



South Coast Air Quality Management District

South Coast
AQMD

21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

TECHNOLOGY COMMITTEE MEETING

Committee Members

Vice Mayor Rex Richardson, Chair
Supervisor Andrew Do
Board Member Gideon Kracov
Mayor Larry McCallon
Board Member Veronica Padilla-Campos
Mayor Carlos Rodriguez

August 19, 2022 ♦ 12:00 p.m.

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- *6 - Toggle mute/unmute
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Cleaning the air we breathe...

AGENDA

Members of the public may address this body concerning any agenda item before or during consideration of that item (Gov't. Code Section 54954.3(a)). If you wish to speak, raise your hand on Zoom or press Star 9 if participating by telephone. All agendas for regular meetings are posted at South Coast AQMD Headquarters, 21865 Copley Drive, Diamond Bar, California, at least 72 hours in advance of the regular meeting. Speakers may be limited to three (3) minutes total for all items on the agenda.

CALL TO ORDER

ROLL CALL

ACTION ITEMS (1-3):

- 1. Recognize Revenue, Transfer Funds and Execute Contract with San Bernardino County, Acting on Behalf of Arrowhead Regional Medical Center for Deployment of Zero Emission Mobile Clinics** David Chen
Air Quality
Specialist
(Motion Requested)

Arrowhead Regional Medical Center (ARMC) operates two mobile pediatric asthma clinics referred to as Breathmobiles. In June 2022, U.S EPA awarded \$500,000 to the South Coast AQMD under the Clean Air Technology Initiative to help replace an existing older gasoline powered Breathmobile with a new zero emission platform. San Bernardino County is supporting the development of a new third mobile clinic and has requested additional support in making this a zero emission clinical platform also. These actions are to: 1) recognize revenue up to \$500,000 from U.S. EPA into the Advanced Technology, Outreach and Education Fund (17); 2) transfer \$500,000 from the Clean Fuels Program Fund (31) as cost-share into the Advanced Technology, Outreach, and Education Fund (17); and 3) execute a contract with San Bernardino County acting on behalf of ARMC for the purchase of two zero emission mobile clinics in an amount not to exceed \$1,000,000 from the Advanced Technology, Outreach, and Education Fund (17).

- 2. Amend Contract for Joint Electric Truck Scaling Initiative Pilot Project** Patricia Kwon
Program Supervisor
(Motion Requested)

In June 2021, the Board approved the execution of several contracts for the CARB and CEC awarded Joint Electric Truck Scaling Initiative (JETSU) Pilot Project, including a contract with Gladstein, Neandross and Associates to develop the ZEV workplan. The JETSU Pilot Project will deploy 100 Daimler and Volvo Class 8 battery electric trucks, charging infrastructure, and distributed energy resource technologies at two fleets in disadvantaged communities. Due to the large number of project partners and strict reporting requirements to submit quarterly progress reports within 10 days of the end of each quarter, CARB has approved the reallocation of \$220,000 in South

Coast AQMD administrative funds for project reporting. This action is to amend an existing contract with Gladstein, Neandross and Associates, adding \$220,000 in CARB grant funds from the GHG Reduction Projects Special Revenue Fund (67) for project reporting.

3. Adopt Resolution Recognizing Funds for FY 2021-22 Community Air Protection Incentives and Reimburse General Fund for Administrative Costs (*Motion Requested*)

Darren Ha
Air Quality
Specialist

In June 2022, the South Coast AQMD executed a grant agreement with CARB to receive FY 2021-22 Community Air Protection Program (CAPP) incentive funds in the amount of \$98,799,787, of which 6.25 percent may be used to fund administrative costs. This action is to: 1) adopt a Resolution recognizing CAPP revenue up to \$98,799,787 from CARB into the Community Air Protection AB 134 Fund (77). Eligible projects include those submitted under the Carl Moyer Program and Proposition 1B–Goods Movement Program, projects consistent with the Community Air Protection Incentives Guidelines, and other projects included in approved AB 617 community emissions reduction programs; and 2) reimburse the General Fund for administrative costs incurred in implementing the CAPP grant.

INFORMATIONAL ITEM:

4. Measuring Emissions from Large Ocean-Going Vessels

Kent Johnson, Ph.D.
University of
California, Riverside

The 2016 AQMP identified the need to achieve significant NO_x reductions to meet the federal 8-hour ozone standards. By 2023 ocean-going vessels (OGVs) are expected to be one of the largest sources of NO_x emissions. The University of California Riverside/College of Engineering-Center for Environmental Research & Technology (UCR/CE-CERT) has extensive experience and have tested over 20 OGVs since 2005. Dr. Kent Johnson, Principle Investigator at the Emissions and Fuels Research Group at UCR/CE-CERT will share findings of emissions measurements from OGVs. Dr. Johnson will also share their future outlook on conducting OGV emissions research using new methods to improve emissions inventories from OGVs and the growing importance of off-cycle emissions from newer OGVs that meet the most stringent International Maritime Organization (IMO) Tier III emissions standards.

5. Other Business

Any member of the Committee, or its staff, on his or her own initiative or in response to questions posed by the public, may ask a question for clarification, may make a brief announcement or report on his or her own activities, provide a reference to staff regarding factual information, request staff to report back at a subsequent meeting concerning any matter, or may take action to direct staff to place a matter of business on a future agenda. (Gov't. Code Section 54954.2)

6. Public Comment Period

At the end of the regular meeting agenda, an opportunity is provided for the public to speak on any subject within the Committee's authority that is not on the agenda. Speakers may be limited to three (3) minutes each.

7. Next Meeting Date

Friday, September 16, 2022 at 12:00 p.m.

ADJOURNMENT

Document Availability

All documents (i) constituting non-exempt public records, (ii) relating to an item on an agenda for a regular meeting, and (iii) having been distributed to at least a majority of the Committee after the agenda is posted, are available by contacting Penny Shaw Cedillo at 909.396.3179, or send the request to pcedillo@aqmd.gov.

Americans with Disabilities Act and Language Accessibility

Disability and language-related accommodations can be requested to allow participation in the Technology Committee meeting. The agenda will be made available, upon request, in appropriate alternative formats to assist persons with a disability (Gov't Code Section 54954.2(a)). In addition, other documents may be requested in alternative formats and languages. Any disability or language-related accommodation must be requested as soon as practicable. Requests will be accommodated unless providing the accommodation would result in a fundamental alteration or undue burden to South Coast AQMD. Please contact Penny Shaw Cedillo at 909.396.3179 from 7:00 a.m. to 5:30 p.m., Tuesday through Friday, or send the request to pcedillo@aqmd.gov.

