

BOARD MEETING DATE: July 12, 2019

AGENDA NO. 7

PROPOSAL: Transfer and Appropriate Funds, Issue Solicitations and Purchase Orders, and Add/Delete Positions for Rule 1180 Implementation and Enhanced Particulate Monitoring Programs

SYNOPSIS: In June 2018, the Board recognized over \$7 million in revenue into the Rule 1180 Special Revenue Fund (78) to establish community air monitoring stations near refineries by January 1, 2020. These actions are to transfer and appropriate funds, issue solicitations and purchase orders for equipment, and add or delete positions necessary for the implementation of Rule 1180 Community Monitoring and Enhanced Particulate Monitoring Programs.

COMMITTEE: Administrative, June 14, 2019; Recommended for Approval

RECOMMENDED ACTIONS:

1. Transfer and appropriate funds up to \$4,071,615 from the Rule 1180 Special Revenue Fund (78) to Science & Technology Advancement's FYs 2019-20 and/or 2020-21 Budgets (Org 42), Capital Outlays Major Object, as indicated in Table 1.
2. Authorize the Procurement Manager, in accordance with South Coast AQMD's Procurement Policy and Procedure, to issue sole source purchase orders for the following (as listed in Table 1 and described in this letter):
 - a. Up to 10 extractive UV-DOAS and FTIR optical multi-pollutant analyzers from FluxSense, Inc., in an amount not to exceed \$2,193,125;
 - b. Up to three HF/H₂S multiple-gas analyzers from Barnett Technical Services in an amount not to exceed \$197,100; and
 - c. Up to 10 aethalometers from Magee Scientific in an amount not to exceed \$251,000.
3. Authorize the Procurement Manager, in accordance with South Coast AQMD's Procurement Policy and Procedure, to issue sole source or 'prior bid, last price' purchase orders, solicitation(s) if deemed appropriate, and/or cooperative purchasing agreement, as listed in Table 1.
4. Authorize the Procurement Manager, in accordance with South Coast AQMD's Procurement Policy and Procedure, to issue a solicitation and, based on the results of the solicitation, issue a purchase order(s) for the purchase, installation and operation of seven automated field-GC monitoring systems in an amount not to exceed \$513,240 as listed in Table 1.

5. Transfer and appropriate up to \$2,075,500 from the Rule 1180 Special Revenue Fund (78) into Science & Technology Advancement's FYs 2019-20 and/or 2020-21 Budgets (Org 42), Services and Supplies Major Object, as listed in Table 2.
6. Approve the addition of five positions for Rule 1180 air monitoring, planning and implementation, as listed in Table 3, and transfer and appropriate up to \$360,703 from the Rule 1180 Special Revenue Fund (78) to Science & Technology Advancement's FY 2019-20 Budget (Org 44), Salaries and Employee Benefits Major Object.
7. Add one Senior Office Assistant position and delete one Office Assistant position in Science & Technology Advancement's Atmospheric Measurements Branch (Monitoring Network Unit/Operations/Federal Programs Group), as listed in Table 4.

Wayne Natri
Executive Officer

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Background

Petroleum refineries are among the largest stationary sources of air pollution in the South Coast Air Basin (Basin). These sources process crude oil into various products, such as gasoline, diesel fuel, aviation fuel and other fuel oils. These and other refinery-related activities can result in emissions of criteria pollutants, toxic air contaminants, greenhouse gases, and other air pollutants. In recent years, community concerns over emissions from refineries have increased, both from routine facility operations and potential releases due to emergency or other unforeseen conditions.

Beginning in 2013, South Coast AQMD conducted technology demonstration studies to assess the level of air toxics and criteria pollutants on-site and near refineries and compare this shorter-duration sampling to estimated annual emissions. South Coast AQMD's work with optical remote sensing (ORS) and low-cost sensors continues to study air pollutants in communities near refineries. Refinery-related monitoring is also a component of MATES V, which is currently ongoing.

