CEMS Application Completion Check

South Coast Air Quality Management District • Source Test Engineering Branch

Before you submit your CEMS Application, did you:

- ☐ Identify the type of CEMS to be installed (RECLAIM, non-RECLAIM, single-dedicated CEMS, time-shared CEMS, ACEMS, FSMS)?
- ☐ Identify whether this is a new CEMS, or an existing CEMS modification?
- ☐ Identify whether the source monitored by this CEMS, has an existing certified CEMS?
- ☐ Fully identify the source(s) monitored by the CEMS and pollutants to be monitored, permitted pollutants limits, the South Coast AQMD identification (Permit-to-Construct, Permit-to-Operate, Facility ID), and attach a copy of the Permit?
- ☐ Describe the process(es) monitored, expected contaminant gas concentrations and attach a drawing of the process?
- ☐ Describe the exhaust stack where the CEMS will acquire a gas sample and attach a drawing?
- ☐ Describe the components of the CEMS (analyzers, flow measurements, DAS, PLC, recorders), and attach a schematic drawing and vendors specification sheets?
- ☐ Identify how pollutant emissions will be calculated, recorded, and reported, and the programming logic involved to meet compliance with all applicable South Coast AQMD rules and permit conditions concerning CEMS monitoring?
- ☐ Supplemental sheets concerning other facility sources which will use this CEMS information?
- ☐ *(RECLAIM ONLY)*: Have you contacted Ms. Sruthi Gandepally (SGandepally@aqmd.gov) concerning your RTU reporting obligations?
- ☐ CEMS Quality Assurance Plan (QAP) to be submitted before CEMS Certification can be issued?
- ☐ Facility contact information, and signed and dated by a facility representative (not a consultant or a source test lab)?

The completed CEMS Application includes: ☐ Completed *PART 4* of this packet, plus attachments, ☐ Completed CEMS Fee Processing Form *ST-400*, and a check for the appropriate basic processing fee, ☐ and a cover letter briefly describing your CEMS situation.

DO NOT attach this CEMS Application, *Form ST-400*, or CEMS fees to any other South Coast Air Quality Management District correspondence (Permitting submittals, etc.). CEMS Application and Certification is handled separately from the Permitting process. This submittal must be directed to:

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Monitoring & Analysis Division, Source Test Engineering Branch
21865 Copley Drive
Diamond Bar, CA 91765-4182*

*expedited FedEx, UPS, USPS or courier delivery: mark envelope "*Hold at Front Desk for Pick-up by Source Testing Staff (ext. 2273)*"

South Coast Air Quality Management District

FORM ST-220AP

21865 Copley Drive, Diamond Bar, CA 91765-4182

Monitoring & Analysis Division, Source Test Engineering Branch (909) 396-2273

APPLICATION FOR INITIAL CERTIFICATION, OR MODIFICATION, OF RECLAIM AND NON-RECLAIM CONTINUOUS EMISSIONS MONITORING SYSTEMS (CEMS)

***Applicant*: Please check all that are applicable regarding your submittal:**

Present Status:	☐ Currently *or* ☐ Previously Certified (*certification no.*_____ *date*_____)[1] ☐ New Source ☐ RECLAIM ☐ Non-RECLAIM
Type of Application:	☐ Initial Certification ☐ Modification / Recertification due to: ☐ Process Modification ☐ CEMS Modification ☐ Rule/Permit Change
Source(s) Monitored:	☐ One (Dedicated) ☐ More than one (time-shared, SCEMS) ☐ More than one SOx source (FSMS only): ____ *(specify number)*
Type(s) of CEMS:	☐ NOx ☐ SOx ☐ CO ☐ Fuel ☐ O_2 ☐ Flow ☐ Time-Shared ☐ FSMS ☐ SCEMS ☐ ACEMS ☐ _____

Please fill out the requested information below, as completely as possible, and return it to the South Coast Air Quality Management District c/o Source Test Engineering Branch. If additional space is required, attach supplementary pages to the end of this form.

1. APPLICANT, COMPANY, CONTACT INFORMATION

Facility ID No. : _____

Facility Permit Holder : _____

_____

Mailing Address : _____

_____

Equipment Location : _____
(*Also include Company Name if different from Business License Name listed above*)

_____

Company Contacts : _____ (Name) _____ (Phone)

_____ (Title) _____ (E-mail Address)

: _____ (Name) _____ (Phone)

_____ (Title) _____ (E-mail Address)

[1] Be sure to attach a copy of your most recent CEMS Certification to this Application.