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Instructions for Participating in a Virtual Meeting as an Attendee

As an attendee, you will have the opportunity to virtually raise your hand and provide public comment.

Before joining the call, please silence your other communication devices such as your cell or desk phone. This will prevent any feedback or interruptions during the meeting.

Please note: During the meeting, all participants will be placed on Mute by the host. You will not be able to mute or unmute your lines manually.

After each agenda item, the Chairman will announce public comment.

Speakers may be limited to a total of 3 minutes for the entirety of the consent calendar plus board calendar, and three minutes or less for each of the other agenda items.

A countdown timer will be displayed on the screen for each public comment.

If interpretation is needed, more time will be allotted.

Once you raise your hand to provide public comment, your name will be added to the speaker list. Your name will be called when it is your turn to comment. The host will then unmute your line.

Directions for Video ZOOM on a DESKTOP/LAPTOP:

- If you would like to make a public comment, please click on the “**Raise Hand**” button on the bottom of the screen.
- This will signal to the host that you would like to provide a public comment and you will be added to the list.

Directions for Video Zoom on a SMARTPHONE:

- If you would like to make a public comment, please click on the “**Raise Hand**” button on the bottom of your screen.
- This will signal to the host that you would like to provide a public comment and you will be added to the list.

Directions for TELEPHONE line only:

- If you would like to make public comment, please **dial *9** on your keypad to signal that you would like to comment.

Technology Committee Agenda #1

BOARD MEETING DATE: September 2, 2022

AGENDA NO.

PROPOSAL: Recognize Revenue, Transfer Funds and Execute Contract with San Bernardino County, Acting on Behalf of Arrowhead Regional Medical Center for Deployment of Zero Emission Mobile Clinics

SYNOPSIS: Arrowhead Regional Medical Center (ARMC) operates two mobile pediatric asthma clinics referred to as Breathmobiles. In June 2022, U.S EPA awarded \$500,000 to the South Coast AQMD under the Clean Air Technology Initiative to help replace an existing older gasoline powered Breathmobile with a new zero emission platform. San Bernardino County is supporting the development of a new third mobile clinic and has requested additional support in making this a zero emission clinical platform also. These actions are to:

- 1) recognize revenue up to \$500,000 from U.S. EPA into the Advanced Technology, Outreach and Education Fund (17);
- 2) transfer \$500,000 from the Clean Fuels Program Fund (31) as cost-share into the Advanced Technology, Outreach, and Education Fund (17); and
- 3) execute a contract with San Bernardino County acting on behalf of ARMC for the purchase of two zero emission mobile clinics in an amount not to exceed \$1,000,000 from the Advanced Technology, Outreach, and Education Fund (17).

COMMITTEE: Technology, August 19, 2022; Recommended for Approval

RECOMMENDED ACTIONS:

1. Recognize revenue up to \$500,000 from U.S. EPA into the Advanced Technology, Outreach and Education Fund (17);
2. Transfer \$500,000 from the Clean Fuels Program Fund (31) as cost-share into the Advanced Technology, Outreach and Education Fund (17); and

3. Execute a contract with San Bernardino County, acting on behalf of Arrowhead Regional Medical Center, for the purchase of two zero emission mobile clinics in an amount not to exceed \$1,000,000 from the Advanced Technology, Outreach and Education Fund (17).

Wayne Natri
Executive Officer

AK: MW:TL:DC

Background

ARMC currently operates two mobile clinics using Class 6 gasoline-powered Recreational Vehicles (RVs). ARMC is a 456-bed university-affiliated teaching hospital operated by San Bernardino County. The RV clinical platforms referred to as Breathmobiles provide pediatric asthma management at no cost to school children residing within low-income communities within San Bernardino County's that experience high asthma-related hospitalizations. The two Breathmobiles routinely travel to 40 different school sites throughout San Bernardino County and during school hours clinical staff meet with school children and children from the surrounding areas. Seventy five percent of the children participating in the program have their asthma symptoms under control by the third follow up visit.

Proposal

The proposed project will allow ARMC to operate two new zero emission mobile clinics. One of the new clinics will replace an existing 2006 model year gasoline powered Breathmobile. The other will be a third mobile clinic that ARMC will use to provide service in the Fifth District of San Bernadino County, which includes the Rialto, Bloomington, Colton, San Bernardino City, Muscoy, and Devore areas. Both zero emission mobile clinics will have at least a 100-mile range and provide the clinics with over 5 hours of electrical power each. Eliminating the need to use a gasoline generator will benefit the sensitive receptors visiting the mobile clinics and reduce noise at the school sites. Both new mobile clinics are expected to be deployed by the end of 2024 and ARMC will upgrade its existing vehicle charging infrastructure to support the clinics. The development of zero emission mobile clinics provides transferable technology for other zero emission mobile clinic applications.

The total cost of the proposed project is \$2.2 million. ARMC will replace the 2006 Breathmobile using the U.S. EPA Clean Air Technology Initiative (CATI) funds of \$500,000 and San Bernardino County will contribute \$500,000 towards the purchase of the additional clinic. Staff is proposing \$250,000 towards each vehicle using funds transferred into the Advanced Technology, Outreach and Education Fund (17) from the Clean Fuels Program Fund (31) for a total amount not to exceed \$500,000. ARMC will

be contributing \$700,000 of in-kind support, covering staffing costs for the two mobile clinics and supporting the charging infrastructure for a total project cost of \$2.2 million.

Proposed Partners	Mobile Clinic #1 (replacement)	Mobile Clinic #2
U.S. EPA (CATI)	\$500,000	\$0
South Coast AQMD	\$250,000	\$250,000
San Bernardino County	\$0	\$500,000
ARMC (in-Kind)	\$350,000	\$350,000
Total Project Cost	\$2,200,000	

Sole Source Justification

Section VIII.B.3 of the Procurement Policy and Procedure identifies four provisions by which sole source awards may be justified when contracts are funded in whole or in part with federal funds. This award is made under provision B.3.c: The awarding federal agency authorizes noncompetition proposals. U.S. EPA deemed the proposed award to ARMC to be a sub-award and does not require a competitive solicitation. This award is also being made under provision B.2.d.(1): Projects involving cost sharing by multiple sponsors. This \$2.2 million project is being cost shared by U.S. EPA, San Bernardino County, South Coast AQMD with in-kind support from ARMC.