Rule 1180-Refinery Fenceline and Community Air Monitoring, which was adopted in December 2017, requires real-time fenceline air monitoring systems and establishes a fee schedule to fund refinery-related community air monitoring systems that will provide air quality information to the public about levels of various criteria air pollutants, VOCs, metals and other compounds at or near the property boundaries of petroleum refineries and in nearby communities. In accordance with Rule 1180 Refinery Fenceline and Community Air Monitoring requirements, staff is developing a draft plan for community air monitoring systems that will be made available for public

review. A June 2018 Board action authorized recognizing revenue up to \$7,508,861 in Rule 1180 payments into the Rule 1180 Special Revenue Fund (78) for the installation of community air monitoring stations near refineries by January 1, 2020. The original estimated payments were reduced to \$7,151,297 during the rulemaking process because one of the eight refineries did not meet the established criteria. This amount has been received in two installments of \$2,145,390 and \$5,005,907 (received in July 2018 and January 2019, respectively). Beginning in January 2020, the seven refineries will also fund annual operating and maintenance costs pursuant to Rule 301-Permitting and Associated Fees of approximately \$4.6 million for up to 10 refinery-related community air monitoring stations near those seven references, which are listed below.

- Tesoro Refining & Marketing Company, LLC, Carson Refinery, Carson;
- Tesoro Refining & Marketing Company, LLC, Wilmington Refinery, Wilmington;
- PBF Energy, Torrance Refining Company, Torrance;
- Chevron Products Company, Chevron El Segundo Refinery, El Segundo;
- Phillips 66 Company, Carson;
- Phillips 66 Company, Wilmington; and
- Valero Energy Corporation, Valero Wilmington Refinery, Wilmington.

South Coast AQMD has also been providing enhanced particulate monitoring as part of a national monitoring program since 2003. Sample collection began in February 2003 and will continue for the foreseeable future. South Coast AQMD is expected to receive up to \$2,100,000 from the Department of Homeland Security (DHS) for the fully funded Enhanced Particulate Monitoring Program.

Proposal

This action is to transfer and appropriate up to \$6,507,818 into Science & Technology Advancement's FYs 2019-20 and/or 2020-21 Budgets for expenditures in Capital Outlays (Table 1), Services and Supplies (Table 2), and Salaries & Employee Benefits (Table 3) Major Objects to support work required under Rule 1180. These actions represent the resource appropriations required to implement the Rule 1180 community monitoring network and will be fully supported by the funding received from the refineries subject to Rule 1180 initial and ongoing fees.

Proposed Purchases through Sole Source or 'Prior Bid, Last Price' Purchase Orders, Solicitation(s) and/or Cooperative Purchasing Agreement

This action is to purchase the equipment described below and listed in Table 1 using the procurement method noted.

Extractive UV-DOAS and FTIR Optical Multi-Pollutant Analyzers

Extractive ultra-violet differential optical adsorption spectrometer (UV-DOAS) and fourier transform infrared spectroscopy (FTIR) optical multi-pollutant analyzers will be used to conduct real-time, high-resolution (3-5 minute) measurements of VOCs and air

toxics at the community monitoring sites. FluxSense, Inc., (FluxSense) is the only manufacturer that can provide both extractive DOAS and FTIR instrumentation capable of detecting a number of important VOCs and air toxics (e.g. 1,3-butadiene, acetaldehyde, acrolein, ammonia, benzene, formaldehyde, hydrogen cyanide, hydrogen fluoride, xylenes, toluene and total non-methane hydrocarbons) with low-ppb sensitivity and in near-real time. Similar technology is currently being utilized by South Coast AQMD's Mobile Optical Remote Sensing Laboratory, and extractive DOAS and extractive FTIR instruments use the same proprietary software, therefore ensuring compatibility of data collected from multiple platforms. The purchase order will include assistance with installation of the instruments at all locations, calibration and maintenance support of the instruments and training by FluxSense staff for the first two years of operation to ensure optimal instrument performance. This sole source purchase order for up to 10 extractive UV-DOAS and extractive FTIR with FluxSense will not exceed \$2,193,125.

HF/H2S Multiple-Gas Analyzers

Off-axis integrated cavity output spectroscopy (OA-ICOS) analyzers will be used to conduct real-time, high-resolution (~1 minute) simultaneous measurements of hydrogen fluoride (HF) and hydrogen sulfide (H2S) at community monitoring stations near refineries that use HF, namely Torrance Refining Company and Valero Wilmington refineries. The LGR H2SF-927 is the only continuous, real-time analyzer for simultaneous detection of HF and H2S with low-ppb detection limits and employs OA-ICOS optical analysis. This sole source purchase order for up to three HF/H2S analyzers with Barnett Technical Services (authorized distributor for ABB - Los Gatos Research) will not exceed \$197,100.

