BOARD MEETING DATE: September 1, 2023 AGENDA NO. 9

PROPOSAL: Appropriate Funds, Issue Solicitations and Purchase Orders for Air Monitoring and Laboratory Equipment

SYNOPSIS: South Coast AQMD FY 2023-24 Annual Budget approved the purchase of air monitoring and laboratory equipment. This action is to appropriate additional funds, issue solicitations and purchase orders for air monitoring and laboratory equipment for supporting AB 617 community air monitoring and ethylene oxide measurement efforts.

COMMITTEE: Administrative, August 11, 2023; Recommended for Approval

RECOMMENDED ACTIONS:

1. Appropriate up to $350,000 from the Undesignated (Unassigned) Fund Balance to the General Fund, FY 2023-24 Monitoring and Analysis Budget, Capital Outlays Major Object; and
2. Authorize the Procurement Manager, in accordance with South Coast AQMD's Procurement Policy and Procedure, to issue "Prior Bid, Last Price" purchase orders, sole-source purchase orders, or solicitation(s) as needed, and based on the results, issue purchase orders for the equipment listed in Table 1.

Wayne Nastri
Executive Officer

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Background

In May 2023, the Board approved the Executive Officer's Proposed Goals and Priority Objectives and Proposed Budget for FY 2023-24. The adopted budget includes capital outlay funds in the amount of $320,000 for the replacement of air monitoring and laboratory equipment to support the AB 617 program.

South Coast AQMD began investigating facilities that emit Ethylene Oxide (EtO) in March 2022, following U.S. EPA's reconsideration of the potential toxicity of EtO. In

recent years, continuous instruments have been developed to measure EtO in real- or near-time, at low time resolution (e.g., one minute to an hour) and with low detection limits (e.g., below one part per billion; ppb). These instruments can be used to identify EtO hotspots, characterize the process(es) that might lead to fugitive emissions of EtO from sterilization and other industrial facilities, and assess the potential impact of these emissions in our communities, including AB 617 and other environmental justice communities. Continuous EtO instruments will be effective supplemental tools to the traditional method of collecting integrated canister samples for a period of 24-hours followed by laboratory analysis using U.S. EPA TO-15 method. Funding in the amount of $350,000 is needed to procure two continuous EtO instruments for fixed and mobile monitoring applications.

Proposal

Proposed Purchases through "Prior Bid, Last Price" or Solicitation Process

Continuous Gaseous Monitors

The FY 2023-24 budget includes funding for the purchase of up to four continuous gaseous monitors. Continuous monitors for measuring NOx, hydrogen sulfide or gaseous pollutants are needed to satisfy the operational needs of the AB 617 program. The units would be used for baseline measurements in the South Los Angeles community. Replacement of gaseous monitors that have reached the end of their useful life is critical to meeting the data completeness requirement and providing air quality data to the public. The estimated cost for up to four continuous gaseous monitors is $80,000, as approved in the FY 2023-24 Adopted Budget (see Table 1). The purchase will be made by "Prior Bid, Last Price" or through a solicitation process, as needed, followed by issuance of a purchase order.

Continuous Particulate Monitors

The FY 2023-24 budget includes funding for the purchase of up to four continuous particulate monitors for PM2.5, PM10, or ultrafine particle measurements to support AB 617 monitoring efforts. Up to two units would be used for baseline measurements in the South Los Angeles community, and up to two units would be used to support sensor deployment in the San Bernardino Muscoy community, and to replace the continuous particle monitors used on mobile platforms to conduct air monitoring surveys. The approximate cost for up to four continuous particulate monitors is $120,000, as approved in the FY 2023-24 Adopted Budget (see Table 1). The purchase will be made by "Prior Bid, Last Price" or through a solicitation process, as needed, followed by issuance of a purchase order.

Proposed Purchases through Sole-Source Purchase Order

Gas Pre-Concentrator

The FY 2023-24 budget includes funding for the purchase of a gas pre-concentrator. There is a need for continued ambient air hydrocarbon speciation analysis in AB 617 communities. This analysis is commonly used for AB 617 community odor complaints,

oil well monitoring near communities, and source apportionment. The current pre-concentrator is more than 15 years old, replacement parts are no longer available, and the software is no longer supported. The approximate cost for a gas pre-concentrator is $90,000, as approved in the FY 2023-24 Adopted Budget (see Table 1). The purchase will be made through issuance of a sole-source purchase order with Entech Instruments, Inc.