Benefits to South Coast AQMD

The existing Breathmobile travels over 5,100 miles/year and uses a gasoline-powered generator at the school sites for 4-5 hours a day. Each year the vehicle and generator consume over 1,000 gallons of gasoline. Furthermore, ARMC, with the assistance of South Coast AQMD and San Bernardino County, will purchase an additional zero emission mobile clinic to expand their clinical fleet in lieu of purchasing a gasoline-powered mobile clinic. Both new proposed clinical vehicles will provide zero emission miles during transit and power the clinics without using a generator. Combined, the two new zero emission mobile clinics will prevent an additional 0.14 tons of NOx, 0.14 tons of hydrocarbons along with 4.8 tons of CO emissions annually.

Resource Impacts

Sufficient funds are available for transfer into the Advanced Technology, Outreach, and Education Fund (17) from the Clean Fuels Program Fund (31), which was established as a special revenue fund resulting from the state-mandated Clean Fuels Program. The Clean Fuels Program, under Health and Safety Code Sections 40448.5 and 40512 and Vehicle Code Section 9250.11, establishes mechanisms to collect revenues from mobile sources to support projects to increase the utilization of clean fuels, including the development of the necessary advanced enabling technologies. Funds collected from motor vehicles are restricted, by statute, to be used for projects and program activities related to mobile sources that support the objectives of the Clean Fuels Program.

Agenda Item #1

Recognize Revenue, Transfer Funds and
Execute Contract with San Bernardino County
on behalf of Arrowhead Regional Medical
Center for the Deployment of Two Zero
Emission Mobile Clinics

David Chen

Background

- Arrowhead Regional Medical Center (ARMC) is a university-affiliated teaching hospital operated by San Bernardino County
- ARMC operates two mobile gasoline-powered clinics or “Breathmobiles” that:
 - Provide diagnostics, physical exams, and pediatric asthma management programs at no cost to school children
 - Visit 40 schools throughout San Bernardino County’s low-income communities
 - 75% of the children have asthma symptoms under control by 3rd visit



Proposal

- Replace the older MY2006 existing vehicle with a zero emission (ZE) battery-electric vehicle and purchase an additional ZE battery-electric vehicle
 - Each of the ZE vehicle will have at least a 100-mile range and over 5 hours of power eliminating the need for a generator
 - New vehicles will reduce 0.14 tons of NO_x, 0.14 tons of hydrocarbons, along with 4.8 tons of CO emissions annually
 - Both new vehicles are expected to be deployed by the end of 2024
- EPA has awarded \$500k towards the replacement of the older vehicle under the Clean Air Technology Initiative Program

Project Funding

Funding Source	Mobile Clinic #1 (Replacement)	Mobile Clinic #2 (New Purchase)
EPA CATI	\$500,000	\$0
South Coast AQMD	\$250,000	\$250,000
ARMC (In-Kind)	\$350,000	\$350,000
San Bernardino County	\$0	\$500,000
Project Total	\$2,200,000	



Recommended Actions

- Recognize revenue up to \$500,000 from U.S. EPA into the Advanced Technology, Outreach and Education Fund (Fund 17)
- Transfer \$500,000 from the Clean Fuel Funds Program (Fund 31) for our cost-share into the Advanced Technology, Outreach and Education Fund (Fund 17)
- Execute a contract with San Bernardino County on behalf of Arrowhead Regional Medical Center to purchase two zero emission mobile clinics in an amount not to exceed \$1,000,000 from Advanced Technology, Outreach and Education (Fund 17)

BOARD MEETING DATE: September 2, 2022

AGENDA NO.

PROPOSAL: Amend Contract for Joint Electric Truck Scaling Initiative Pilot Project

SYNOPSIS: In June 2021, the Board approved the execution of several contracts for the CARB and CEC awarded Joint Electric Truck Scaling Initiative (JETSII) Pilot Project, including a contract with Gladstein, Neandross and Associates to develop the ZEV workplan. The JETSII Pilot Project will deploy 100 Daimler and Volvo Class 8 battery electric trucks, charging infrastructure, and distributed energy resource technologies at two fleets in disadvantaged communities. Due to the large number of project partners and strict reporting requirements to submit quarterly progress reports within 10 days of the end of each quarter, CARB has approved the reallocation of \$220,000 in South Coast AQMD administrative funds for project reporting. This action is to amend an existing contract with Gladstein, Neandross and Associates, adding \$220,000 in CARB grant funds from the GHG Reduction Projects Special Revenue Fund (67) for project reporting.

COMMITTEE: Technology, August 19, 2022; Recommended for Approval

RECOMMENDED ACTION:

Authorize the Executive Officer to amend a contract with Gladstein, Neandross and Associates for JETSII Pilot Project reporting adding \$220,000 from the GHG Reduction Projects Special Revenue Fund (67).

Wayne Natri
Executive Officer

AK:PSK

Background

In June 2021, the Board approved the execution of several contracts for the CARB and CEC awarded Joint Electric Truck Scaling Initiative (JETSII) Pilot Project, including a contract with Gladstein, Neandross and Associates to develop the ZEV workplan. The

JETSI Pilot Project will deploy 100 Daimler and Volvo Class 8 battery electric trucks, charging infrastructure, and distributed energy resource technologies at two fleets in disadvantaged communities. South Coast AQMD was awarded \$16,019,316 in CARB funds and \$10,964,955 in CEC Funds for the JETSI Pilot Project. South Coast AQMD is leading a regional collaborative with the Mobile Source Air Pollution Reduction Review Committee, Southern California Edison, Port of Los Angeles, and Port of Long Beach. These partners provide a cost share of \$21.4 million in addition to \$25.4 million in cost share from fleet partners. This project will significantly advance the market penetration of Class 8 battery electric trucks through at-scale production of Daimler and Volvo trucks. The project also includes an existing contract with Gladstein, Neandross and Associates (GNA) to develop the ZEV workforce plan.

Proposal

Due to the large number of project partners and strict reporting requirements to submit quarterly progress reports within 10 days of the end of each quarter, CARB has approved the reallocation of \$220,000 in South Coast AQMD administrative funds for project reporting. This action is to amend the existing contract with GNA to add \$220,000 for JETSI Pilot Project reporting, in addition to the ZEV workforce plan, from the GHG Reduction Projects Special Revenue Fund (67).

