South Coast
Air Quality Management District
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DRAFT AIR QUALITY MANAGEMENT PLAN ADVISORY GROUP MEETING MINUTES

Friday, August 27, 2021
1:00 p.m.

1. Welcome, Introductions, and Approval of Minutes

Ian MacMillan, Assistant Deputy Executive Officer of South Coast AQMD's Planning, Rule Development, and Area Sources Division, called the virtual meeting to order at 1:00 pm, welcomed all participants and introduced South Coast AQMD staff and Advisory Group members present. Mr. MacMillan asked if there were any comments on the previous meeting's minutes. Since there were no comments, the minutes were approved.

Comments from Advisory Group and Staff Responses:
No comments from the Advisory Group on this agenda item.

Comments from Public and Staff Responses:
No comments from the Public on this agenda item.

2. 2022 AQMP Reasonably Available Control Measures (RACM) Demonstration Methodology for Stationary Sources

Dr. Kalam Cheung, Program Supervisor of Policy, Climate, Energy, and Incentives presented the methodology for RACM demonstration for stationary sources. Dr. Cheung provided the overview of RACM requirements, and presented the seven-step analysis for RACM which includes (i) Updated RACT/Prior RACM, (ii) EPA's Technical Support Documents, (iii) Control Measures Beyond RACM in 2016 AQMP, (iv) Other Districts' Control Measures, (v) EPA's Menu of Control Measures, (vi) EPA's Guidance Documents, and (vii) Control Measures Workshop and Working Group.

Comments from Advisory Group and Staff Responses:
Inquiry on how cost-effectiveness is calculated for mobile sources compared to stationary sources and availability of a cost-effectiveness number for mobile source measures. Staff responded that in the 2016 AQMP, $50,000 per ton of NOx reduced was used as threshold that triggers additional economic studies. The approach for cost effectiveness thresholds for the 2022 AQMP has not yet been determined. CARB staff responded that CARB uses a similar approach to South Coast AQMD for mobile source measures. Cost-effectiveness and technological feasibility assessment will be conducted for all measures included in CARB's 2022 State SIP strategy. Future workshops will propose specific dollar-per-ton cost-effectiveness thresholds for mobile sources.

Comment that South Coast AQMD needs to partner with U.S. EPA to revise the outdated Control Technique Guidelines (CTG) for ultraviolet/electron beam (UV/EB) technology. Staff responded that South Coast AQMD staff submitted a comment letter in June 2020 to recommend U.S. EPA to consider revisiting and updating all outdated CTGs. Once U.S. EPA's CTG documents are revised, staff will update the RACT analysis to reflect the current state of technology. The comparisons with recently adopted rules and regulations by other agencies, as well as the most recent versions of U.S. EPA

guidance documents and their technical support documents, would capture the latest technology development in this source category.

Inquiry on potential RACM rejected in 2016 AQMP. Staff responded that in the 2016 AQMP, a seven-step analysis was conducted to identify potential RACM. Based on the analysis, 20 potential RACM were identified and evaluated in more detail. Ten of the 20 measures were rejected as RACM because they were not technologically feasible or cost-effective to implement at the time of the evaluation. As technology evolves and cost of control is updated, these 10 measures will be evaluated again in this AQMP to re-assess feasibility based on updated information.

Comments from Public and Staff Responses:
Comment regarding the need for evaluation of solar technology for the 2022 AQMP. Staff thanked the individual and noted the comment.

Comment to evaluate permits and literature search to determine RACM and reevaluate traditional cost-effectiveness criteria to determine economic feasibility. Staff thanked the individual and noted the comments.

3. Updates on 2022 AQMP Emissions Inventory and Air Quality Modeling

Dr. Sang-Mi Lee, Program Supervisor of Air Quality Modeling and Emissions Inventory Development presented preliminary emissions inventory for the 2022 AQMP. The presentation included emissions from stationary, on-road mobile, and off-road mobile sources for the base (2018) and future milestone years (2023, 2031 and 2037). Dr. Lee provided comparisons between the preliminary emissions inventory and the 2016 AQMP emissions inventory, which were due to updated economic growth scalars, recently adopted regulations, and update methodologies where applicable. She also provided updates on air quality modeling to predict ozone and PM2.5 levels for the Basin, the Coachella Valley and adjacent air basins. Specifically, state-of-the-art tools were developed to allocate emissions from on-road mobile sources, ocean going vessels and aircraft to a modeling grid. These approaches utilize big data collected via remote sensing, sensors, and satellite-based communication.