Aethalometers

Aethalometers will be used to conduct real-time measurements of black carbon (BC) at refinery-related community air monitoring sites. The Magee Scientific AE33 is the only real-time, continuous BC analyzer that employs a unique DualSpot™ technology and multi-wavelength optical analysis. The AE33 model was utilized for collecting BC data at 10 air monitoring stations during MATES V. This sole source purchase order for up to 10 aethalometers with Magee Scientific will not exceed \$251,000.

Air Monitoring Equipment

The H2S/SO2 analyzers, meteorological stations and towers and other supporting equipment, including pure air generators, gas dilution systems, and data loggers will be used to conduct measurements of air pollutants and meteorological parameters and log the data collected at community air monitoring stations. The technical specifications of this proposed air monitoring equipment is consistent with that of instrumentation in use within the South Coast AQMD air monitoring network. Up to seven H2S/SO2 multiple-gas analyzers and up to 10 each of meteorological stations and towers, pure air generators with hydrocarbon (HC) scrubbers, gas dilution systems and data loggers will

be purchased through either sole source or ‘prior bid, last price’ purchase orders or solicitation(s) if deemed appropriate, as specified in Table 1.

Monitoring Containers or Trailers

Monitoring stations (each comprised of either an air monitoring container or trailer) will be deployed at up to 10 locations near the seven refineries. Up to seven monitoring containers or trailers are required at this time and will be purchased through either ‘prior bid, last price’ purchase order or cooperative purchasing agreement in an amount not to exceed \$245,000, as listed in Table 1.

Proposed Purchase through Solicitation

Automated Field-GC Monitoring Systems

Continuous automated field-GC monitoring systems will be used to measure the ambient concentrations of the specific VOCs identified by Rule 1180 (e.g., acrolein, 1,3-butadiene, styrene, benzene, toluene, ethylbenzene and xylenes) and other selected VOCs (e.g., acetone, 2-butanone, ethyl acetate, vinylchloride, trichloroethylene, perchloroethylene, 1,2-dichlorobenzene, 1,4-dichlorobenzene, hexane and propene) with time resolution of approximately one-hour at seven community air monitoring sites. The purpose of the automated field-GC monitoring is to complement the high-resolution extractive DOAS and FTIR measurements. This action is to issue a solicitation and, based on the results of the solicitation, issue a purchase order(s) not to exceed \$513,240, as listed in Table 1.

Proposed Staffing Adjustments

Rule 1180 Community Monitoring Implementation

This action is to approve the addition of five positions for Rule 1180 air monitoring planning and implementation, as listed in Table 3. The new staff will be responsible for installation, operation, calibration, maintenance and repair of air monitoring equipment for Rule 1180 community air monitoring stations, conducting mobile optical remote sensing community surveys and data analysis and reporting.

Enhanced Particulate Monitoring Program (FY 2019-20)

South Coast AQMD is expected to receive funding from DHS for the ongoing Enhanced Particulate Monitoring Program for FY 2019-20 in an amount up to \$2,100,000. This action is to approve the addition of one Senior Office Assistant position and the deletion of one Office Assistant position in Science & Technology Advancement’s Atmospheric Measurements Branch (Monitoring Network Unit/Operations/Federal Programs Group), as listed in Table 4. This would better serve operational needs of the Enhanced Particulate Monitoring Program by being able to perform more specialized complex office responsibilities assigned to the program. This request has the concurrence of DHS.

Sole Source Justification

Section VIII.B.2 of the Procurement Policy and Procedure identifies four major provisions under which a sole-source award may be justified. The request for sole source purchases from FluxSense are made under Sections VIII.B.2.c(1): The unique experience and capabilities of the proposed contractor or contractor; VIII.B.2.c(2): The project involves the use of proprietary technology; and VIII.B.2.d(6): Projects requiring compatibility with existing specialized equipment. FluxSense is the only contractor who provides both extractive DOAS and extractive FTIR instruments with the required specifications. Additionally, the proposed instruments and proprietary software are compatible with instrumentation and software that is currently being used by South Coast AQMD staff inside the Mobile ORS Laboratory, therefore allowing for data compatibility and comparability. The request for sole source purchases from Barnett Technical Services and Magee Scientific are made under Sections VIII.B.2.c(2): The project involves the use of proprietary technology. The HF/H2S multiple-gas analyzers (LGR H2SF-927) is only available from Barnett Technical Services, and the aethalometer (AE33) is only available from Magee Scientific.

Benefits to South Coast AQMD

Funding for the implementation of Rule 1180 will allow the South Coast AQMD to fulfill the requirements of Rule 1180 and will result in benefits to environmental justice communities and others working and residing in the Basin.