Benefits to South Coast AQMD

The JETSI Pilot Project supports development and demonstration of various electric container and freight transport technologies and infrastructure, as well as solar and energy storage technologies to enable development and demonstration of microgrids for fleets charging heavy-duty trucks, yard tractors, and forklifts. These technologies are included in the *Technology Advancement Office Clean Fuels Program 2022 Plan Update* under the categories of “Develop and Demonstrate Electric and Hybrid Vehicles,” “Develop and Demonstrate Electric Container Transport Technologies,” “Develop and Demonstrate Electric Charging Infrastructure,” and “Develop and Demonstrate Microgrids with Photovoltaic/Fuel Cell/Battery Storage/EV Chargers and Energy Management.” These projects are to develop and demonstrate zero-emission heavy-duty trucks, freight handling equipment, infrastructure, and solar. Successful demonstrations of such projects will contribute to the attainment of national ambient air quality standards in the Basin by eliminating PM and NOx emissions from replaced diesel heavy-duty trucks and off-road freight handling equipment. The JETSI Pilot Project also includes installation of infrastructure powered by solar and energy storage.

Resource Impacts

This contract amendment will be fully covered by CARB administrative funds for the JETSI Pilot Project in the GHG Reduction Projects Special Revenue Fund (67).

Agenda Item #2

Amend Contract for Joint Electric Truck
Scaling Initiative (JETSI) Pilot Project

Patricia Kwon

Background

- In June 2021, Board approved execution of contracts for JETSI Pilot Project including a Zero Emission Vehicle Workforce Plan
- Project deploys 100 Daimler and Volvo Class 8 battery electric trucks, charging infrastructure, and distributed energy resource technologies at two fleets in disadvantaged communities
- South Coast AQMD awarded \$16M from CARB and \$11M from CEC
- MSRC, SCE, POLA and POLB providing \$21M in funding and fleets providing \$25M in cost share towards the \$74M project
- GNA working on ZEV workforce plan required by CEC



Proposal

- JETSI has large number of project partners and strict requirements to submit progress reports within 10 days after each quarter
- CARB approved reallocation of \$220k in administrative funds to assist with reporting requirements
- Amend contract with Gladstein, Neandross and Associates for ZEV workforce plan to include JETSI project reporting

Recommended Action

Authorize Executive Officer to amend contract with Gladstein, Neandross and Associates for project reporting adding \$220,000 from GHG Reduction Projects Special Revenue Fund (67)

BOARD MEETING DATE: September 2, 2022

AGENDA NO.

PROPOSAL: Adopt Resolution Recognizing Funds for FY 2021-22 Community Air Protection Incentives and Reimburse General Fund for Administrative Costs

SYNOPSIS: In June 2022, the South Coast AQMD executed a grant agreement with CARB to receive FY 2021-22 Community Air Protection Program (CAPP) incentive funds in the amount of \$98,799,787, of which 6.25 percent may be used to fund administrative costs. This action is to: 1) adopt a Resolution recognizing CAPP revenue up to \$98,799,787 from CARB into the Community Air Protection AB 134 Fund (77). Eligible projects include those submitted under the Carl Moyer Program and Proposition 1B–Goods Movement Program, projects consistent with the Community Air Protection Incentives Guidelines, and other projects included in approved AB 617 community emissions reduction programs; and 2) reimburse the General Fund for administrative costs incurred in implementing the CAPP grant.

COMMITTEE: Technology, August 19, 2022; Recommended for Approval

RECOMMENDED ACTIONS:

1. Adopt the attached Resolution recognizing, upon receipt, up to \$98,799,787 of FY 2021-22 CAPP incentive funds from CARB into the Community Air Protection AB 134 Fund (77); and
2. Reimburse the General Fund up to 6.25% of the CAPP grant amount from the Community Air Protection AB 134 Fund (77) for administrative costs incurred for implementing the CAPP grant.

Wayne Nastri
Executive Officer

Background

In June 2021, the Governor approved the Budget Act of 2021 (AB 128) which appropriated \$320 million for financial incentives to reduce mobile and stationary sources of criteria air pollutants or toxic air contaminants, consistent with community emissions reduction programs pursuant to AB 617. In July 2022, South Coast AQMD executed a grant agreement (G21-MCAP-24) with CARB to receive FY 2021-22 (Year 5) Community Air Protection Program (CAPP) incentive funds in the amount of \$98,799,787, which includes 6.25% in administrative funds. CARB requires that air districts provide a Board Resolution, which officially recognizes the South Coast AQMD's receipt of the CAPP funding and that, authorizes the South Coast AQMD to implement incentive programs, including Carl Moyer, Proposition 1B-Goods Movement Program, and projects approved in Community Air Reduction Programs, using CAPP funds.

Per the grant agreement, the revenue will support incentive projects that reduce emissions and improve public health in communities with high burdens of cumulative pollutant exposure consistent with the requirements of AB 617, AB 1550 and SB 535. SB 535 and AB 1550 require at least 70-80% of the funds to go towards emission reduction projects that directly benefit disadvantaged and low-income communities. Projects that may be eligible for this funding include those submitted under the Carl Moyer and Proposition 1B-Goods Movement Programs, projects consistent with Community Air Protection Incentives Guidelines, and other incentive projects and programs in approved Community Emissions Reduction Plans.

Proposal

These actions are to adopt the attached Resolution recognizing up to \$98,799,787 from CARB into the Community Air Protection AB 134 Fund (77) and reimburse the General Fund up to 6.25% of the CAPP grant amount from the Community Air Protection AB 134 Fund (77) for the administrative costs incurred for implementation of the CAPP grant.

Benefits to South Coast AQMD

The implementation of incentive projects funded by the Year 5 CAPP funds will reduce emissions of criteria and toxic air pollutants in communities with high burdens of cumulative pollutant exposure. The CAPP incentive funds will be used for projects that meet or exceed the statewide targets specified by the CAPP incentives grant agreement.

The funds will be used for projects that reduce emissions beyond what is required by existing regulations, and these reductions will continue throughout the life of the projects, resulting in long-term emission reductions and public health benefits.

Resource Impacts

South Coast AQMD will receive up to \$98,799,787 from CARB for FY 2021-22 CAPP (Year 5) CAPP incentive funds, which will be recognized into the Community Air Protection AB 134 Fund (77). Administrative costs will not exceed 6.25%.

