Assembly Bill (AB) 617
Community Air Initiatives

Technical Advisory Group (TAG) Meeting #1

Wednesday, February 27, 2019
9:00 A.M. – 11:00 A.M.

South Coast Air Quality Management District
Conference Room GB
21865 Copley Dr, Diamond Bar, CA 91765

Webcast is available at http://www.aqmd.gov/home/library/webcasts
Questions and Comments can be emailed to AB617_TAG@aqmd.gov

	Item	Presenter
1.	Welcome and Introduction	Jo Kay Ghosh, Ph.D. Health Effects Officer
2.	Emissions Inventory and Chemical Transport Modeling	Sang-Mi Lee, Ph.D. Program Supervisor Marc Carreras Sospedra, Ph.D. Air Quality Specialist
3.	Traditional and advanced air monitoring technologies: advantages and limitations	Payam Pakbin, Ph.D. Program Supervisor
4.	Overview of SOUTH COAST AQMD laboratory capabilities	Aaron Katzenstein, Ph.D. Lab Services & Source Testing Manager
5.	Discussion and Comments	Advisory Group Members
6.	Public Comments	Members of the Public
7.	Lab/AQ SPEC Tour Members are invited to this optional tour	Aaron Katzenstein & Andrea Polidori

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Representative *(Primary[1]; Alternate[2])*	Affiliation	Community	Participant in the TAG Meeting
Jesse Marquez[1]; Flavio Mercado[2]	Coalition for a Safe Environment; Active Resident from Wilmington	Wilmington, Carson and West Long Beach	Jesse Marquez
Jill Johnston	University of Southern California	Wilmington, Carson and West Long Beach	Jill Johnston
Uduak-Joe Ntuk[1]; Tim DeMoss[2]	City of Los Angeles; Port of Los Angeles	Wilmington, Carson and West Long Beach	Uduak-Joe Ntuk
Ryan Sinclair	Loma Linda University	San Bernardino, Muscoy	Ryan Sinclair
Andreas Beyersdorf	California State University, San Bernardino	San Bernardino, Muscoy	Andreas Beyersdorf
Tammy Yamasaki	Southern California Edison	San Bernardino, Muscoy	Tammy Yamasaki
Hector Garcia	Our Lady of Victory	East LA, Boyle Heights, East Commerce	
Marisa Blackshire	BNSF	East LA, Boyle Heights, East Commerce	Marisa Blackshire
Rafael Yanez	Active Resident	East LA, Boyle Heights, East Commerce	Rafael Yanez
Manuel Pastor	Univ. Southern California, Sociology and American Studies & Ethnicity	Technical Expert	
Scott Fruin	Univ. Southern California, Preventive Medicine	Technical Expert	
Cesunica (Sunny) Ivey	UC Riverside	Technical Expert	Cesunica (Sunny) Ivey
Luis Portillo	Inland Empire Partnership	Technical Expert	
Ken Davidson	US EPA Region 9 Air Division, Acting Manager, Air Toxics, Radiation, and Indoor Air Office	Technical Expert	
Janet Whittick	California Council for Environmental and Economic Balance (CCEEB)	Technical Expert	Janet Whittick
Melissa Lunden	Aclima	Technical Expert	Melissa Lunden

Technical Advisory Meeting (TAG) Meeting #1 Summary: During the TAG Meeting # 1 emissions inventory, chemical transport modeling, community air monitoring, and an overview of laboratory capabilities were summarized.