2. CEMS HISTORY AND REPORTING REQUIREMENTS Please provide some background concerning your CEMS proposal so that we can better determine if you are fulfilling (or over-fulfilling) your CEMS monitoring obligations

a. SOURCE (OR SOURCES) MONITORED BY THIS CEMS

SOx CEMS Applicants Only: *If this CEMS is an FSMS, also complete Appendix F.*

EQUIPMENT 1:

South Coast AQMD Application/Permit No. or RECLAIM Device I.D. ☐

Description (from Application or Permit, *including control equipment*) : _____

_____

_____

Operating Rate (*incl units*) : _____ *Design* _____ *Normal* _____ *Minimum*

Process Characteristic : ☐ Continuous ☐ Batch: _____ *(hrs/batch)*

☐ Intermittent[2]: _____ *(hrs/day) or (/)*

This equipment is: : ☐ New ☐ Existing with no existing CEMS

☐ Existing with existing CEMS

EQUIPMENT 2:

South Coast AQMD Application/Permit No. or RECLAIM Device I.D. ☐

Description (from Application or Permit, *including control equipment*) : _____

_____

_____

Operating Rate (*incl units*) : _____ *Design* _____ *Normal* _____ *Minimum*

Process Characteristic : ☐ Continuous ☐ Batch: _____ *(hrs/batch)*

☐ Intermittent[2] _____ *(hrs/day) or (/)*

This equipment is: : ☐ New ☐ Existing with no existing CEMS

☐ Existing with existing CEMS

[2] Equipment operates on-demand, is supplemental, or is a back-up to another piece of equipment.

EQUIPMENT 3:

South Coast AQMD Application/Permit No. or RECLAIM Device I.D. ☐

Description : _____
(from Application or Permit, *including control equipment*)
_____
_____

Operating Rate (*incl units*) : _____ *Design* _____ *Normal* _____ *Minimum*

Process Characteristic : ☐ Continuous ☐ Batch: _____ *(hrs/batch)*
☐ Intermittent[2]: _____ *(hrs/day) or (/)*

This equipment is: : ☐ New ☐ Existing with no existing CEMS
☐ Existing with existing CEMS

EQUIPMENT 4:

South Coast AQMD Application/Permit No. or RECLAIM Device I.D. ☐

Description : _____
(from Application or Permit, *including control equipment*)
_____
_____

Operating Rate (*incl units*) : _____ *Design* _____ *Normal* _____ *Minimum*

Process Characteristic : ☐ Continuous ☐ Batch: _____ *(hrs/batch)*
☐ Intermittent[2] _____ *(hrs/day) or (/)*

This equipment is: : ☐ New ☐ Existing with no existing CEMS
☐ Existing with existing CEMS

b. PRESENT CEMS STATUS

☐ CEMS not installed (approx: ☐ order ☐ install date: _____)

☐ CEMS installed ☐ CEMS installed & Operating (date: _____)

c. CEMS REPORTING REQUIREMENTS

Briefly describe what necessitated this CEMS proposal (Rules, Permit Conditions, or self-elected) and attach a copy of the applicable part of the South Coast Air Quality Management District Facility Permit, Permit-to-Construct, or Permit-to-Operate in *Attachment 1*. (It is recommended that you thoroughly discuss your continuous monitoring requirements with your assigned South Coast AQMD Permitting Engineer to assure that you have fulfilled all of your monitoring obligations, and also to assure that you are not proposing to monitor a contaminant[3] that is not required to be continuously monitored):

Contaminant Monitored	**Applicable Rule or Permit Condition or "Self Elected"**	**Continuous Monitoring Requirement**
☐ NOx	_____	☐ Concentration Limit: _____ ppm (corrected to: ☐3% ☐15% O_2)
	_____	☐ Mass Emission (unit): _____ (_____)
☐ SOx	_____	☐ Concentration Limit: _____ ppm (corrected to: ☐3% ☐15% O_2)
	_____	☐ Mass Emission (unit): _____ (_____)
☐ CO	_____	☐ Concentration Limit: _____ ppm (corrected to: ☐3% ☐15% O_2)
	_____	☐ Mass Emission (unit): _____ (_____)
☐ other: _____	_____	☐ Concentration Limit: _____ ppm (corrected to: ☐3% ☐15% O_2)
	_____	☐ Mass Emission (unit): _____ (_____)

Comments concerning above requirements: _____

_____

_____

d. SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT CONTACTS

Permitting Engineer: _____ (name) _____ (phone ext)

Inspector: _____ (name) _____ (phone ext)

Source Testing Engineer: _____ (name) _____ (phone ext)

[3] There is a distinction between contaminants which require continuous monitoring (CEMS), and contaminants which are required to be monitored periodically or non-continuously, such as annual CO and NOx monitoring for Permit Compliance. These distinctions aren't always clearly explained in the Permit Conditions. Be sure to contact an South Coast Air Quality Management District Permitting Engineer for clarification on what is - and what is not required before proceeding with a CEMS Application.

3. PROCESS DESCRIPTION

Briefly describe manufacturing and control processes in the space below, and include a simplified process flow diagram in *Appendix A*.