Attachment

Resolution

RESOLUTION NO. 22-

A Resolution of the South Coast Air Quality Management District Governing Board Recognizing FY 2021-22 Community Air Protection Incentive Funds

WHEREAS, under Health & Safety Code §40400 et seq., the South Coast Air Quality Management District (South Coast AQMD) is the local agency with the primary responsibility for the development, implementation, monitoring and enforcement of air pollution control strategies, clean fuels programs and motor vehicle use reduction measures; and

WHEREAS, the South Coast AQMD is authorized by Health & Safety Code §§40402, 40440, and 40448.5 as well as the Carl Moyer Memorial Air Quality Standards Attainment Program (§§44275 et seq.) to implement programs to reduce transportation emissions, including programs to encourage the use of alternative fuels, zero and low emission vehicles, to develop and implement other strategies and measures to reduce air contaminants, and achieve the state and federal air quality standards; and

WHEREAS, the Governing Board has adopted several programs to reduce emissions from on-road and off-road vehicles, as well as emissions from other equipment, including infrastructure from the Carl Moyer Program, the Proposition 1B-Goods Movement Program, and projects included in approved Community Emissions Reduction Programs; and

WHEREAS, the Governing Board directs staff to prioritize funding of zero emission vehicles and equipment whenever feasible, including charging/fueling infrastructure for medium- and heavy-duty vehicles, in disadvantaged and low-income communities; and

WHEREAS, the South Coast AQMD is designated as an extreme non-attainment area for ozone and as such is required to utilize all feasible means to meet national ambient air quality standards.

THEREFORE, BE IT RESOLVED that the Governing Board of the South Coast AQMD, State of California, in regular session assembled on September 2, 2022, does hereby authorize the Executive Officer to accept the terms and conditions of the FY 2021-22 (Year 5) Community Air Protection Program (CAPP) grant award and hereby recognizes up to \$98,799,787 from CARB to administer and implement the Year 5 CAPP.

BE IT FURTHER RESOLVED that the Executive Officer is authorized and directed to take all steps necessary to carry out this Resolution.

Date

Faye Thomas, Clerk of the Board

Agenda Item #3

Adopt Resolution Recognizing Funds
for FY 2021-22 Community Air
Protection Program Incentives and Reimburse
General Fund for Administrative Costs

Darren Ha

Background

- The Governor appropriated \$320 million under the Budget Act of 2021 (AB 128) to AB 617 – FY 2021-22 (Year 5) Community Air Protection Program incentive funds
- CARB awarded South Coast AQMD \$98,799,787 in FY 2021-22 (which includes 6.25% for administrative costs)
- In June 2022, a Grant Agreement with CARB was executed
- Eligible projects for funding will include those submitted under Carl Moyer, Proposition 1B, projects consistent with Community Air Protection Incentives Guidelines, and other projects included in an approved community emission reduction program

Recommended Actions

- Adopt Resolution recognizing up to \$98,799,787 in FY 2021-22 CAPP incentive funds from CARB into the Community Air Protection Program AB 134 Fund (77)
- Reimburse the General Fund up to 6.25% of the CAPP grant amount from the Community Air Protection AB 134 Fund (77) for administrative costs incurred for implementing the CAPP grant

Agenda Item #4

Measuring Emissions From Large Ocean Going Vessels

South Coast AQMD Technology Committee

August 19, 2022

Dr. Kent Johnson

kjohnson@cert.ucr.edu

**Co-Authors Thomas Durbin, Georgios Karavalakis, Wayne Miller, and
Tianbo Tang (Grad Student)**

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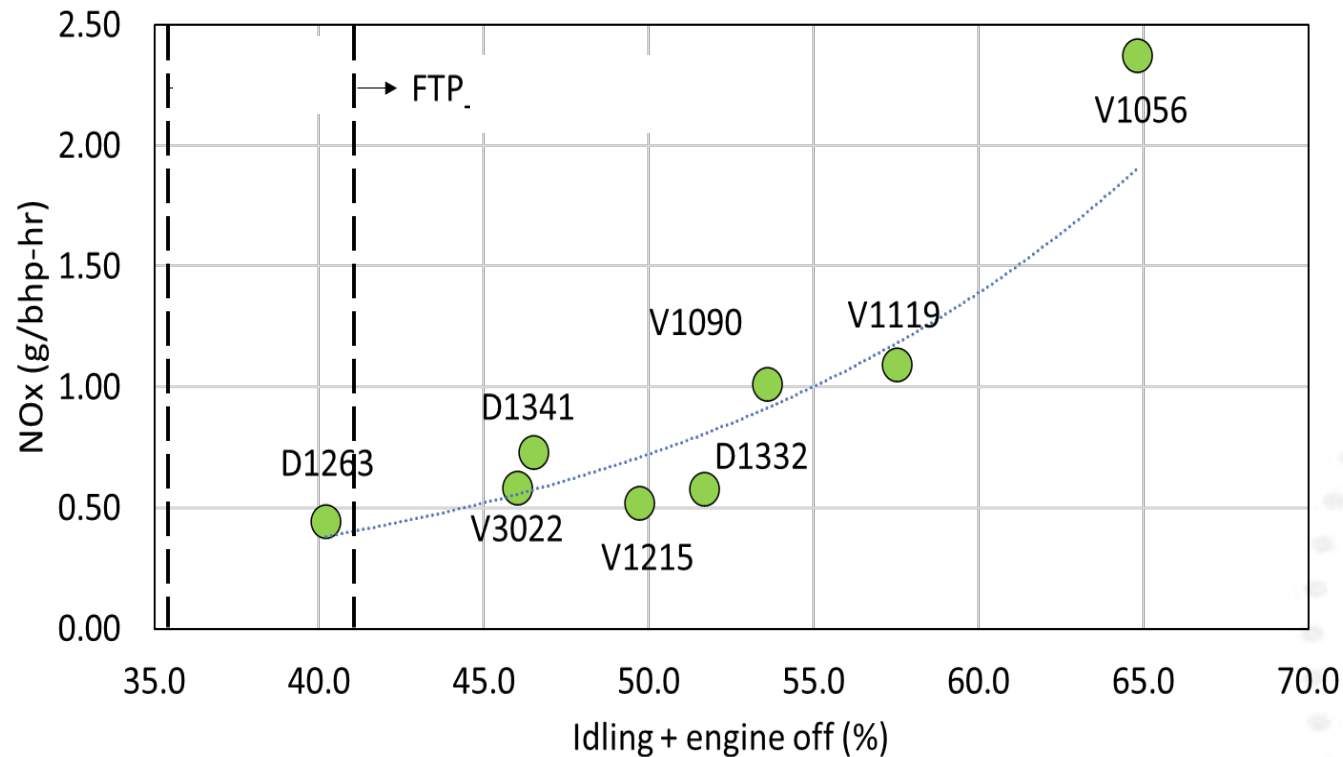
University of California, Riverside