1. **Welcome and Introduction** – Jo Kay Ghosh, Health Effects Officer
    a. Jo Kay welcomed the TAG. Jo Kay remarked that the TAG consists of three members of each respective year one community and technical experts. She announced that the meeting will be broadcast online.
2. **Emissions Inventory and Chemical Transport Modeling** – Sang-Mi Lee, Program Supervisor; Marc Carreras Sospedra, Air Quality Specialist
    a. Sang-Mi invited all TAG members and members of the public to introduce themselves.
    b. Jason Low (South Coast AQMD) covered general housekeeping rules.
    c. Sang-Mi discussed the types of emission inventories and air quality modeling used to support the Air Quality Management Plan (AQMP) and the Multiple Air Toxics Exposure Studies (MATES). She summarized the methodology to quantify emissions from different emission source categories. She discussed data sources that are being used, including MATES IV and the 2016 AQMP, summarized the major findings of these efforts and areas where the emissions inventory can be improved. She concluded with a summary of different state-of-the-art peer-reviewed modelling tools used, as well as how cancer risk is calculated and exposure analysis conducted.
3. **Q and A on Emissions Inventory and Chemical Transport Modeling**
    a. Jesse Marquez (Coalition for a Safe Environment) asked how modelling accounts for the atmospheric inversion layer.
        i. Sang-Mi responded that the atmospheric inversions layer as well as the atmospheric boundary layer is incorporated in the modelling tools that we use.
    b. Janet Whittick (California Council for Environmental and Economic Balance (CCEEB)) noticed the scale for the MATES IV charts are all different and asked that they be displayed on the same scale for comparison.
        i. Sang-Mi commented that the different scales are used to capture the information, however, the staff presentations in CSC meeting #3 in each community included a pie chart that showed the different categories on the same scale.
    c. Jesse Marquez (Coalition for a Safe Environment) commented that communities need to know what is happening on a micro scale. He provided an example of an instance where he was documenting flaring at Conoco Phillips and noticed that wind directions changed between the morning and afternoon. He commented that in the case of a release it is important to have microscale data because minutes become important.
        i. Sang–Mi responded that, generally, with regard to wind direction, the daytime air flow is from the ocean toward the inland, but the wind direction switches in the evening. She further elaborated that the wind patterns are captured by the monitors, but that when it comes to modelling it is an average of conditions in that area. The weather modelling tool that is being used does predict patterns on the hourly scale and at different heights and locations.
        ii. Jason Low (South Coast AQMD) further elaborated on the issue of time scale. He responded that modeling take average measurements, which are good for

estimating long-term exposures. However for short-term exposures, hourly measurements and real-time information is important. South Coast AQMD is considering real-time monitoring as part of the Community Air Monitoring Plan.

iii. Andrea Polidori (South Coast AQMD) further elaborated that when measuring at a source like a refinery or any other high altitude source, South Coast AQMD uses vertical wind profile instruments that measure how wind changes with altitude.

d. Rafael Yanez (East Los Angeles resident) asked where on-road source information is obtained. He suggested partnering with insurance companies to gather mileage travel data.

i. Sang–Mi commented that working with insurance companies to gather information is a good suggestion but obtaining such information may be challenging especially due to privacy issues. However vehicle activity data, including number, type, miles travelled and where activity occurs is obtained from the Southern California Association of Governments (SCAG). SCAG is the metropolitan authority that provides a regional transportation plan. Emission factor data is obtained from EMFAC mobile source emissions model developed by the California Air Resources Board (CARB).

ii. Jason Low (South Coast AQMD) commented that South Coast AQMD and others are trying to get such info from third party vendors as well as the Transportation Authority. He remarked that knowing the types of cars is important, but that information may not be available in a timely manner.

iii. Rafael Yanez (East Los Angeles resident) followed up stating that there are problems with using older data and that current data is necessary. He suggested tools like Sig Alert to gather information.

1. Sang-Mi responded that the South Coast AQMD does use traffic sensor data from PeMS, CalTrans that reflects the hour to hour traffic variation.

e. Ryan Sinclair (Loma Linda University) commented that on the diesel map for on-road sources, the concern is from semi-trucks on the freeway. However, for San Bernardino and Muscoy the concern is idling trucks. He asked how PM2.5 is released when trucks are idling versus driving at high speed.

i. Sang-Mi responded that there are two mechanisms of PM 2.5 release. She remarked that emissions have a speed correction function, and it is represented by a U curve. Idling isn't fully reflected in the mobile source inventory, but to an extent, it is incorporated at the locations of warehouses and truck stops.

4. **Traditional and Advanced Air Monitoring Technologies: Advantages and Limitations** – Payam Pakbin, Program Supervisor

a. Payam discussed the purpose of air monitoring and its impact in overall AB 617 activities. He discussed the pollutants of interest and the main technologies that can be used for community air monitoring. He provided examples of monitoring currently used for various pollutant sources and also discussed the benefits and limitations of the different types of air monitoring tools that can be implemented in AB 617 communities.

5. **Overview of South Coast AQMD Laboratory Capabilities** – Aaron Katzenstein, Laboratory Manager

a. Aaron gave an overview of the staff, instruments, different analytes measured, groups organization, and the different programs of the laboratory.