---

4. FUEL AND FLUE GAS INFORMATION

Please include a simplified stack diagram in *Appendix B.* ***ACEMS Applicants:*** *Complete specified sections only.* ***Time-Shared CEMS Applicants:*** *Make copies of this page and list information based on individual sampling locations.*

a. STACK SAMPLING DIMENSIONS

(***ACEMS Applicants:*** note specific requirements)

		Diameter or Length	*Width*
Stack dimensions	:	_____ ft. _____ in.	_____ ft. _____ in.
Overall stack height	:	_____ ft. _____ in.	
CEMS probe tip distance in stack from stack wall (***ACEMS Applicants:*** does not apply, leave blank)	:	_____ ft. _____ in.	
CEMS probe distance downstream from disturbance (***ACEMS Applicants:*** this is the Reference Method CEMS probe distance)	:	_____ ft. _____ in.	
CEMS probe distance upstream from disturbance (***ACEMS Applicants:*** this is the Reference Method CEMS probe distance)	:	_____ ft. _____ in.	
Reference sample port distance from CEMS probe (***ACEMS Applicants:*** does not apply, leave blank)	:	_____ ft. _____ in.	☐ Upstream ☐ Downstream *(check)*

b. ANTICIPATED FLUE OR STACK PARAMETERS

Contaminant Gas	:	NO_x :_____ *to* _____ ppm	SO_x :_____ *to* _____ ppm
		CO :_____ *to* _____ ppm	( ):_____ *to* _____ ppm
(Other gas)		( ):_____ *to* _____ ppm	( ):_____ *to* _____ ppm
Diluent Gas	:	CO_2 :_____ *to* _____ %	O_2 :_____ *to* _____ %
(Other gas)		( ):_____ *to* _____ %	( ):_____ *to* _____ %

Temperature: _____ *to* _____ °F Static Press: _____ *to* _____ " H_2O

Moisture: _____ *to* _____ % Flowrate: _____ *to* _____ dscfm

Particulate Matter : _____ *to* _____ gr/dscf

c. ANTICIPATED FUEL PARAMETERS

Fuel Type : ☐ Natural Gas ☐ *(specify)* _____

Sulfur Content[4] : _____ *to* _____ ppm

CO_2[4]: _____ *to* _____ % Usage Rate: _____ *to* _____ dscfm

Moisture[4]: _____ *to* _____ % Meter Pres: _____ *to* _____ psig

[4] Only applies for fuel other than natural gas.

5. CEMS DESCRIPTION Please include a simplified CEMS diagram in *Appendix C* and attach manufacturer's specification sheets. ***ACEMS Applicants:*** Complete only *Sections 5.c. & e.* and *Appendix G,* instead of *Appendix C*. ***Time-Shared CEMS Applicants:*** Indicate which CEMS components are shared.

a. PRINCIPAL GAS ANALYZER

Gas Monitored	Make	Model	Method of Detection (NDIR, etc.)	Proposed Range(s)	*(check)*[5] dry wet
					☐ ☐
					☐ ☐
					☐ ☐
					☐ ☐

b. PRINCIPAL FLOW MONITOR

Type: fuel flow	Make	Model	Principle (Orifice, Pitot, etc.) Description or Purpose	Proposed Range	*(check)*[6] cor unc
☐ ☐					☐ ☐
☐ ☐					☐ ☐

c. SUPPLEMENTAL COMPONENTS[7] / PRINCIPAL ACEMS COMPONENTS

Parameter	Make	Model	Description or Purpose

d. SAMPLE ACQUISITION & CONDITIONING SYSTEM *(probe, chiller, etc.)*

Make	Model	Description
		(☐ Single-Point ☐ Multiple[8]-Point Probe):
		(Conditioning System / Chiller):

e. DATA ACQUISITION & REPORTING EQUIPMENT *(Computer, DAS, PLC, Chart Recorder etc.* ***non-RECLAIM only:*** *indicate which component will be official record).*

Make	Model	Description
		(DAS):
		(PLC):
		(Software):
		(Recorder):

[5] Specify whether reported raw gas reading will be to "*dry*" or "*wet*" conditions, excluding external corrections (If any readings are "*wet*", be sure to detail how they will be corrected to dry standard conditions in *Appendix D*).

[6] Specify whether reported raw fuel or flue reading will be corrected "*unc*" or uncorrected "*cor*" to dry standard conditions, excluding external corrections (If readings will be "*unc*", be sure to detail how they will be corrected to dry standard conditions in *Appendix D*).

[7] Components used to augment the performance of the principal gas and flow components listed in *a.* & *b.* (temperature, pressure, and moisture correction devices, for instance).

[8] Be sure to complete *Appendix C1*. You must successfully bench-test this probe before CEMS Initial Approval can be granted.