**Center for Environmental Research and Technology
(CE-CERT)**

Background: Why Tier 3 Ocean Going Vessels (OGVs) are Important to Study

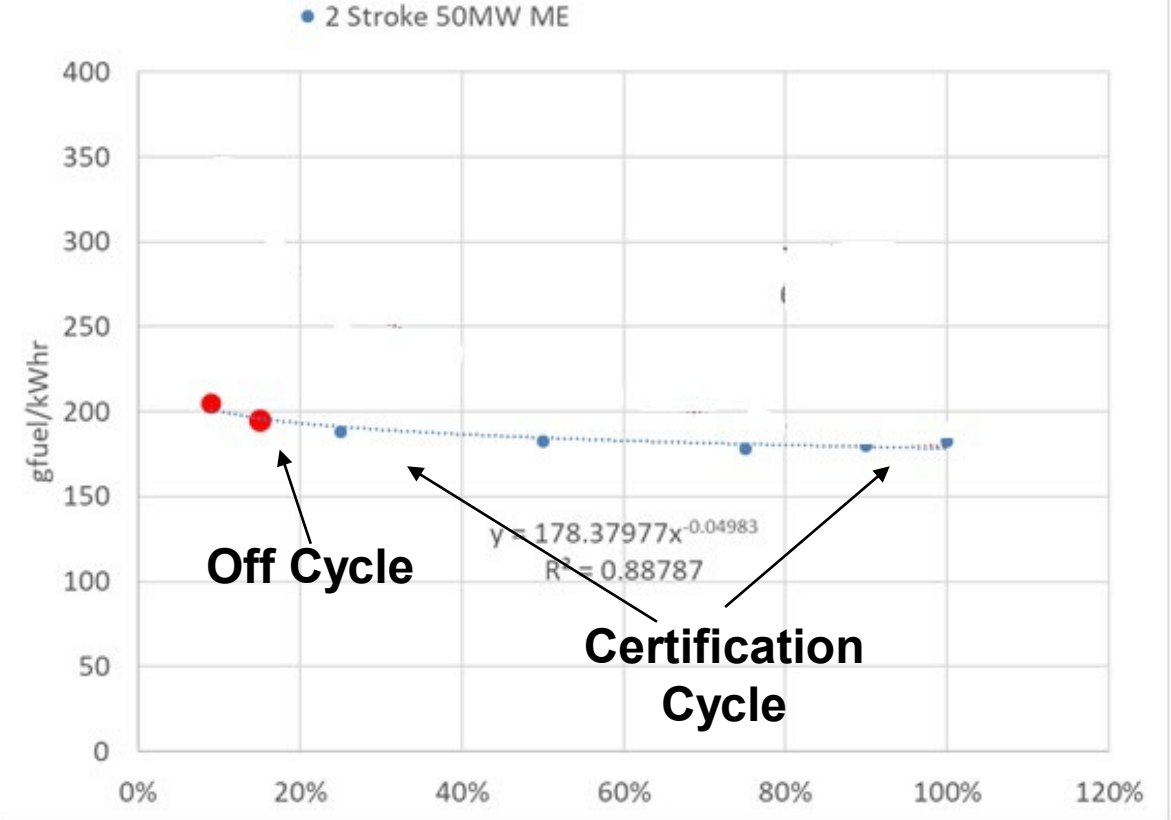


Diesel Engines are Designed for Cycles not In-Use Conditions Differences are Called “Off-Cycle” Emissions



- Diesel engines need to be designed for their operation
- Selective Catalytic Reduction results in higher off-cycle emissions for 2013+ on highway diesel engines.
- Tier 3 engines in OGVs introduced Selective Catalytic Reduction technology into Marine engines

UCR Has Tested on Over 20 OGVs Since we Started in 2005



OGV Operate around 8% - 12% load during port transits where these off-cycle emissions may be very high

Other Control Technologies, Like Scrubbers, Claim Large PM Reductions. In-use Testing Suggest a Different Story



- ❑ Scrubbers claim 60% reduction in PM emissions
- ❑ UCR's on-board measurements demonstrated 0 % reductions (in some cases an increase in PM)

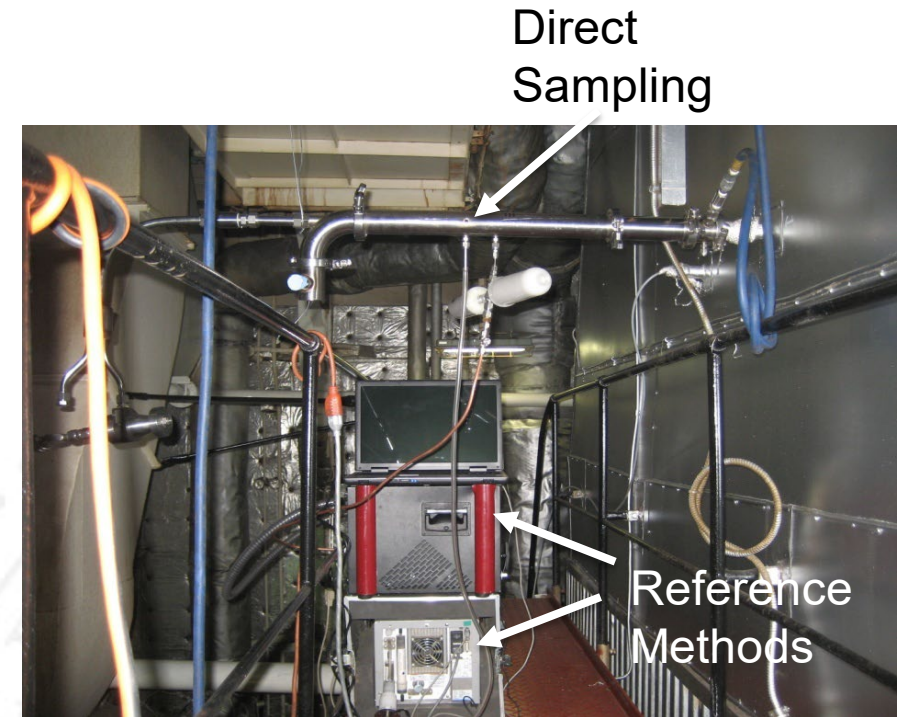
How Do We Measure OGV Emissions and What Data Do These Measurements Provide