Ethylene Oxide Analyzer (Picarro, Inc., Model G2920)
Picarro, Inc. has developed a continuous monitor based on cavity ring-down spectroscopy (CRDS) for direct measurements of EtO in real- and near-real time. Because of its relatively small size and versatility, sub-part per billion detection limit, and proven field performance in the Basin with minimal data loss, this instrument is appropriate for stationary and mobile measurements of EtO. The G2920 would be used as a continuous emissions monitoring systems (CEMS) to evaluate the ability of CRDS to measure stack emissions. This unit would also be used for fixed air monitoring applications near sterilization and other industrial facilities and, overall, to better understand the capabilities and limitations of CRDS technology. The approximate cost for one G2920 Monitor and associated equipment is $150,000. The purchase will be made through issuance of a sole-source purchase order with Picarro, Inc.

Continuous Monitor for Ethylene Oxide (Aerodyne Research, Inc., Model TILDAS-FD-SC-L1)
Aerodyne Research, Inc. developed a continuous monitor based on Tunable Infrared Laser Direct Absorption Spectroscopy (TILDAS) for direct measurements of EtO in real- and near-real time. When operated under ideal conditions, this instrument can achieve a detection limit for EtO close to typical background levels measured in the Basin using canister sampling followed by laboratory analysis (method TO-15). This instrument has high sensitivity, has demonstrated field performance in the Basin with minimal data loss, and can be integrated easily with one of South Coast AQMD's mobile platforms for air toxic measurements (also developed by Aerodyne Research, Inc). The TILDAS-FD-SC-L1 would be used as a CEMS to evaluate the ability of TILDAS to measure stack emissions. This unit would be used for fenceline and other mobile monitoring surveys near sterilization and other industrial facilities, for community-based measurements, for better assessment of regional background levels of EtO and, overall, for understanding the capabilities, and limitations of the TILDAS technology. The approximate cost for one TILDAS-FD-SC-L1 and associated equipment is $200,000. The purchase will be made through issuance of a sole-source purchase order with Aerodyne Research, Inc.

Sole-Source Justification
Section VIII.B.2 of South Coast AQMD's Procurement Policy and Procedure identifies four major provisions under which a sole-source award may be justified. The request for sole-source purchase from Entech Instruments, Inc., is made under Section

VIII.B.2.c(3): The project involves the use of proprietary technology. The pre-concentrator sold by Entech Instruments, Inc., is the only pre-concentrator compatible with the laboratory's current GC-MS methodology and configuration.

The request for sole-source purchase from Picarro, Inc. and Aerodyne Research, Inc. is made under Section VIII.B.2.c(1): The unique experience and capabilities of the contractor or contractor team. The Picarro instrument provides a combination of portability and demonstrated real-world detection limits in the sub-ppb range, small form factor, CEMS capability, and ability to continuously collect data without downtime. These features are unique amongst CRDS-based EtO instrumentation. The G2920 model is exclusively sold through Picarro, Inc.

The Aerodyne instrument is the only portable continuous monitor with a demonstrated capability of detecting concentrations of EtO near regional background levels on a continuous basis and potential CEMS capability, with minimal instrument downtime. This EtO monitoring instrument is exclusively sold through Aerodyne Research, Inc.

Resource Impacts
Funding to purchase the continuous gaseous monitors, continuous particulate monitors, and gas pre-concentrator outlined in this Board letter is available in the FY 2023-24 Adopted Budget. Funding to purchase the two continuous ethylene oxide monitors is available upon approval of the appropriation from the General Fund Undesignated (Unassigned) Fund Balance in this Board letter.

Table 1
FY 2023-24 Capital Outlays Major Object

Description	Qty	Estimated Amount	Contracting Method
Continuous Gaseous Monitors	Up to 4	$80,000	"Prior Bid, Last Price" or Solicitation Process
Continuous Particulate Monitors	Up to 4	$120,000	"Prior Bid, Last Price" or Solicitation Process
Gas Pre-Concentrator	1	$90,000	Sole Source
Ethylene Oxide Analyzer (Picarro, Inc., Model G2920)	1	$150,000	Sole Source
Continuous Monitor for Ethylene Oxide (Aerodyne Research, Inc., Model TILDAS-FD-SC-L1)	1	$200,000	Sole Source
Total		**$640,000**	