

BOARD MEETING DATE: February 5, 2021

AGENDA NO. 5

**PROPOSAL:** Recognize Revenue, Appropriate Funds, Execute Purchase Orders and Contracts to Design and Develop a Mobile Air Toxics Measurement Platform

**SYNOPSIS:** South Coast AQMD applied for U.S. EPA “Community-Scale Air Toxics Ambient Monitoring” funds for FY 2020-21 through FY 2022-24 and was awarded \$749,624 to design and develop a platform for highly time-resolved mobile measurements of air toxics. This platform is being developed to identify major sources of particulate metals, ethylene oxide and other air toxics emissions and pollution hotspots. These actions are to recognize up to \$749,624 in revenue into the General Fund and appropriate up to \$674,240 to the Science & Technology Advancement’s or Planning, Rule Development & Area Sources’ Budget, and to execute purchase orders and contracts for equipment and services for the Community-Scale Air Toxics Ambient Monitoring program.

**COMMITTEE:** Administrative, January 15, 2021; Recommended for Approval

**RECOMMENDED ACTIONS:**

1. Recognize up to \$749,624 in revenue into the General Fund, upon receipt, and as set forth in Table 1, appropriate up to \$674,240, into Science & Technology Advancement’s (43) or Planning, Rule Development & Area Sources’ (26) FY 2020-21, FY 2021-22, and/or FY 2022-23 Budget, Services and Supplies/Capital Outlays Major Objects, as needed (exclude \$75,384 in Salaries and Benefits already included in the adopted budget);
2. Authorize the Procurement Manager, in accordance with South Coast AQMD Procurement Policy and Procedure, to issue purchase orders or a solicitation(s), as needed, followed by a purchase order for the equipment listed in Table 1, as follows:
  - a. Up to three (3) Field X-ray Fluorescence Instrument Packages (model Xact® 625i) from SailBri Cooper Incorporated in an amount not to exceed \$379,746; and
  - b. One Data Server in an amount not to exceed \$100,000.
3. Authorize the Executive Officer to execute the following, as listed in Table 1:

- a. A contract with Aerodyne Research, Inc. in an amount up to \$70,000 to demonstrate the capabilities of a recently developed ethylene oxide monitor for mobile monitoring applications; and
- b. Contracts or purchase orders, as deemed appropriate, in an amount up to \$50,000 for storage services with vendor(s) selected from the South Coast AQMD's List of Prequalified Vendors to provide cloud data storage.

Wayne Nastri  
Executive Officer

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### **Background**

On February 13, 2020, the U.S. EPA released Request for Applications (RFA) #EPA-OAR-OAQPS-20-05 to announce the availability of funds for "Community-Scale Air Toxics Ambient Monitoring" projects. The RFA solicited proposals for projects designed to assist state, local, and tribal agencies in assessing the degree and extent to which air toxics impact their respective communities. To be considered for funding under this RFA, each project had to address only one of the following four categories: 1) characterizing the impact of air toxics in a community (community-scale monitoring); 2) assessing impacts of toxics emissions from specific sources (near-source monitoring); 3) evaluating new and emerging testing methods for air toxics; and 4) analyzing existing air toxics data and developing or enhancing analytical, modeling, or implementation tools.

South Coast AQMD staff submitted a grant proposal to U.S. EPA under the third category (evaluating new and emerging testing methods for air toxics) requesting funding in the amount of \$749,624 to develop a mobile platform for monitoring particulate metals and ethylene oxide in near-real time.

On September 28, 2020, U.S. EPA informed staff that the South Coast AQMD's proposal was selected for award based on its score, rank and technical merit. On November 17, 2020 staff received a Notification of Grant Award from U.S. EPA stating that partial federal funding in the amount of \$374,812 became available. Upon further communication with U.S. EPA's Grant Officer, staff was informed that the second half of these funds will be released in early 2021.

### **Proposal**

Staff is seeking Board approval to recognize revenue and appropriate funds, execute contracts, and procure related services and supplies as listed in Table 1 to conduct a

comprehensive study based upon the proposal to the U.S. EPA Community-Scale Air Toxics Ambient Monitoring Grant focused on the following specific objectives:

- 1) Design and develop a novel mobile platform for time-resolved mobile measurements of multi-metals using a state-of-the-art XRF-based instrument;
- 2) Deploy the proposed mobile platform for near-source and hyperlocal community-scale monitoring of air toxic metals;
- 3) Evaluate a recently developed ethylene oxide monitor for mobile monitoring application; and
- 4) Conduct advanced analysis and statistical modeling on the collected data to identify major sources of air toxics and evaluate their impact on selected communities.

This three-year project will, for the first time, utilize mobile monitoring to measure the spatial gradient of particulate metals, ethylene oxide, and other air contaminants in AB 617 communities that are impacted by these pollutants. This project will build on the community partnership already in place through the AB 617 program. South Coast AQMD staff have already collected input on the major air quality concerns in AB 617 communities, and the monitoring tools and activities proposed in this project will directly address some of these concerns. The measurement data will be interpreted using atmospheric chemical and physical principles in a hybrid approach of regional and neighborhood scale modeling.