On-Board Measurements – Highest Quality for In-Use Operation



Equipment needs to be loaded onto the vessel



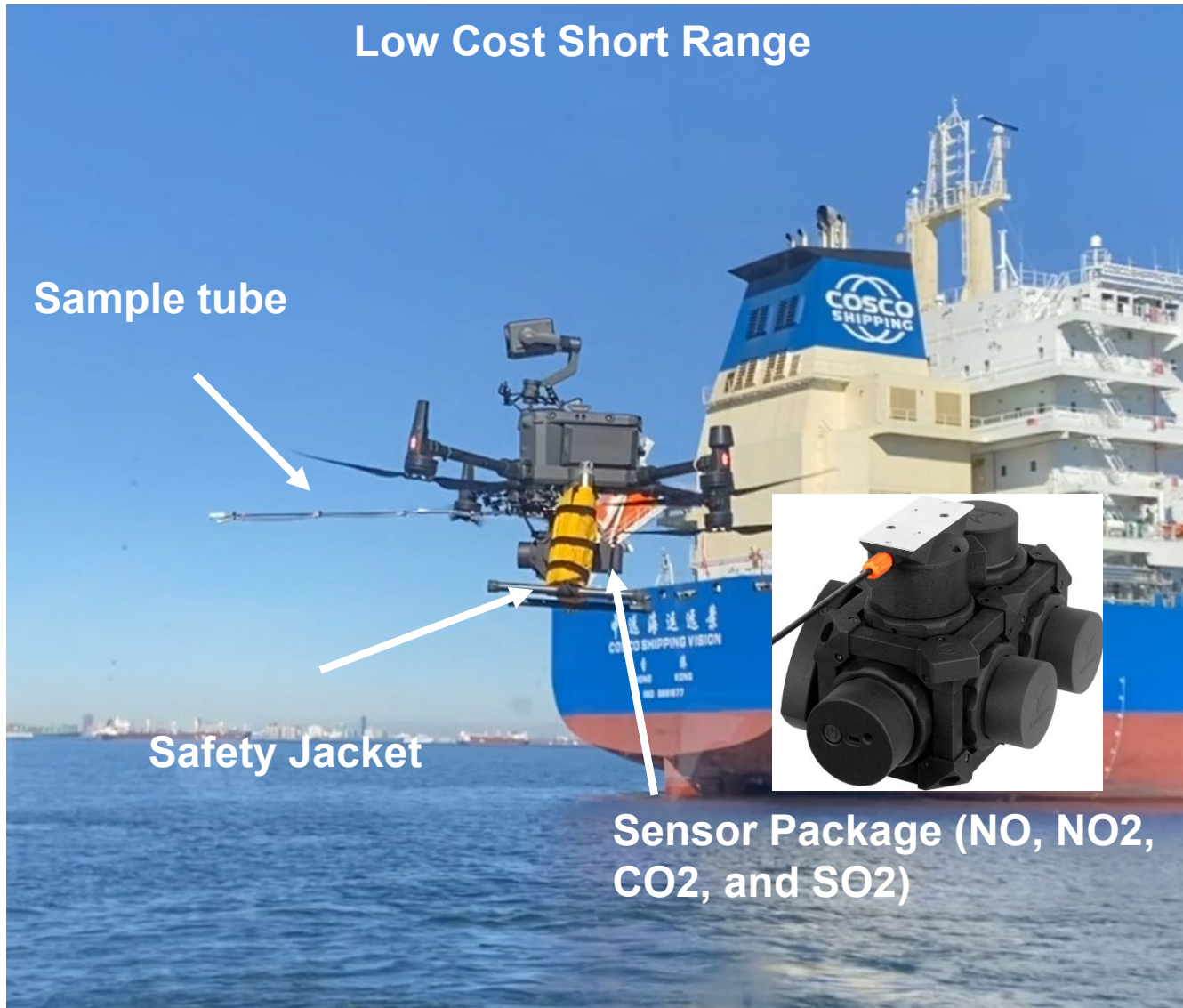
Direct Sampling

Reference Methods

- Measurement of CO, CO₂, NO, NO₂, (NO_x), SO₂, HC, and PM
- Utilizes federal reference methods. Highest quality and legally defensible

Drone Testing can be Low or High Cost

Low Cost Short Range



High Cost Long Range

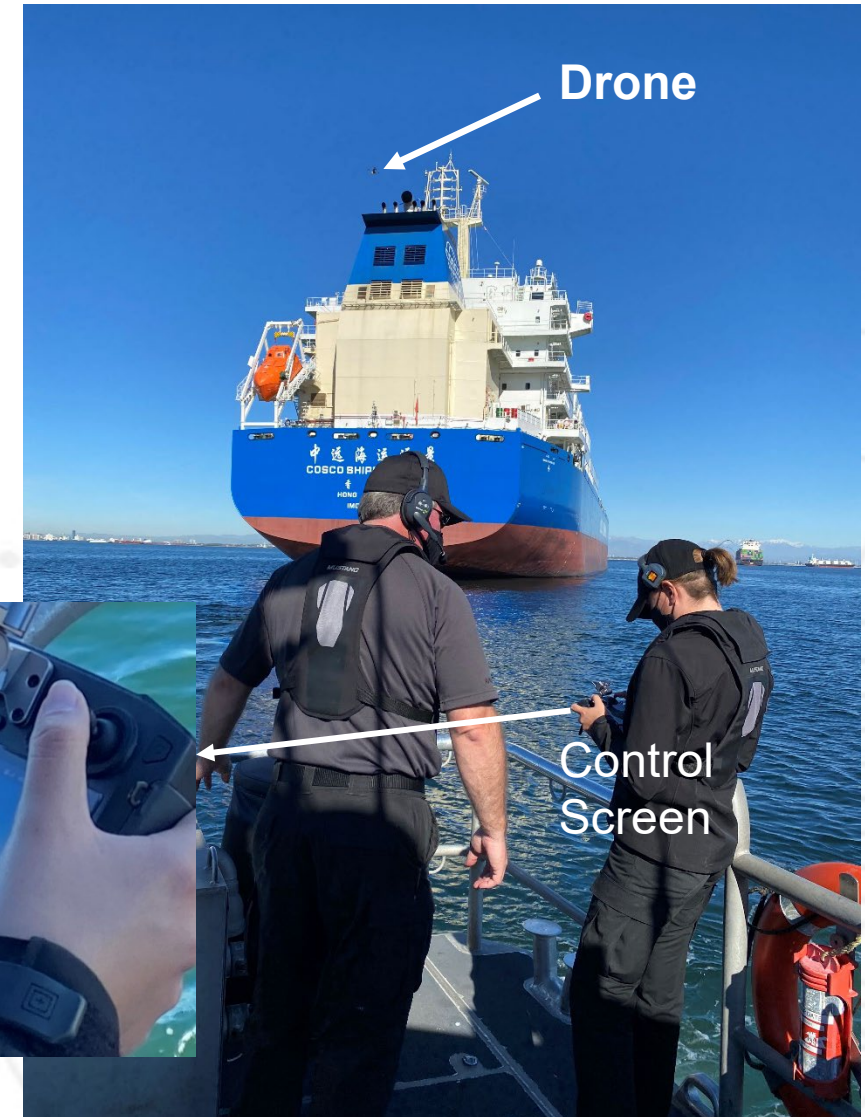


<https://www.theexplorer.no/solutions/using-drones-to-monitor-sulphur-emissions-from-ships/>