6. **Questions**
    a. Uduak-Joe Ntuk (City of Los Angeles) remarked that some air emissions are infrequent and sporadic. He asked if the process is looking to increase the frequency of testing.
        i. Jason Low (South Coast AQMD) responded that that the Community Air Monitoring Plan is supposed to be an enhancement of current protocols as well as an opportunity for doing some new approaches to monitoring that focus on the community level. In the example of the work South Coast AQMD did in the City of Paramount, Jason described how the monitoring approach was adjusted when needed. With AB 617 community monitoring, similar adjustments can be made.
        ii. Uduak-Joe Ntuk (City of Los Angeles) followed up asking how funding is going to be allocated for these projects.
            1. Jo Kay responded that South Coast AQMD will have to put together an air monitoring plan and an emission reduction plan. She commented that they have different requirements in statute but South Coast AQMD is trying to integrate the two. The emission reduction plan must be approved by the Board prior to by September 27th, 2019 and later needs to be approved by CARB. She further remarked that South Coast AQMD has funding that has been allocated for this year for equipment and for staffing costs to run the program. South Coast AQMD received $20 million for all 3 communities plus future work to designate the communities for the future years.
    b. Rafael Yanez (Resident of East Los Angeles) asked for clarification on the distinction between black carbon, PM2.5 and PM10. He also wanted information on what equipment has been chosen for approval by the Board. He further commented that PM2.5 emissions are a main pollutant and remarked that equipment like street sweepers can be utilized. He wanted to know what the South Coast AQMD has done to communicate these emission levels to cities and agencies that do offer street sweeping and county maintenance. He is hoping we are moving toward community action and clean up.
        i. Sang-Mi commented that a similar question came from Wendy Gutschow via email. Sang-Mi responded that PM2.5 has many components. Black carbon is a component of PM2.5 as well as diesel PM. PM2.5 from vehicles comes from vehicle exhaust and the wear and tear of brakes. The resuspension of PM is different than diesel PM from exhaust. Cleaner vehicles would help reduce diesel PM emissions. Sang-Mi further remarked that black carbon (BC) or elemental carbon (EC) is used as a surrogate to measure diesel particulate. EC has been widely used as a surrogate for diesel PM but as trucks have cleaned up to comply with emission standards the diesel PM emissions have been reduced significantly. Therefore, other methods and additional diesel exhaust tracers may be needed in the future studies.

ii. Jason Low (South Coast AQMD) commented that South Coast AQMD looked at the air quality priorities identified by the three communities and is now thinking about the most important technologies that we can use for the community monitoring. This may include some equipment that South Coast AQMD already owns and new equipment that can be obtained. He further commented that South Coast AQMD has the capability to shift and add things.

c. Jesse Marquez (Coalition for a Safe Environment) requested an accurate emissions inventory for his community, including brake dust, PM10, etc. He also expressed dissatisfaction with the refinery fenceline monitoring plans. He asked if South Coast AQMD has an FTIR that can do one minute or less analysis, QA and reporting.
    i. Jason Low (South Coast AQMD) responded that we are incorporating data sets from different sources and that Payam discussed areas of improvement. Part of the community air monitoring plan is to improve certain aspects of the emission inventory. As for the FTIR, South Coast AQMD's equipment cannot do one minute or less QA and reporting with acceptable accuracy. He remarked that fenceline portion of the refinery plans are currently under review.
    ii. Andrea Polidori (South Coast AQMD) remarked that the fence line monitoring in Rule 1180 can only measure ambient concentrations, rather than total emissions. He further remarked that South Coast AQMD started conducting mobile monitoring surveys capable of measuring emissions, at refineries in 2015, and, after the initial stage, at least three refineries were surveyed quarterly to understand the temporal variability of emissions at refineries. This allows for column densities to be measured.
    iii. Sang-Mi remarked that South Coast AQMD is using the best available technology to ensure the most accurate information. Any input from this advisory group is important, and South Coast AQMD would like specific feedback. She further described how short-term emergency response systems are different from systems or methods used to quantify long-term exposures.
    iv. Andrea Polidori (South Coast AQMD) remarked that South Coast AQMD is working with the Jet Propulsion Lab to look into new equipment to measure benzene levels at a desired detection limit and time resolution.
    v. Jesse Marquez (Coalition for a Safe Environment) requested trend analysis of benzene in his community.
        1. Andrea Polidori (South Coast AQMD) commented that South Coast AQMD is finalizing a report that South Coast AQMD will be shared with the community.