6. CEMS EXPENDITURE

	Equipment & Materials	*Total System as Installed*
Estimated Cost of Equipment :	$_____	$_____

CEMS Contractor :_____

Address :_____

_____

_____

Phone :_____

7. DETERMINATION OF REQUIRED MONITORING PARAMETERS

Check below how you propose to meet applicable rule and permit condition monitoring requirements for each monitored pollutant of this CEMS. Detail, step by step in *Appendix D,* how these parameters will be applied to the final monitoring requirement by use of equations, assumptions, and calculations. (Be sure to detail how corrections will be made to dry, standard conditions, or conditions imposed by rules or permits). Constants, factors, and/or coefficients not used in commonly accepted equations; or non-standard equations, must be submitted with full explanation and supporting documentation (historical data, etc.). Check all that apply for your particular monitoring situation:

Gas	**Concentration Based On:**	**Flowrate Based On:**	**Emission Rate Based On:**
NOx:	☐ Direct Gas Measurement ☐ Predicted (ACEMS/PEMS) ☐ + O_2 Correction (O_2 Analyzer) ☐ _____	☐ Direct Stack Flow Meas. ☐ Predicted (ACEMS/PEMS) ☐ Standard Fuel F-Factor ☐ _____	☐ Direct (conc x stack flow) ☐ Predicted (ACEMS/PEMS) ☐ Standard Fuel F-Factor ☐ _____
SOx:	☐ Direct Measurement ☐ Predicted (ACEMS/PEMS) ☐ Fuel Sulfur Content (FSMS) ☐ + O_2 Correction (O_2 Analyzer) ☐ _____	☐ Direct Measurement ☐ Predicted (ACEMS/PEMS) ☐ Fuel Usage ☐ Standard Fuel F-Factor ☐ _____	☐ Direct (conc x flowrate) ☐ Predicted (ACEMS/PEMS) ☐ Fuel Sulfur Content (FSMS) ☐ Standard Fuel F-Factor ☐ _____
CO:	☐ Direct Gas Measurement ☐ Predicted (ACEMS/PEMS) ☐ + O_2 Correction (O_2 Analyzer) ☐ _____	☐ Direct Stack Flow Meas. ☐ Predicted (ACEMS/PEMS) ☐ Standard Fuel F-Factor ☐ _____	☐ Direct (conc x stack flow) ☐ Predicted (ACEMS/PEMS) ☐ Standard Fuel F-Factor ☐ _____
___:	☐ Direct Gas Measurement ☐ Predicted (ACEMS/PEMS) ☐ + O_2 Correction (O_2 Analyzer) ☐ _____	☐ Direct Stack Flow Meas. ☐ Predicted (ACEMS/PEMS) ☐ Standard Fuel F-Factor ☐ _____	☐ Direct (conc x stack flow) ☐ Predicted (ACEMS/PEMS) ☐ Standard Fuel F-Factor ☐ _____

8. COMPUTER PROGRAMMING LOGIC FOR THE PARAMETERS IN SEC. 7

Briefly describe in *Appendix E* how these parameters will be programmed into the data reduction and recording units. Use block diagrams, or a copy of recorded data if needed, to show the location in the program where constants, variables and other parameters are entered. Indicate DAS polling frequency. ***ACEMS Applicants*** must also discuss redundancy and/or remediation for primary parameter error or failure.

9. APPLICABLE PERMITS AND PERMIT CONDITIONS

Please attach applicable permits and permit conditions related to all basic and control equipment which will be monitored by the CEMS (Label as "*Attachment 1*", or attach to sheet provided).

10. MANUFACTURER'S OR VENDOR'S CEMS SPECIFICATIONS

Please attach manufacturer's or vendor's specification sheets for all equipment or devices which relate to the CEMS (Label as "*Attachment 2*", or attach to sheet provided).

11. QA/QC PROCEDURES

All CEMS applicants[9] shall submit a complete Quality Assurance Plan (QAP) according to RECLAIM Regulation XX and Rule 218. In this Plan, you must address the on-going maintenance and contingencies necessary to assure the continued reliability of emission information. Discuss scheduled and unscheduled maintenance, contingencies for equipment/CEMS outages and modifications, recordkeeping and reporting, calculation methodology, periodic testing, personnel responsible for assuring implementation of this Plan, etc. If you have already prepared a QAP for this CEMS, please include a copy with this Application, and label it as "*Attachment 3*". If the QAP is not yet completed, briefly describe or outline its content, and include it as "*Attachment 3*". **NOTE TO ALL APPLICANTS:** The completed QAP must be submitted, and approved before CEMS "Final Certification" can be granted.

12. REMOTE TERMINAL UNIT (RTU) (*RECLAIM CEMS Applicants Only)*

Although not technically classified as a part of the CEMS which you have described in this Application, an approved RTU is required, pursuant to RECLAIM RULES 2011 and 2012, to electronically report CEMS emission information to the South Coast AQMD on a daily basis (or at an interval specified by other rules or permit conditions). Please contact Ms. Sruthi Gandepally in the South Coast AQMD's Information Management Division (IM), at (909) 396-3308 (e-*mail:* SGandepally@aqmd.gov) for more information regarding RTU specifications, capabilities, and approval. For our records, please indicate present RTU status:

☐ This proposed CEMS will use an existing RTU which is capable of connecting to the South Coast Air Quality Management District (serves previously certified CEMS or CEMS undergoing certification, at this facility).

☐ There is presently no RTU installed at this facility. Part of this CEMS proposal includes RTU specifications which will be forwarded to the person listed above.

☐ New RTU is installed and is capable of connecting to the South Coast Quality Management District.

[9] Effective May 14, 1999, Non-RECLAIM CEMS applicants must also prepare a QAP. ACEMS applicants shall submit a QAP for each parameter measured.