Comments from Advisory Group and Staff Responses:
Comment that as more sources enter the Annual Emissions Reporting (AER) program in future years, projected contribution to total NOx emissions from area sources versus point sources may change in the future. Staff responded that the distinction between area source and point source might be different depending on geographical areas. Point source emissions are reported data by facilities subject to AER. Area sources include permitted sources which are not included in point sources and aggregated sources that cannot be tracked individually. Emissions from residential fuel combustion or personal use products (consumer products) are example of area sources. Staff ensured emissions are not double counted in both area and point sources inadvertently through a “point-area source reconciliation” process.

Comments from Public and Staff Responses:
No comments from the Public on this agenda item.

4. Meteorological Impact on High Ozone Episodes in South Coast Air Basin

Dr. Sang-Mi Lee gave a presentation on the meteorological impact on high ozone episodes, which includes two independent approaches – one approach is based on a study conducted by external consultants and the other is an in-house approach conducted by South Coast AQMD staff. The results showed that ozone levels in the Basin are highly sensitive to meteorology, which fluctuates every year due to atmospheric dynamics. She also noted that it is challenging to precisely quantify the impact due to large uncertainties in emissions and volatile precursor levels in a large, heterogeneous urban air shed. Dr. Lee explained that high ozone concentrations for the next three decades show a marginally decreasing trend with the baseline emissions, while reduced emissions scenarios were predicted to show attainment of ozone standards, despite climate change.

Comments from Advisory Group and Staff Responses:
Inquiry on South Coast AQMD's next steps to analyze meteorological impact over a longer time frame than five years in the future, provided U.S. EPA recommends a span of no less than 20 years to account for climate signal in attainment demonstration. Staff responded that U.S. EPA does not recommend reflecting climate changes on attainment demonstration which has less than 20 year time span. Staff is working very closely with scientists in U.S. EPA, and CARB to address the long-term meteorological impact in the 2022 AQMP. Key factors such as long-range transport, background ozone, biogenic emissions, and other uncertainties, would be considered in the weight of evidence discussion.

Comments from Public and Staff Responses:
Inquiry on how real-world ozone levels in the South Coast Air Basin decreased while the number of exceedances was highest in 2020 since 1997. Staff explained there are different metrics to evaluate ozone air quality. Common metrics include U.S. EPA's standard using the 4th highest concentration in a year, averaged over a three-year period (design value), or the number of days exceeding this standard. Although exceedances and the design value have not reduced as much as desired in recent years, other metrics show that progress is still being made. For example, emissions levels continue to decline, and modeling demonstrates that this approach will overcome any natural fluctuation due to year-to-year meteorological variability. This fluctuation is expected to impact each metric differently, but overall there is a strong correlation between the significant reductions in NOx and VOC emissions at a multi-decade scale and subsequent reduced ozone levels.

Comment that zero-emission solar conversion should be considered. Staff thanked the individual and noted the comment.

5. Update on 2022 AQMP Working Groups

Mr. Michael Krause, Planning and Rules Manager, provided updates on Residential and Commercial Buildings Working Group for the 2022 AQMP. Mr. Zorik Pirveysian, Planning and Rules Manager, provided updates on Mobile Source Working Groups, including Heavy-Duty Trucks, Construction and Industrial Equipment, Ocean-Going Vessels, and Aircraft Working Groups, and introduced potential control strategies for each of these mobile sources.

Comments from Advisory Group and Staff Responses:

Inquiry on whether funding strategies for incentive measures are specific to source categories. Staff responded that there will be a separate working group to discuss funding requirements, including how much funding is needed and the sources of funding.

Inquiry on the information on the cargo handling equipment working group. CARB staff answered that there is no specific working group on cargo handling equipment. As part of the regulatory development for cargo handling equipment, workshops and working group meetings where stakeholders can provide feedback will soon take place. CARB is updating the emissions inventory for cargo handling equipment with more up-to-date information through a public process.

Comment to consider additional working group process for statewide activity to address infrastructure needs. CARB staff responded that CARB would host future State SIP Strategy workshops for both hydrogen and zero-emission infrastructure. Staff will look at infrastructure holistically, including the grid reliability, grid connections, and cost at the statewide level.

Comments from Public and Staff Responses:
No comments from the Public on this agenda item.

6. Other Business

No additional comments, announcements, or reports from the Advisory Group members.

7. Public Comment

No additional comments, announcements, or reports from the Public.