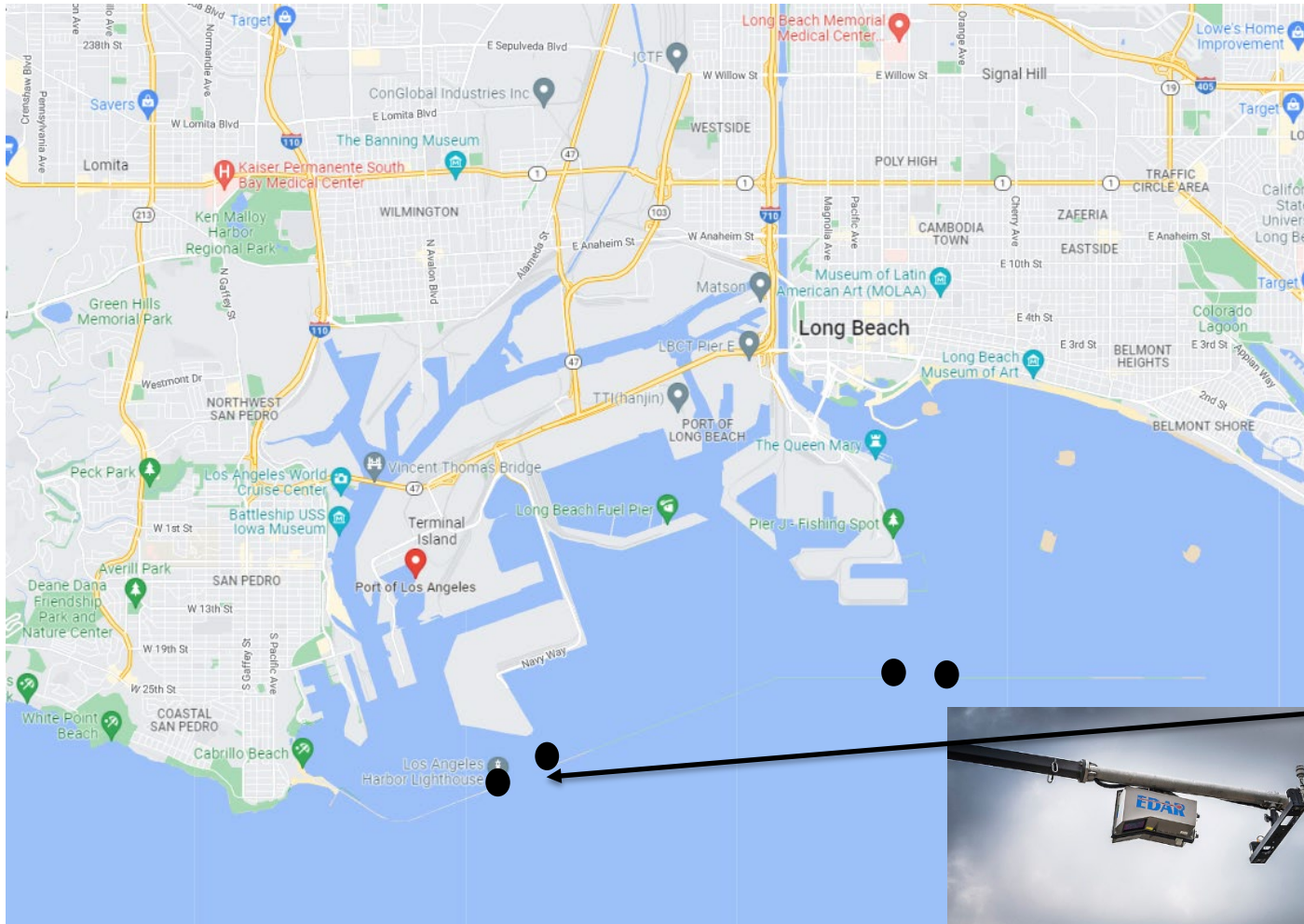
- **Low cost**, range of 30-40 minutes (<1 mi) and requires pilot operation
- **High cost**, range of 100km and can be automated and pilot operated
- Reference methods not used, and results are not legally defensible (in the US)
- However, good agreement has been observed between the reference methods and drone screen testing (except for PM)

Drone Measurements in the US Require Pilot and Assistant Plus other Restrictions

- Sight assistant is required based on current UAV permits and policies



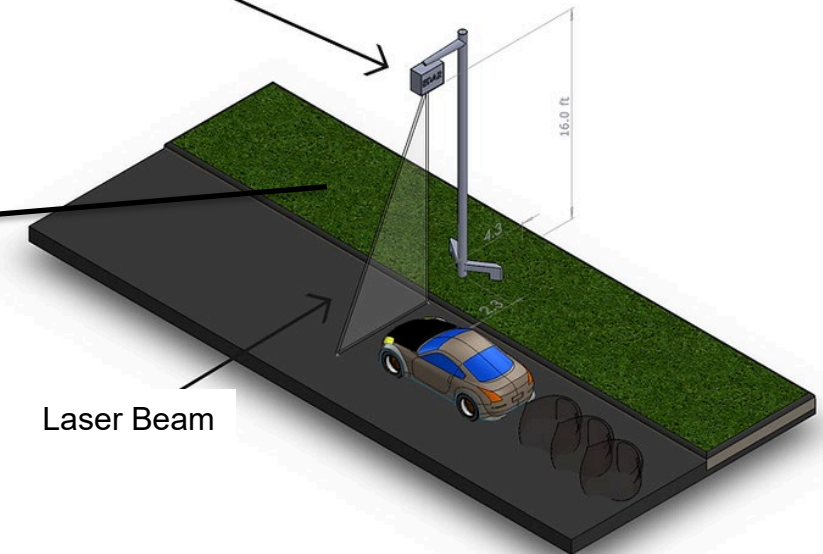
Remote Sensing Devices



- Captures CO, CO2, NO, NO2, (NOx), HC, and PM
- Would capture all OGVs entering and exiting port
- Limited to a single value, but broad impact



Measurement System



Laser Beam

Questions