Resource Impacts

The initial payments received from petroleum refineries under Rule 1180 will provide sufficient resources to plan and establish the required community air monitoring program. Future Rule 301 annual fees will provide sufficient resources for ongoing community air monitoring operation and maintenance.

DHS funding will fully support the Enhanced Particulate Monitoring Program.

Attachments

- Table 1: Proposed Capital Outlays Expenditures for Rule 1180 (FYs 2019-20 and/or 2020-21)
- Table 2: Proposed Services and Supplies Expenditures for Rule 1180 (FYs 2019-20 and/or 2020-21)
- Table 3: Proposed Staffing Additions for Rule 1180 (FY 2019-20)
- Table 4: Proposed Staffing Addition/Deletion for Enhanced Particulate Monitoring Program (FY 2019-20)

Table 1
Proposed Capital Outlays Expenditures for Rule 1180
(FYs 2019-20 and/or 2020-21)

Description	Qty	Estimated Amount	Action
Extractive UV-DOAS and FTIR optical multi-pollutant analyzer*	10	\$2,193,125	Sole Source
HF/H2S multiple-gas analyzer	3	197,100	Sole Source
Aethalometer	10	251,000	Sole Source
H2S/SO2 analyzer	7	126,000	Sole Source, 'Prior Bid, Last Price' or Solicitation
Meteorological station and tower	10	54,750	Sole Source, 'Prior Bid, Last Price' or Solicitation
Pure air generator with HC scrubber	10	131,400	Sole Source, 'Prior Bid, Last Price' or Solicitation
Gas dilution system	10	200,000	Sole Source, 'Prior Bid, Last Price' or Solicitation
Data logger	10	160,000	Sole Source, 'Prior Bid, Last Price' or Solicitation
Monitoring container or trailer**	7	245,000	'Prior Bid, Last Price' or Cooperative Purchasing
Automated field-GC system	7	513,240	Solicitation then Purchase Order
FYs 2019-20 and/or 2020-21 Appropriations		Up to \$4,071,615	

*During the procurement process, these items may be categorized as Capital Outlays or Services and Supplies depending upon whether the item is purchased, leased or contracted as a service.

**This is a reduced appropriation from the original \$500,000 appropriation approved by the Board on January 4, 2019, Agenda Item 3 (Table 1).

Table 2
Proposed Services and Supplies
Expenditures for Rule 1180 (FYs 2019-20 and/or 2020-21)

Description	Account Number	Estimated Amount FY 2019-20	Estimated Amount FY 2020-21
Rents and Leases Structure	67350	\$235,000	\$320,000
Professional and Specialized Services	67450	15,000	58,000
Maintenance of Equipment	67600	25,000	84,500
Building Maintenance Operation	67650	387,000	36,000
Auto Mileage	67770	2,000	8,000
Communications*	67900	200,000	200,000
Laboratory Supplies*	68050	85,000	90,000
Office Supplies*	68100	85,000	25,000
Office Furniture	68200	120,000	0
Small Tools, Instruments, Equipment*	68300	50,000	50,000
FYs 2019-20 and/or 2020-21 Appropriations**		\$1,204,000	\$871,500

* Expenditures may be appropriated in the Capital Outlays Major Object as warranted.

**The total of FYs 2019-20 and 2020-21 is \$2,075,500.

Table 3
Proposed Staffing Additions for Rule 1180 (FY 2019-20)

Position Title	Qty	Estimated Amount*
Air Quality Specialist	2	\$167,598
Senior Air Quality Instrument Specialist	1	75,258
Air Quality Instrument Specialist II	1	69,809
Senior Office Assistant	1	48,038
Total	5	\$360,703

*Salaries & Employee Benefits at Step 5 include base salary, retirement cost, insurance, FICA & SDI and for the period of January 2020 through June 2020.

Table 4
Proposed Staffing Addition/Deletion for Enhanced Particulate Monitoring Program (FY 2019-20)*

Title	Qty	Branch	Estimated Amount**
Senior Office Assistant	1	Atmospheric Measurements (Monitoring Network Unit/Operations/Federal Programs Group)	\$96,075
Office Assistant	(1)	Atmospheric Measurements (Monitoring Network Unit/Operations/Federal Programs Group)	(88,656)
Total			\$7,419

*On June 7, 2019, the Board letter (Agenda Item #6) included appropriations for the Enhanced Particulate Monitoring Program.

**Salaries & Employee Benefits at Step 5 include base salary, retirement cost, insurance, FICA & SDI.