest rate for a cost recovery factor. We estimate

the annual emission reductions in pounds reduced per year and the annualized cost in dollars per year. The ratio of those two is the cost effectiveness in dollars per pound.

Mr. Hernandez followed up asking when dealing with ARB, do they set the standard in terms of what is feasible throughout the state or is it something we develop specifically for Ventura County. Mr. Cowen stated this is a pretty standard calculation that all of the air districts use. Mr. Hernandez stated he believes what we do is reasonable, but he was concerned about equity over the various areas of the state. Mr. Cowen stated some districts express the cost effectiveness in dollars per ton, but we have been using dollars per pound for over 30 years so we stick with that.

Mr. Thomas added that by following the big air districts like South Coast, San Joaquin and the Bay Area they have such a big market that once they find something cost effective they adopt a rule. So we are likely getting that equipment anyway because we are adjacent to South Coast. If it is feasible there it will typically be feasible here. Equipment manufacturers are not likely to make different equipment for us because we are too small a market area.

Mr. Cowen noted the extreme nonattainment areas are more aggressive and they enact technology-forcing rules. So we normally wait a couple of years to make sure what they propose actually works in the field. That is one of the advantages of following their lead.

Mr. Wolfson noted in the documentation we used South Coast cost effectiveness analysis from 2008 and asked if that was the latest information available. Mr. Cowen stated that is the latest information and the equipment cost is probably less now. It might be a little out of date but if anything the estimated cost is high not low, so the cost effectiveness is acceptable.

Mr. Wolfson asked an additional question regarding section B.2.a. of the rule, where it requires devices be certified by the South Coast in accordance with Rule 1146.2. Mr. Cowen stated that is in the current existing rule and we are not proposing any change to that requirement. It was added because in that size range, South Coast currently requires certification by the manufacturer. So since this equipment is already being certified for the South Coast district, we are not requiring a separate certification for us. Any subject device installed in Ventura County must be certified by the manufacturer to meet the South Coast requirements.

Chair Head, not hearing any additional questions or discussion, asked if anyone would like to make a motion that the committee recommends adoption of the proposed rule. Mr. Hernandez made the motion and Mr. Lucas seconded the motion. Mr. Thomas called the role and the vote was unanimous in favor.

IX. Adjournment

Having no further business, the chair adjourned the meeting at approximately 8:23 p.m.

Prepared by:

A handwritten signature in blue ink, appearing to read "Tyler Harris", with a horizontal line extending to the right.

Tyler Harris

Air Pollution Control District Staff