13. CEMS INSTRUMENT ENCLOSURE *(Please indicate below)*:

☐ CEMS will be enclosed in an environmentally-controlled shelter with:
- ☐ Temperature alarm or record of exceedances of manufacturer's specified operating range.
- ☐ No provisions for temperature alarm or record *(Additional QA certification testing required).*

☐ CEMS shelter will not be environmentally-controlled *(Additional QA certification testing shall be required).*

14. NON-RECLAIM CEMS CERTIFICATION OPTIONS (*Non-RECLAIM CEMS Applicants Only)*

Before Final CEMS Certification, Non-RECLAIM or "Command-and-Control" CEMS Applicants must check the appropriate box below, which indicates how they will certify, and maintain this CEMS (be sure to read both of these documents before deciding):

☐ CEMS is to be reviewed and certified according to the performance specifications of Rule 218.1, and will be subject to Rule 218.1 Quality Assurance requirements.

☐ CEMS is to be reviewed and certified according to the applicable performance specifications of 40CFR60, Appendix B, and will be subject to the Quality Assurance requirements of 40CFR60, Appendix F.

15. MULTI-POINT PROBE REQUIREMENTS ***(Multi-Point Probe Applicants Only)***

☐ I have read and understand the procedures for "pre-certifying" the multiple-point probe for my CEMS, and the continued QA measures as described in South Coast Air Quality Management District Source Testing *Form 511*: "Multi-Point Probe Acceptance and Quality Assurance Standards, for Use in Conjunction with EPA/EMTIC Guidance Document (GD)-031". I understand that the completed probe bench-test report must be submitted to the South Coast AQMD for formal approval before the probe may be installed in the stack sampling location, and that issuance of CEMS Initial Approval will be contingent upon the successful completion of this task.

16. EXPEDITED REVIEW REQUESTED ***(Read Below, Carefully, Before Requesting)***

I have read the South Coast Air Quality District Rule 301(v)(3) regarding the provisions for an expedited CEMS certification review, and I understand that it entails paying additional fees upon completion of this project, and that the decision to grant expedited review will be at the discretion of the Manager of the Source Testing Branch of the South Coast AQMD. I also understand the limitations concerning CEMS expedited review: The only processes involving CEMS Certification which can be expedited concern South Coast AQMD's responsibility to provide a prompt review and approval of complete CEMS Application, CEMS Test Protocol and Report, and CEMS Final Certification when these documents are submitted in a timely manner. Submittal of incomplete documentation for review, and on-site scheduling problems will still delay the review process – expedited, or not. Expedited or "fast track" CEMS review will not provide relief from meeting mandated Permitting and Compliance deadlines, nor will it directly affect issuance of Permit-to Operate.

☐ I am requesting an expedited CEMS review *(Please explain briefly the time constraints or reasons for expedited request, to aid in our assessment of your request):*

17. CONFIDENTIALITY OF INFORMATION IN THIS SUBMITTAL

Do you regard any of the information included in this application as confidential?

☐ YES ☐ NO - If yes, please specify below (use additional pages, if necessary):
(check one)

By signing below, I certify that all of the information in this CEMS Application is accurate to the best of my knowledge, and that I have read the Non-RECLAIM certification options (if applicable) and the confidentiality of information statement, and that I concur with them.

SIGNATURE OF COMPANY REPRESENTATIVE

SIGNATURE: _____ DATE: _____

_____	_____	_____	_____
(NAME)	(TITLE)	(PHONE)	(DATE)

NOTE: The CEMS Certification and the Facility Permit-to-Construct processes are parallel, but separate projects. **Do not send your CEMS Applications, CEMS Fees, or other related documents to Permit Processing.** This will only lengthen the review process. Please mail or deliver your completed CEMS Application(s)/Fee(s) to:

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 Copley Drive
Diamond Bar, CA 91765-4182

C/O: Mr. Dipankar Sarkar, Program Supervisor
Source Test Engineering Branch,
Monitoring & Analysis Division

A basic or initial application fee is due with each CEMS Application (Reference: *Rule 301(j)(5)*, please complete attached Form *ST-400 "RECLAIM & Non-RECLAIM CEMS Plan, Application Fee Processing Form"*). A copy of this application is also available on disk, formatted for MS WORD or ADOBE ACROBAT. To obtain this form, please check the South Coast Air Quality Management District Website at www.aqmd.gov, or contact us at (909) 396-2273 (*e-mail:* dsarkar@aqmd.gov).

APPENDIX A

SIMPLIFIED PROCESS FLOW DIAGRAM *(Reference Section 3)*

Provide a simple flow/block diagram showing both the basic and control equipment, and include the exhaust stack where the CEMS will be mounted. Be sure to include by-pass ducts, emergency venting stacks, blanked-off stacks, recirculated flows and influent or effluent flow to or from related processes.