### **Solicitation**

#### *Data Server*

A data server is required to support advanced analysis and community-scale modeling on the collected data to identify major sources of air toxics, and evaluate their impact on impacted communities. This action is to issue an RFQ (s), to select a vendor capable of providing the most cost-effective hardware and support services for conducting neighborhood-scale data process and, based on the results, execute a subsequent purchase order(s) for the server for an amount of up to \$100,000, as listed in Table 1.

#### *Data Visualization Platform (Cloud Data Storage)*

Cloud data storage is required to merge the information gathered from this project with other relevant air quality information in the data visualization platform that is being developed by District Staff. This action is to execute contracts or purchase orders with vendor(s) selected from the South Coast AQMD's List of Prequalified Vendors to provide cloud data storage in an amount up to \$50,000, as listed in Table 1.

### **Sole Source Justification**

Section VIII.B.3 of the Procurement Policy and Procedure identifies four major provisions under which a sole source award funded, in whole or in part with federal funds, may be justified. Specifically, this request for sole source award is made under the provision B.3.a.: These items are only available from a single source.

The Xact® 625i sold by SailBri Cooper Incorporated is the only field x-ray fluorescence instrument that offers an Automated Data Analysis Plotting Toolset (ADAPT) package to manage and analyze the measurements of over 40 different metals in ambient particles in real-time through a number of relevant graphical tools. The ADAPT package includes the hardware for on-site meteorological measurement and intuitive software which is accessed in the field or remotely through the on-board computer. The software platform generates multiple graphical reports in near real-time over user-selected time periods to deliver insights on the temporal and directional variability trends of the measured metals. This enables ADAPT to provide improved directionality estimation of metal sources impacting the monitoring site. In addition, the Xact® 625i is the only multi-metal monitor with demonstrated ability to provide near-real time measurements of air toxic metals on a mobile platform.

Aerodyne Research, Inc. developed the ethylene oxide instrument with suitably low detection limits that will be used for mobile measurements over the duration of this “Community-Scale Air Toxics Ambient Monitoring” study. There is no other known company manufacturing ethylene oxide monitors that can demonstrate their performance on a mobile platform and conduct a service agreement for this equipment.

### **Benefits to South Coast AQMD**

This work will provide unprecedented monitoring information on particulate metals, ethylene oxide and other air toxics emissions, identify locations of pollution hotspots from a wide variety of facilities and industrial sources, and allow mapping of ambient levels of these pollutants in surrounding neighborhoods. This work will also assist in identifying and addressing specific concerns related to air toxic exposure in AB 617 and other environmental justice communities. Additionally, it will serve as a template for developing monitoring strategies and/or studies to provide information on mitigation efforts and their future implementation.

### **Resource Impacts**

The \$749,624 in U.S. EPA funding will support the design and development of a novel platform for highly time-resolved mobile measurements of air toxics. This new monitoring platform will also partially support the AB 617 and other community monitoring projects.

### **Attachments**

Table 1 – Proposed Appropriations for FYs 2020-21, 2021-22, and/or 2022-23

**Table 1**  
**Proposed Appropriations for FYs 2020-21, 2021-22, and/or 2022-23**

<b>Account Description</b>	<b>Account Number</b>	<b>Org Unit</b>	<b>Initial Appropriation Amount*</b>	<b>Total Estimated Expenditures</b>
<b>Services and Supplies/Capital Outlay Major Objects</b>				
Cooper Xact Monitors 625i (up to 3 units)	77000	STA	\$253,164 (2 units)	\$379,746 (Sole Source)
Data Server	77000	PRDAS	\$0	\$100,000 (RFQ)
Laboratory Supplies	68050	STA	\$10,000	\$10,000
Consumables, Tools, Hardware, and other Supplies	68300	STA	\$35,000	\$35,000
Travel	67800	STA	\$0	\$5,440
Siting and Site Operation	67450	STA	\$24,054	\$24,054
<b>Total Services and Supplies/Capital Outlay Major Objects</b>			<b>\$322,218</b>	<b>\$554,240</b>
<b>Contractual</b>				
Service Agreement with Aerodyne Research, Inc.	67450	STA	\$0	\$70,000 (Sole Source)
Data Visualization Platform (Cloud Data Storage)	67450	STA	\$50,000	\$50,000 (Solicitation to Prequalified Vendors)
<b>Total Contractual</b>			<b>\$50,000</b>	<b>\$120,000</b>
<b>Total Appropriation</b>			<b>\$372,218</b>	<b>\$674,240</b>
<b>Salaries and Benefits Major Object</b>			\$0	<b>\$75,384</b>
<b>Total Award</b>				<b>\$749,624</b>

\*Initial appropriations will only utilize \$372,218 of the \$374,812 that have been made available by the U.S. EPA on November 17, 2020. Additional purchases will be finalized when the second half of these funds will be released in early 2021.