d. Janet Whittick (California Council for Environmental and Economic Balance (CCEEB)) expressed her appreciation for the presentations on monitoring, modelling, and emissions inventory. She would like this information presented at the state level. Janet asked what the communities need and how can she can help in communicating robust data to the CSC.
    i. Sang-Mi responded that the South Coast AQMD does its best to try to make the data transparent. The purpose of the TAG is to communicate this information to the CSC.

ii. Jo Kay further commented that this is a forum to delve into the technical details, which is different from the meetings in the general community. One aspect of this work is to understand how the technical data will support the community plan. Jo Kay commented that a source attribution analysis needs to be conducted simultaneously with the development of the community plans. However, since the AB 617 program relies heavily on community input, the emission inventory data will be utilized but community member input also helps drive the plan elements. AB 617 has very aggressive deadlines and so some of the decisions we make will be based on best available data. Jo Kay commented that there will be opportunities to make adjustments.

e. Rafael Yanez (East Los Angeles resident) requested the equipment list. He said the goal of the CSC is to come together and get a community plan to protect the public. He commented that the chemicals don't disappear, but are deposited on the ground and into storm drains. Rafael wanted to know what the agency is doing to make the community aware of the problem and provide suggestions to mitigate the pollution that gets deposited on the streets.
    i. Sang–Mi responded that tons of chemicals are released into the air but many chemicals have a limited lifetime. They can get dispersed, transformed to different chemicals and deposited into surfaces. Most of the gaseous species dissipate away. South Coast AQMD's jurisdiction is air and they don't have direct jurisdiction on water or soil.
    ii. Rafael Yanez (East Los Angeles resident) followed up saying that there is an interagency forum where this information can get passed in and that the agency in charge of water should be made aware of the issues.
        1. Jason Low (South Coast AQMD) responded that South Coast AQMD has partnered with different agencies and that South Coast AQMD will the take the opportunity to communicate with them.

7. Public Comment

a. Tim DeMoss (Port of Los Angeles) remarked that he is concerned that the monitoring equipment does not have to be EPA approved.
    i. Payam responded that some of the monitoring tools that are much better and accurate are under review of EPA but haven't been approved yet. Some equipment that is not EPA approved can, in fact, provide accurate real-time data.
    ii. Jason Low (South Coast AQMD) remarked that for compliance level action South Coast AQMD uses EPA approved equipment or technology that is consistent with EPA performance guidelines, but under AB 617, we can use advanced technologies to capture information and assess and then deploy compliance action tools.
    iii. Tim DeMoss (Port of Los Angeles) remarked that his concern was with the small hand-held devices.

b. David Pettit (NRDC) asked if the monitoring conducted under AB 617 will take into consideration mobile source hot spots at intersections, especially those coming from the Ports.

i. Sang-Mi responded that traffic sensor data will provide the first level of real time data for the basin. Optical devices can be used to monitor and track activity type and vehicle age in the hot spot areas.
ii. Andrea Polidori (South Coast AQMD) remarked that we will use mobile monitoring vehicles that are equipped to measure black carbon, VOCs, NO2, CO, and PM2.5.
iii. Jo Kay responded that resources can be focused on specific intersections. South Coast AQMD can do a truck idling sweep and use data to find the frequent flyer trucks to help target incentives. To address warehouse-related mobile source emissions, South Coast AQMD is working on the Indirect Source Rule. Mobile source emissions at the Ports are being addressed through Memoranda of Understanding (MOU) that are being drafted.

c. Andrea Vidaurre (CCAEJ) commented that data needs to support community emission reduction plans and community group advocacy. She remarked that the community knows the sources but they need the data to support their efforts.
i. Jo Kay cited an example of how monitoring data has led to emission reductions. South Coast AQMD's fugitive dust monitoring helped identify problematic cement batch facilities. This monitoring helped to identify facilities that we then worked with to make measureable emission reductions.

d. Jesse Marquez (Coalition for a Safe Environment) commented that no environmental justice (EJ) group has found the AQMP plans acceptable in the last 15 years. He suggested that every EJ community be included in all future MATES studies.
i. Sang-Mi suggested signing up for the general newsletter and AB 617 newsletter. She remarked that the data from South Coast AQMD studies is public.

e. Sang-Mi concluded the meeting and reminded the group that the next meeting will be in 2-3 months.

f. Several members of the TAG and public members participated in a tour of the South Coast AQMD laboratory.