APPENDIX B

SIMPLIFIED STACK DIAGRAM *(Reference Section 4)*

Show the CEMS sampling probe and reference sample port locations (top/cross-section and side views) in the exhaust stack with respect to the upstream and downstream flow disturbances (fans, dampers, transitions, change in stack cross-sectional areas, etc.). Indicate distances and dimensions for the above information. **ACEMS applicants** must show, dimensionally, the location of all parametric sensors or monitors with respect to the process equipment, influent and exhaust flows, and reference method sampling locations.

APPENDIX C *(Non-ACEMS Applicants Only[10])*

SIMPLIFIED CEMS DIAGRAM *(Reference Section 5)*

Show a flow diagram indicating the routing of sample and calibration gases through the sample acquisition, transport, and conditioning units. This diagram shall include the components of the CEMS (probe, filter, heat traced line, NO_x converter, conditioning system, sample pumps, flow meters, analyzers, recorders, calibration systems, connecting lines, valves, flow and pressure regulators), including by-pass vents. Indicate temperature, pressure, and moisture at key points.

---

[10] *ACEMS Applicants: Complete APPENDIX G Instead*

APPENDIX C1 *(Multiple-Point Probe Applicants Only)*

SIMPLIFIED MULTI-POINT PROBE DIAGRAM *(Reference Section 5)*

Show a dimensional drawing of the proposed multiple-point probe indicating hole bore, hole spacing with respect to inside stack wall, port flange offset, and center-of-stack. Also include sample routing diagram showing audit port (required), vacuum or differential pressure gage (required), flowmeter/rotometer (required), high-volume pump, heated instrument box (if applicable), and connective tubing/valves. Remember, the multiple-point probe must be successfully bench tested according to South Coast Air Quality Management District Source Testing *Form 511*: "Multi-Point Probe Acceptance and Quality Assurance Standards, for Use in Conjunction with EPA/EMTIC Guidance Document (GD)-031" before it may be installed on the stack or duct.

Total Points: _____ (No. Probes: _____ Pts/Probe: _____ Bore: _____)

Pump Specs[11]**:** Make/Mdl: _____ Flowrate: _____

Sample Audit Port (*required*): ☐ Yes ☐ No

Flow Meter[12] **(*required*):** ☐ Rotometer ☐ Other Type: _____

Vacuum/Differential Pressure Gage[12] **(*required*):** ☐ Vacuum ☐ Diff Press

Probe Blowback Capability (*recommended*): ☐ Yes ☐ No

---

[11] Pump flowrate must be included and be accurate because the probe assembly will be bench-tested and pre-certified at that flowrate. Use of a lower flow pump when the probe is installed on the stack will invalidate the pre-certification.

[12] The probe assembly will be bench-tested exactly as it would be configured on the stack (except for the pump as long as a similar one is used) with the vacuum/Δp and flow devices attached. Vacuum/Δp and flow measurements are a part of the required parameters to be recorded and documented for pre-certification, and they will be used for on-going QA demonstration.

APPENDIX D

DETERMINATION OF REQUIRED MONITORING PARAMETERS

(Reference Section 6)

Detail, step by step, how the parameters checked in *Section 6* will be applied to the final monitoring requirement by use of equations, assumptions, and calculations. (Be sure to detail how corrections will be made to dry, standard conditions, or conditions imposed by rules or permits). **ACEMS applicants** must include a model of the parametric monitoring system describing the relationship of each monitoring parameter, it's operating range, and redundancy. In addition, the operational limit of the process monitored, equations, algorithms, factors, and coefficients for determining the final monitoring requirement must be submitted. An electronic copy of the parametric model may also be submitted.

APPENDIX E

BRIEF DESCRIPTION OF COMPUTER PROGRAMMING LOGIC

(Reference Section 7)

Briefly describe how the parameters you described in *Section 6* will be programmed into the data reduction and recording units. Use block diagrams, or a copy of recorded data if needed, to show the location in the program where constants, variables and other parameters are entered. Also include the frequency that each monitoring parameter is polled by the DAS/PLC.

APPENDIX F *(SOx CEMS Applicants Only)*

DESCRIPTION OF SOx SOURCE EQUIPMENT SERVED BY A FUEL SULFUR MONITORING SYSTEM (FSMS)

(Reference Sections 2 and 5b.)

Supply the required information. Attach additional copies if required. If the piece of equipment is also a RECLAIM NOx Major Source, be sure to complete a separate CEMS application.

CEMS Designation:

CEMS Description:

Indicate the type of FSMS: ☐ **Total Sulfur Monitor** ☐ **SOx CEMS**

Equipment Information			Fuel Meter Information		
Equipment	Device I.D., Application, Permit No.	NOx (LGE or MAJ)[13]	Make & Model	Principle (orifice,etc.)	Proposed Range

[13] Applicable to RECLAIM sources only.