8. Next Meeting tentatively planned for October/November 2021

Members Present (21)

Curtis Coleman, Sothern California Air Quality Alliance
Dan McGivney, Southern California Gas (SoCalGas)
David Rothbart, Southern California Alliance of Publicly Owned Treatment Works
David Darling, American Coatings Association
Greg Nord, Orange County Transportation Authority (OCTA)
Janet Whittick, California Council for Environmental and Economic Balance (CCEEB)
John Ungvarsky, United States Environmental Protection Agency (U.S. EPA), Region 9
Kim Fuentes, South Bay Cities Council of Governments
Lakshmi Jayaram, Future Ports
Lori Huddleston, Los Angeles County Metropolitan Transportation Authority (LA Metro)
Marcos R. Holguin, International Longshore and Warehouse Union (ILWU) Locals 13, 63, and 94
Martha Masters, Riverside County Transportation Commission (RCTC)
Michael Carroll, Latham & Watkins LLP
Michael Lewis, Southern California Contractors Association
Paul Ryan, California Refuse Recycling Council
Peter Okurowski, Association of American Railroads
Ramine Cromartie, Western States Petroleum Association (WSPA)

Rita Loof, RadTech
Rongsheng Luo, Southern California Association of Governments (SCAG)
Thomas Jelenić, Pacific Merchant Shipping Association (PMSA)
William La Marr, California Small Business Alliance

Public Attendees and Interested Parties (45)

Abas Goodarzi, US Hybrid
Alek Van Houghton, Ramboll
Ali Ghasemi, Ventura County APCD
Amy Dryden, Association for Energy Affordability Inc.
Amy Jeffries, Boeing
Anjali Deodhar, Viatec Inc.
Annaleigh Ekman, SCAG
Anthony Endres
Ariel Fideldy, CARB
Austin Hicks, CARB
Bertrand Gaschot, Mojave Desert AQMD
Bethmarie Quiambao, Southern California Edison (SCE)
Claire Garcia, Lion Electric
Chadwick Collins, Kellen Company
Chris Dugan, MIG Inc.
Dustin Rice, Fedex
Eric Anderson, Toyota
Eric Berger, SoCalGas
Fernando Gaytan, Earthjustice
Ginger Vagenas, U.S. EPA
Harvey Eder
John Henkelman, Ventura County APCD
John Larrea, California League of Food Process (CLFP)
Ken Dami, Phillips 66
Laura Iannaccone, County of Los Angeles
Lauren Paladino, Los Angeles World Airports (LAWA)
Leah Louis-Prescott, Rocky Mountain Institute (RMI)
Leela Rao, Port of Long Beach
Les Swizer, California New Car Dealers Association (CNCDA)
Lin Wang, LAWA
Luis Amezcua, Building Decarbonation Coalition
Mark Abramowitz, Community Environmental Services
Patricio Portillo, Natural Resources Defense Council (NRDC)
Julia Lester, Ramboll
Resa Barillas, California Environmental Voters
Rynda Kay, U.S. EPA, Region 9
Sam Pournazeri, CARB
Scott King, CARB
Scott Weaver, Ramboll
Sylvia Vanderspek, CARB
Teja Ganapa, Los Angeles Department of Water and Power (LADWP)

Terry Ahn, Orange County Sanitation District
Timothy French, Chicago Law Partners LLC
Tyler Harris, Ventura County APCD
Xico Manarolla, Clean Power Alliance (CPA)

South Coast AQMD Staff Present (34)

Brian Choe, Program Supervisor
Carol Gomez, Planning and Rules Manager
Cui Ge, Ph.D., AQ Specialist
Elliott Popel, AQ Specialist
Eric Praske, Ph.D., AQ Specialist
Eugene Kang, Program Supervisor
Gary Quinn, Program Supervisor
Ian MacMillan, Assistant Deputy Executive Officer
Jong Hoon Lee, Ph.D., AQ Specialist
Josephine Lee, Senior Deputy District Counsel
Kalam Cheung, Ph.D., Program Supervisor
Kathryn Roberts, Deputy District Counsel II
Kayla Jordan, Assistant AQ Specialist
Lane Garcia, Program Supervisor
Laurence Brown, AQ Specialist
Marc Carreras Sospedra, Ph.D., AQ Specialist
Mary Reichert, Senior Deputy District Counsel
Mei Wang, Program Supervisor
Michael Krause, Planning and Rules Manager
Nico Schulte, Ph.D., AQ Specialist
Paul Wright, Senior Information Technology Specialist
Ricky Lai, AQ Specialist
Rosalee Mason, Secretary
Ross Zelen, Assistant to Board Member Kracov
Rui Zhang, Ph.D., AQ Specialist
Sang-Mi Lee, Ph.D., Program Supervisor
Sarah Rees, Ph.D., Deputy Executive Officer
Scott Epstein, Ph.D., Program Supervisor
Sheri Hanizavareh, Senior Deputy District Counsel
Veera Tyagi, Principal Deputy District Counsel
Wei Li, Ph.D., AQ Specialist
Xiang Li, Ph.D., AQ Specialist
Xinqiu Zhang, Ph.D., Senior Staff Specialist
Zorik Pirveysian, Planning and Rules Manager