APPENDIX G *(ACEMS Applicants Only)*

SUPPLEMENTAL INFORMATION FOR "ACEMS"

(Reference Sections 2 and 5)

ACEMS INFORMATION This appendix supplements *Section 2*, and replaces Sections 5.a. and 5.b. If you require more space for completion, make additional copies of this section and attach information. Please attach manufacturer's specification sheets in *Attachment 2*

---

1. **OPERATIONAL LIMIT OF BASIC EQUIPMENT MONITORED** Specify below, the upper and lower operating limit of the BASIC EQUIPMENT (as described in *Section 2*), which the ACEMS parametric model will incorporate, and for which valid data will be produced by the ACEMS (**Note:** Following Final Certification, data falling outside these limits will be regarded as "MISSING DATA", so plan accordingly).

   A. LOWER OPERATIONAL LIMIT: _____ *(units)* **B. UPPER OPERATIONAL LIMIT:** _____ *(units)*

2. **PARAMETRIC MONITORING INFORMATION** (*serial numbers shall be submitted when installation is completed*)

Monitoring Parameter (be specific: manifold vacuum, stack temperature, etc.)	Type Sensor (e.g., thermal anemometer)	Make	Model	Monitoring Range (include units)	Monitoring Hierarchy	
					Primary	Secondary
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐

PARAMETRIC MONITORING INFORMATION (CONT'D)

Monitoring Parameter (be specific: manifold vacuum, stack temperature, etc.)	Type Sensor (e.g., thermal anemometer)	Make	Model	Monitoring Range (include units)	Monitoring Hierarchy Primary	Secondary
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐

ATTACHMENT 1

SOUTH COAST AQMD PERMITS AND CORRESPONDENCE

(Reference Sections 2 and 8)

Please attach the following information related to the basic and control equipment to be monitored, to this sheet, and label them as "Attachment 1":

- *Applicable permits*
- *Other pertinent South Coast AQMD correspondence*

ATTACHMENT 2

MANUFACTURER'S AND/OR VENDOR'S SPECIFICATIONS

(Reference Section 9)

Please attach the following information related to the CEMS (analyzers, components, monitors, data acquisition and recording systems, program logic controllers, etc.), to this sheet, and label them as "Attachment 2":

- *Manufacturer's and/or vendor's technical specification sheets*
- *Other pertinent CEMS information*

ATTACHMENT 3

QUALITY ASSURANCE PLAN (QAP)

(Reference Section 10)

Please attach the following information related to the CEMS QA/QC, and label it as "Attachment 3":

- *Copy of complete Quality Assurance Plan (QAP) for this CEMS, or reference to Facility-wide CEMS QAP with specific QA/QC section for this CEMS attached*
- *If copy of QAP is unfinished/incomplete, provide brief description or outline of QAP*

NOTE TO ALL APPLICANTS: *The complete QAP must be submitted, and approved before CEMS "Final Certification can be granted.*

The following forms should be attached:

- *FORM ST-300, "CEMS Vendors List"*
  A representative list (not a complete list) of possible CEMS vendors.

- *FORM ST-400, "CEMS Fee Sheet"*
  Please complete the requested information, determine the basic fee charged for the CEMS Certification, Modification, or Change-of-Ownership at your facility; and attach to this submittal along with a check for the required amount.

If either of these forms are missing, you may obtain them at:

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 Copley Drive
Diamond Bar, CA 91765-4182

Source Test Engineering Branch,
Monitoring & Analysis Division

(909) 396-2273

RECLAIM & NON-RECLAIM CEMS PLAN, APPLICATION FEE PROCESSING FORM ST-400/2526[1]

South Coast Air Quality Management District

(Fees are applicable FY 25-26)

1. COMPANY INFORMATION PLEASE COMPLETE THE UNSHADED AREAS OF THIS FORM (FOR INSTRUCTIONS, SEE REVERSE SIDE)

LEGAL NAME OF APPLICANT:
BUSINESS MAILING ADDRESS:

2. FACILITY INFORMATION (ONE FACILITY ID PER FORM. SEE REVERSE SIDE FOR MORE INFORMATION)

FACILITY NAME:	FACILITY ID NO:
EQUIPMENT/FACILITY LOCATION: (IF SAME AS MAILING ADDRESS, ENTER "SAME")	
CONTACT PERSON:	CONTACT TITLE: / CONTACT TELEPHONE NO: ( )

3. CEMS PROJECT INFORMATION (ITEMIZE EACH INDIVIDUAL PIECE OF EQUIPMENT & APPLICABLE BASIC PROCESSING FEE, REFERRING TO THE FEE SCHEDULE ON BACK OF FORM. USE ADDITIONAL SHEETS IF REQUIRED)

BASIC EQUIPMENT DESCRIPTION (EQUIPMENT MONITORED BY CEMS – FROM SOUTH COAST AQMD APPLICATION OR PERMIT)	EQUIPMENT ID NO. DEVICE ID (A/N)	FEE INFORMATION CEMS PROJECT DESCRIPTION[2]	FEE INFORMATION BASIC FEE
	( )		
	( )		
	( )		
	( )		
	( )		
	( )		
	( )		
	( )		
	( )		
	( )		
	( )		
		TOTAL FEES INCLUDED :	

SIGNATURE (IF COMPLETED BY COMPANY REPRESENTATIVE)

COMPLETED BY: *(SIGNATURE OF RESPONSIBLE MEMBER OF ORGANIZATION)* *(DATE)*		
TYPE OR PRINT NAME OF SIGNER:	TITLE OF SIGNER:	TELEPHONE NO: ( )

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT USE ONLY

PROGRAM SUPERVISOR: **DIPANKAR SARKAR**	DIV/BRANCH: **M&AD / STE**	ASSIGN S/T ENGR: (PHONE) ( )		*(DATE STAMP)*
TRXN TYPE: **CODE 35**	COMMENT: **CEMS EVALUATION**	CHECK NO.:	AMOUNT: **$**	

[1]Includes CEMS Periodic Assessment, Modification, Change of Ownership

[2]

INSTRUCTIONS FOR COMPLETION OF FEE PROCESSING FORM

Complete all of the information requested in *Sections 1 and 2, Company and Facility Information*. Be sure to include the Facility I.D. No. (from Facility Permit to Operate). If your facility has "major" equipment at more than one location and/or listed under more than one Facility I.D. No., complete one of these forms for each Facility I.D. No., listing the applicable equipment information for each Facility I.D.-based location.

Refer to the TABLE below when completing *Section 3, CEMS Equipment Information*. The *Basic or Minimum Fee* below is the appropriate filing fee for each *Project* on this form (**NOTE:** Expedited projects must have South Coast Air Quality Management District approval before filing). It is an initial accounting, and you may be billed at the completion of the project for additional expenses if any CEMS Project has more components, or utilizes more evaluation time than allocated by that basic fee. Be sure to include the equipment Device I.D., Application or Permit No. (where applicable) from the Facility Permit to Operate. You may include more than one type of fee on a single form, as long as they are clearly marked as to *Project and Equipment*. Use additional sheets to list equipment, if needed, and total results.

South Coast AQMD Rules 301 & 306 Applicable STE Processing Fees (Updated July 1, 2025)
(Fees Effective for all submittals beginning July 1, 2025)

South Coast AQMD Rule	CEMS Project Description	Evaluation Fee			
		Basic or Minimum		Maximum	
		Normal	Expedited[1]	Normal	Expedited[1]
301(j)(5)(A) TABLE IIB, and 301(v)(3)	CEMS Initial Certification or CEMS Modification with Additional Components, according to the following schedule[2]:				
	a. 1-2 components, any combination pollutant, diluent, flow	$ 5,052.38	$ 5,052.38	$ 9,046.08	$ 15,746.92
	b. 3-4 components, any combination pollutant, diluent, flow	$ 6,077.63	$ 6,077.63	$ 16,646.78	$ 29,071.12
	c. Each additional component, beyond 4 components, add to "b." above	+ $ 0.00	+ $ 0.00	+ $ 4,112.04	+ $ 6,244.54
	d. Time-Shared CEMS (add to applicable CEMS fee determined above)	+ $ 0.00	+ $ 0.00	+ $ 4,112.04	+ $ 6,244.54
301(j)(5)(A) TABLE IIB, and 301(v)(3)	ACEMS Initial Certification (excluding modifications):	$ 5,052.38[3]	$ 5,052.38	$ 16,646.78	$ 29,071.12
301(j)(5)(B)(C)(D), and 301(v)(3)	CEMS Modification (excluding additional components) or CEMS monitored equipment, CEMS Periodic Assessment Evaluation:	$ 1,177.30[4]	$ 1,177.30	$ 7,444.61	$ 11,852.03
301(j)(5)(E)	CEMS Change of Ownership to facility document files according to the following schedule:				
	a. First CEMS	$ 354.93			
	b. Each additional CEMS	+ $70.77			

Please return this form (signed and dated), along with the appropriate CEMS Application, Plan, Protocol, Report, Modification, or Change-of-Ownership requiring evaluation; and a check for the total fees. (You may include a single check for the total amount of all submitted fee processing forms):

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Monitoring & Analysis Division, Source Test Engineering Branch
21865 Copley Drive
Diamond Bar, CA 91765-4182

If you require help, or more forms, please contact your assigned CEMS representative, or phone (909) 396-2273.

[1] Requests for expedited evaluations must be approved by South Coast AQMD staff before filing, since expedited review is contingent upon availability of qualified staff over and above regular review scheduling. Expedited reviews shall be billed at the hourly premium of $ 115.72 / hr for CEMS, and $ 108.30 / hr for Protocol or Report evaluations, in addition to normal hourly fees shown below, and as reflected in the expedited "Basic or Minimum Fee", payable at time of filing.

[2] Covers up to 40 hours of evaluation time for the first two components, an additional 20 hours for the first four components, and an additional 12 hours per component beyond four. Excess time will be billed at the hourly rate of $ 223.14 / hr, up to the maximum allowable fee.

[3] Covers up to 40 hours of evaluation time. Excess time will be billed at the hourly rate of $ 223.14 / hr, up to the maximum allowable fee.

[4] Covers up to 10 hours of evaluation time. Excess time will be billed at the hourly rate of $ 223.14 / hr, up to the maximum allowable fee.